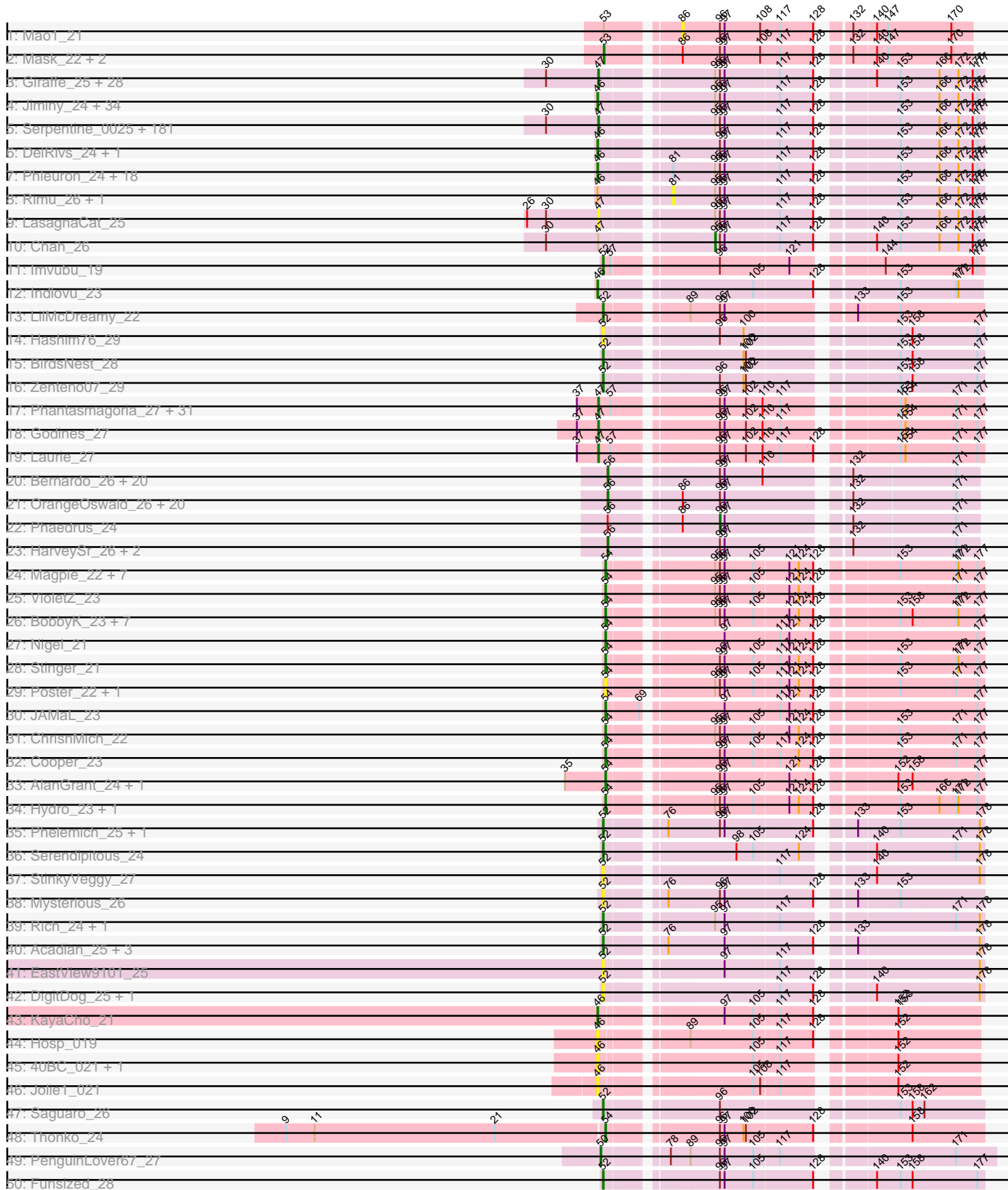
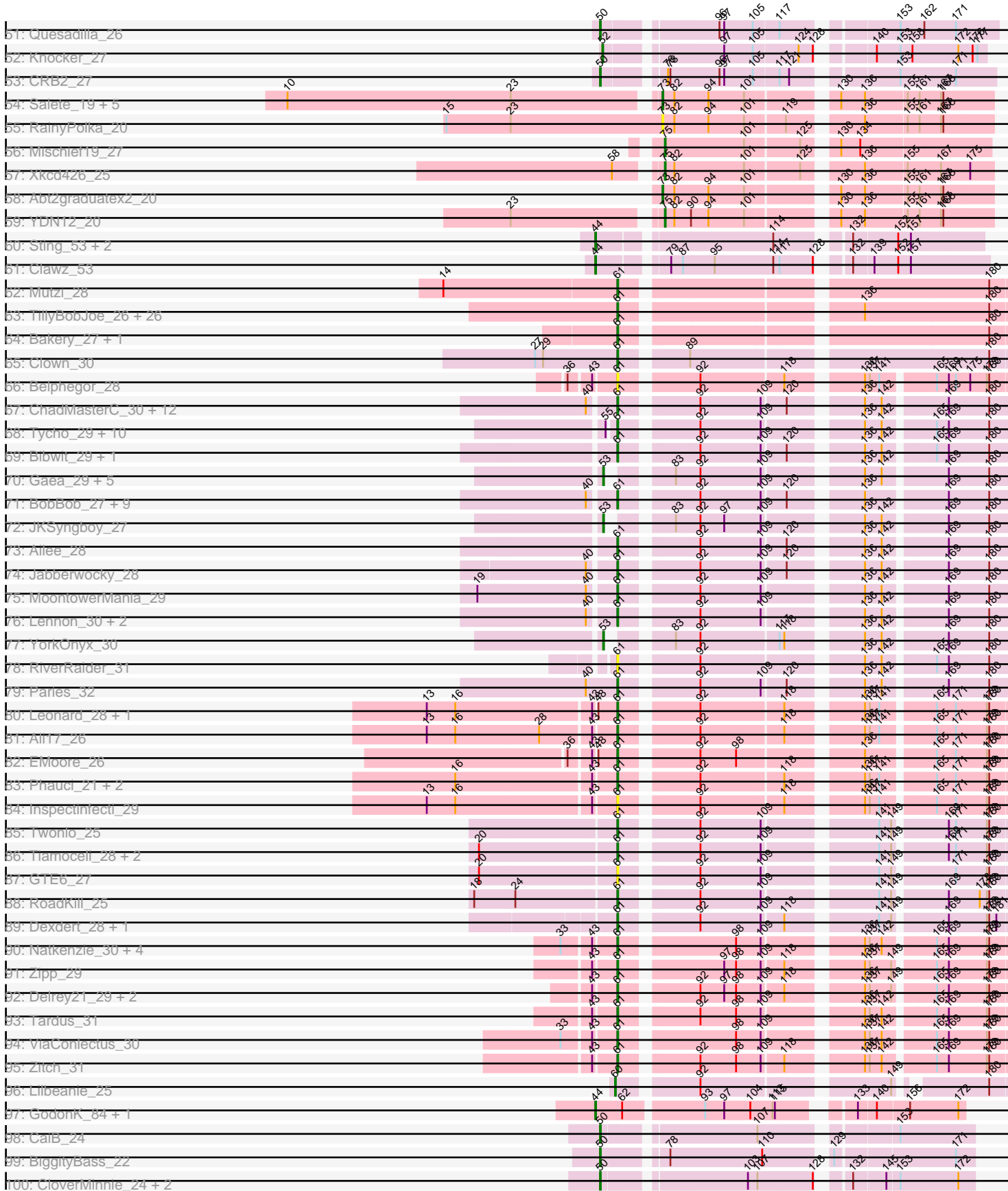


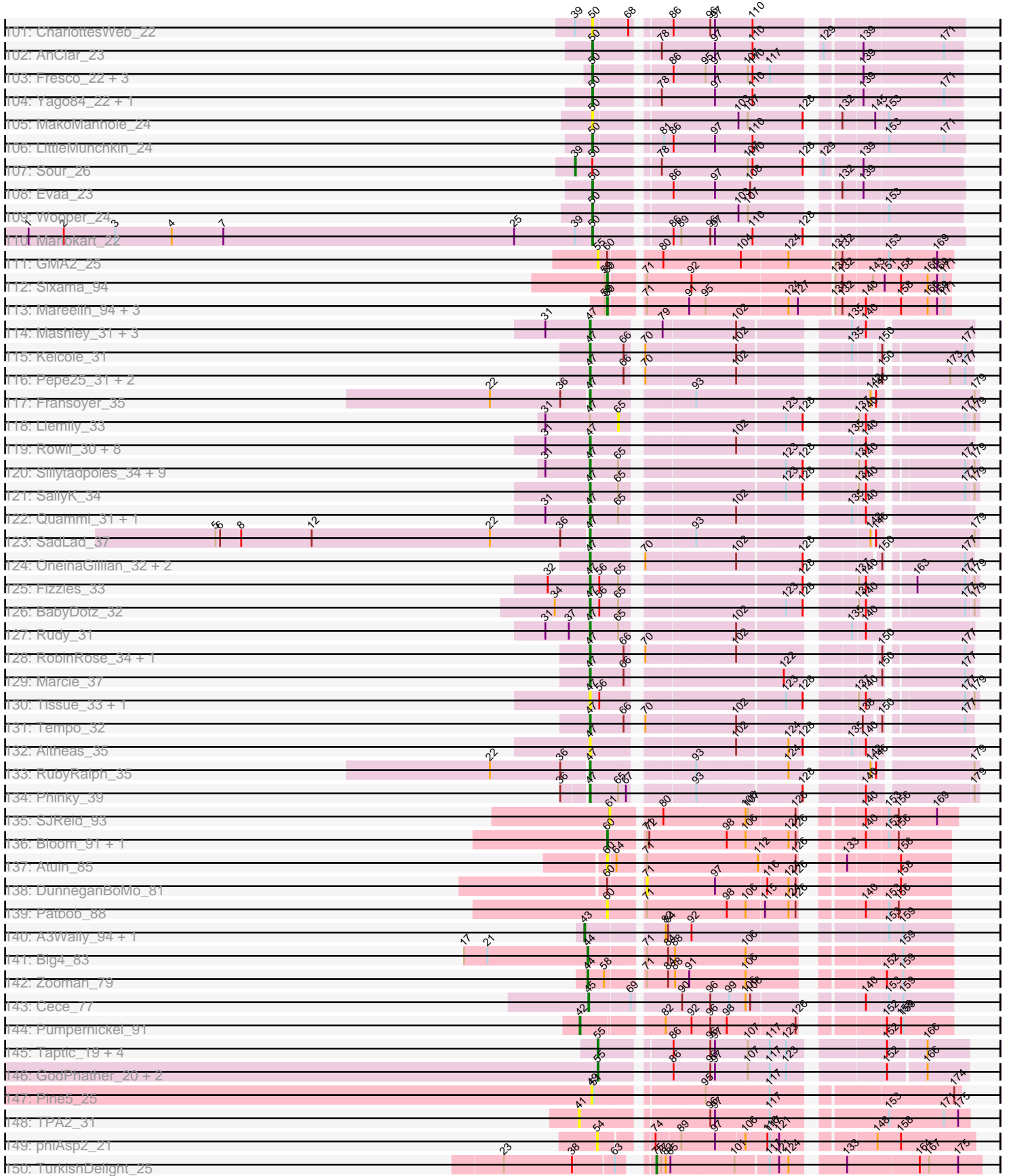
Pham 157463



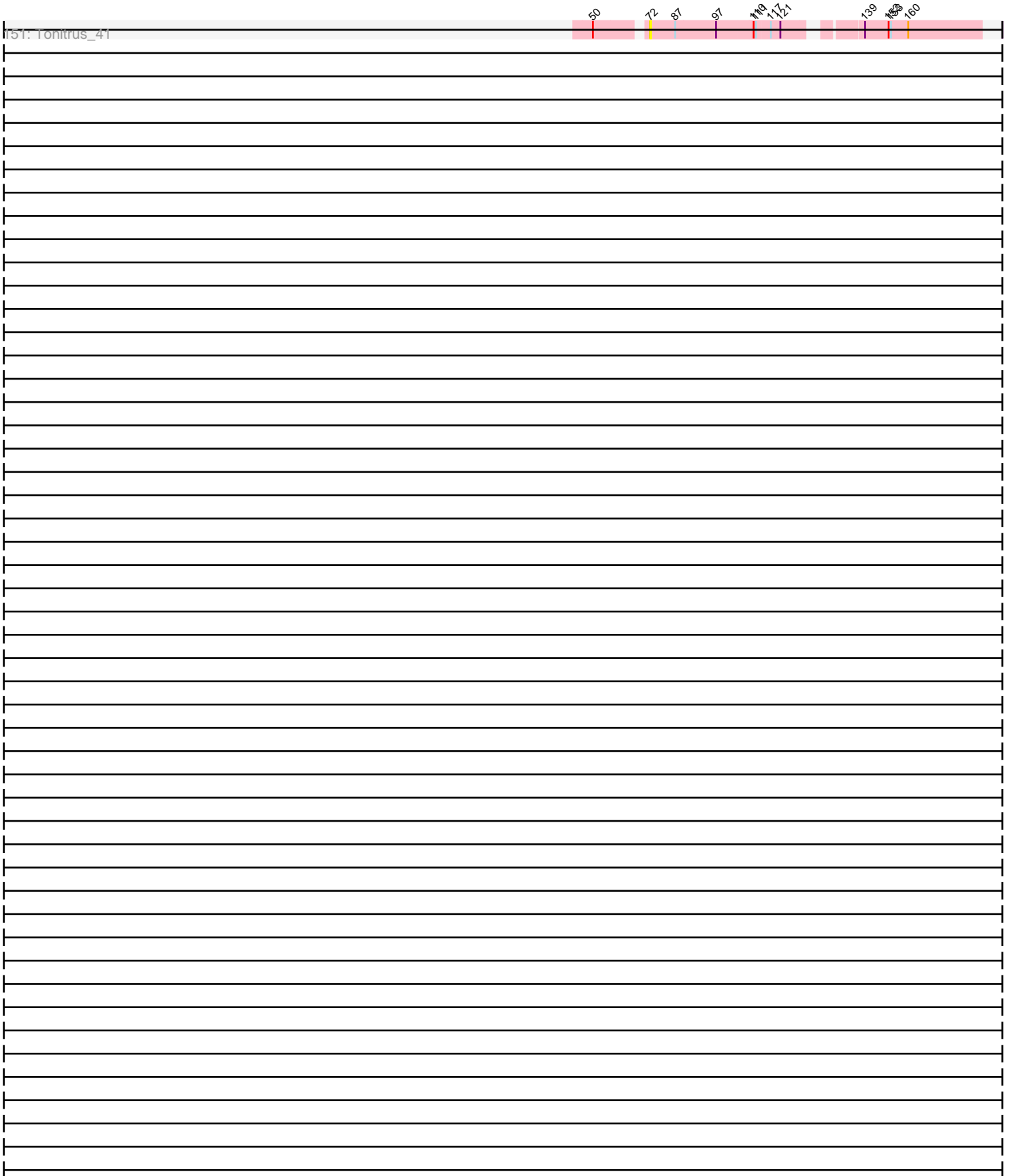
# Pham 157463



Pham 157463



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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 157463 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157463 has 643 members, 96 are drafts.

Phages represented in each track:

- Track 1 : Mao1\_21
- Track 2 : Mask\_22, Dori\_22, Sejanus\_22
- Track 3 : Giraffe\_25, Hetaeria\_25, Oosterbaan\_25, Potter\_24, Usavi\_25, Kikipoo\_25, Cosmolli16\_24, Pipsqueak\_25, FugateOSU\_24, Mana\_24, Scoot17C\_25, LostAndPhound\_24, HighStump\_24, Orion\_25, Megatron\_25, Grand2040\_24, Chorkpop\_25, DoesntMatter\_25, Kahve\_24, LeiMonet\_25, TallGrassMM\_25, IsaacEli\_25, MRabcd\_24, Lasso\_25, UAch1\_25, Morty\_25, Vista\_25, Placalicious\_24, PG1\_25
- Track 4 : Jiminy\_24, DuchessDung\_23, Derpp\_24, MrPhizzler\_24, Oline\_24, Maskar\_24, TyrionL\_24, Zonia\_25, Hocus\_24, Trypo\_25, Etaye\_25, Doddsville\_25, Duggie\_24, JakeO\_24, JDog\_25, Ashraf\_24, ImtiyazSitla\_24, Durga\_25, Swiphy\_26, GeneCoco\_25, Dati\_25, DaddyDaniels\_25, Longacauda\_24, Wallhey\_24, Schueller\_25, Kwksand96\_24, Brilliant\_25, Struggle\_24, Weher20\_25, Vaishali24\_24, PhatLouie\_25, Melc17\_25, Labeouficaum\_24, CharlieGBrown\_24, Pinkman\_24
- Track 5 : Serpentine\_0025, Haimas\_25, Banjo\_24, Mikota\_25, Nacho\_0025, Murdoc\_25, Pops\_25, Chunky\_25, Adriana\_25, Nicole21\_25, Kimbrough\_25, Lumine\_24, Maru\_24, Selr12\_25, Inchworm\_25, OliverWalter\_25, Valjean\_25, Matalotodo\_24, KingVeVeVe\_25, Olive\_25, Iridoclysis\_25, Gyarad\_0025, Zelda\_25, EmpTee\_25, Mecca\_24, Eugenia\_25, Mulan\_24, Prickles\_25, FluffyNinja\_25, Thora\_25, LuckyMarjie\_24, Orwigg\_25, Altwerkus\_24, DirtJuice\_25, Basato\_26, Frankicide\_25, Boehler\_25, KLucky39\_25, Cher\_24, Buckeye\_25, Dione\_24, Gwilliam\_25, Skippy\_25, SDcharge11\_25, Antonia\_24, Gareth\_24, Megamind20\_25, Newman\_25, Kwadwo\_24, Manad\_24, Squid\_25, Daffy\_25, Freya\_24, ABU\_25, Numberten\_25, Hamish\_25, Andre\_25, ThreeOh3D2\_25, BlackStallion\_25, Yoshand\_25, Mcshane\_24, Schadenfreude\_24, Haleema\_24, Scrick\_25, MitKao\_25, Swish\_25, Bishoperium\_24, Mutante\_24, Serendipity\_25, Sigman\_25, Roy17\_25, Lulwa\_25, CheetO\_25, Emiris\_25, Spartan300\_25, Cobra\_25, Bluephacebaby\_24, Dingo\_25, Xavier\_24, LeeLot\_25, KlimbOn\_25, PhrodoBaggins\_24, Suffolk\_25, PinheadLarry\_25, Beaglebox\_24, Jillium\_24, Sophia\_24, Lopsy\_24, Surely\_25, Slatt\_25, Toni\_24, Mosaic\_24, ProfessorX\_25, Solosis\_24, Virapocalypse\_25, Crownjwl\_25, Burr\_24, Roliet\_25, Harvey\_25, Plmatters\_25, Pherdinand\_25, Telesworld\_24, SassyCat97\_24, Badfish\_25, Hertubise\_25, QueenBeane\_25, Childish\_24, Fozzie\_24, Omniscient\_25, MiniBoss\_25, HSavage\_25, Ricotta\_25, Held\_25, JangoPhett\_25, Lego3393\_25, Horchata\_25, Lulumae\_24, Nyala\_24, Colbert\_25, Phareon\_25, AbsoluteMadLad\_24, Inverness\_25, Fang\_25, YouGoGlencoco\_25, Quisquiliae\_25, Waterdiva\_25, UncleHowie\_25,

LemonSlice\_25, Charles1\_25, DonSanchon\_24, Legolas\_24, Cannibal\_25, Gophee\_25, Eremos\_25, Morgushi\_25, Dice\_26, Simielle\_24, Olak\_25, JacAttac\_25, Carthage\_23, Riggan\_25, Puhltonio\_25, Sheila\_25, Mesh1\_25, Samaymay\_25, Timmi\_24, True\_24, Katniss\_25, Daka\_25, Squiggle\_25, TomBombadil\_25, AltPhacts\_25, Phipps\_25, Kloppinator\_25, Craff\_25, PhatCats2014\_25, Soto\_25, Zaider\_26, Piglet\_0024, Roscoe\_26, CamL\_25, HenryJackson\_24, Phunky\_25, Phamished\_25, Fringe\_25, Cornobble\_24, Vaticameos\_25, BlueHusk\_25, Robyn\_24, Orfeu\_24, Podrick\_25, FriarPreacher\_25, ShiVal\_25, CampRoach\_24, Tooj\_25, RedMaple\_24, Pacifista\_26, Anderson\_25, Aelin\_24, Tomlarah\_25, Vortex\_25, Vivaldi\_25

- Track 6 : DelRivs\_24, Soile\_25

- Track 7 : Phleuron\_24, BatteryCK\_24, Phergie\_24, Magic8\_25, OSmaximus\_25, Veritas\_24, Coletti\_24, Chute\_24, MelsMeow\_24, Windsor\_24, Keitherie\_25, Virgeve\_24, Mag7\_24, PhrankReynolds\_24, PhenghisKhan\_24, MichaelPhcott\_24, Kailash\_25, Apizium\_24, Chaelin\_24

- Track 8 : Rimu\_26, Hartsy\_24

- Track 9 : LasagnaCat\_25

- Track 10 : Chah\_26

- Track 11 : Imvubu\_19

- Track 12 : Indlovu\_23

- Track 13 : LilMcDreamy\_22

- Track 14 : Hashim76\_29

- Track 15 : BirdsNest\_28

- Track 16 : Zenteno07\_29

- Track 17 : Phantasmagoria\_27, Allegro\_27, Sabella\_27, LizLemon\_27, Kheth\_27, Faze9\_27, Brownie5\_27, Glass\_27, Coffee\_27, West99\_27, Kaleb\_27, TA17A\_27, Calamitous\_27, Opia\_27, Tinciduntolum\_28, Tres\_27, MasterPo\_27, Lars\_27, Bananafish\_27, Eaglehorse\_27, Boyle\_27, Arbiter\_27, Hedgerow\_27, Holeinone\_27, Rosebush\_27, Blocker23\_27, Ares\_27, Qyrzula\_25, Lephleur\_27, FrenchFry\_27, ItsyBitsy1\_27, Rhinoforte\_27

- Track 18 : Godines\_27

- Track 19 : Laurie\_27

- Track 20 : Bernardo\_26, Baloo\_26, Briakila\_26, Ben11\_25, MmasiCarm\_26, GlenHope\_27, Audrey\_26, Pipefish\_26, Phlyer\_26, Tydolla\_26, SlippinJimmy\_26, Marley1013\_26, Heathcliff\_26, Yahalom\_26, Kronus\_25, Halfpint\_25, Gadget\_27, Gervas\_26, Morty007\_26, Mortcellus\_25, Akoma\_26

- Track 21 : OrangeOswald\_26, Phayeta\_26, LestyG\_26, Yinz\_26, RagingRooster\_26, ChaChing\_26, Athena\_27, Neos5\_26, Nozo\_26, Corofin\_26, Rita1961\_26, Devonte\_26, Obutu\_26, Philly\_25, Chandler\_26, Abinghost\_26, Deenasa\_26, SynergyX\_26, Compostia\_27, Casbah\_25, Kamiyu\_26

- Track 22 : Phaedruss\_24

- Track 23 : HarveySr\_26, Daisy\_26, RomaT\_26

- Track 24 : Magpie\_22, Hangman\_23, Waleliano\_23, BrownCNA\_24, Mithril\_23, JaguarMi\_23, Zemanar\_24, Heath\_22

- Track 25 : VioletZ\_23

- Track 26 : BobbyK\_23, Mudslide\_23, RawrgerThat\_23, Frederick\_23, Prince\_24, Fortunato\_23, Apex\_23, Austelle\_24

- Track 27 : Nigel\_21

- Track 28 : Stinger\_21

- Track 29 : Poster\_22, Nanao\_22

- Track 30 : JAMaL\_23

- Track 31 : ChrisnMich\_22

- Track 32 : Cooper\_23

- Track 33 : AlanGrant\_24, Vincenzo\_24
- Track 34 : Hydro\_23, Lolalove\_23
- Track 35 : Phelemich\_25, Reprobate\_25
- Track 36 : Serendipitous\_24
- Track 37 : StinkyVeggy\_27
- Track 38 : Mysterious\_26
- Track 39 : Rich\_24, Bae\_24
- Track 40 : Acadian\_25, Donny\_25, Suigeneris\_25, SirJeffery\_25
- Track 41 : EastView9101\_25
- Track 42 : DigitDog\_25, Nangang\_25
- Track 43 : KayaCho\_21
- Track 44 : Hosp\_019
- Track 45 : 40BC\_021, 39HC\_021
- Track 46 : Jolie1\_021
- Track 47 : Saguaro\_26
- Track 48 : Thonko\_24
- Track 49 : PenguinLover67\_27
- Track 50 : Funsized\_28
- Track 51 : Quesadilla\_26
- Track 52 : Knocker\_27
- Track 53 : CRB2\_27
- Track 54 : Salet\_19, Asis\_19, BayC\_19, BabyGotBac\_19, Maih\_19, TP1604\_19
- Track 55 : RainyPolka\_20
- Track 56 : Mischief19\_27
- Track 57 : Xkcd426\_25
- Track 58 : Abt2graduatex2\_20
- Track 59 : YDN12\_20
- Track 60 : Sting\_53, DonTron\_53, Soos\_49
- Track 61 : Clawz\_53
- Track 62 : Mutzi\_28
- Track 63 : TillyBobJoe\_26, Halo3\_27, ClamChowder\_28, PinkCoffee\_28, KimmyK\_28, Salvador\_26, Twister6\_28, Arri\_29, VanDeWege\_29, Valary\_29, Togo\_26, Danyall\_28, Jambalaya\_26, Portcullis\_26, RogerDodger\_29, Evamon\_26, Phlop\_26, Savbucketdawg\_26, Wizard\_26, Gezellig\_27, PullumCavea\_26, Fugax\_28, Nubi\_26, Shinji\_26, SmokingBunny\_26, Fireball\_27, Barb\_28
- Track 64 : Bakery\_27, YungMoney\_28
- Track 65 : Clown\_30
- Track 66 : Belphegor\_28
- Track 67 : ChadMasterC\_30, Sanjuju\_28, Shivanishola\_31, Keitabear\_30, Stultus\_28, Kamashten\_29, Charming\_30, Affeca\_28, Barsten\_30, Kewpiedoll\_29, Angelicage\_28, Vivi2\_32, Thing3\_29
- Track 68 : Tycho\_29, Baumdotcom\_29, Ashertheman\_30, Tangerine\_29, Gustavo\_29, SchottB\_28, LilHam\_27, Saronaya\_29, StorminNorm\_29, Kroos\_30, Kwobi\_30
- Track 69 : Bibwit\_29, Sedona\_30
- Track 70 : Gaea\_29, Derg\_27, Ribeye\_30, Bizzy\_30, Flatwoods\_30, Baddon\_29
- Track 71 : BobBob\_27, Galadriel\_30, Nordenberg\_24, Brandonk123\_31, Fosterous\_28, McKinley\_32, Tangent\_30, Rofo\_30, Geodirt\_27, Love\_33
- Track 72 : JKSyngboy\_27
- Track 73 : Ailee\_28
- Track 74 : Jabberwocky\_28
- Track 75 : MoontowerMania\_29
- Track 76 : Lennon\_30, Sitar\_30, Fitzgerald\_28

- Track 77 : YorkOnyx\_30
- Track 78 : RiverRaider\_31
- Track 79 : Paries\_32
- Track 80 : Leonard\_28, Phinally\_28
- Track 81 : Ali17\_26
- Track 82 : EMoore\_26
- Track 83 : Phauci\_21, MelBins\_29, Hans\_30
- Track 84 : Inspectinfecti\_29
- Track 85 : Twonlo\_25
- Track 86 : Tiamoceli\_28, EdmundFerry\_26, Chickadee\_27
- Track 87 : GTE6\_27
- Track 88 : RoadKill\_25
- Track 89 : Dexeert\_28, Kwekel\_27
- Track 90 : Natkenzie\_30, Sampson\_30, Scioto\_30, Abblin\_30, APunk\_31
- Track 91 : Zipp\_29
- Track 92 : Delrey21\_29, DoctorFroggo\_29, Verity\_29
- Track 93 : Tardus\_31
- Track 94 : ViaConlectus\_30
- Track 95 : Zitch\_31
- Track 96 : Lilbeanie\_25
- Track 97 : GodonK\_84, Phendrix\_82
- Track 98 : CaiB\_24
- Track 99 : BiggityBass\_22
- Track 100 : CloverMinnie\_24, MossRose\_24, AnarQue\_24
- Track 101 : CharlottesWeb\_22
- Track 102 : AnClar\_23
- Track 103 : Fresco\_22, Axumite\_22, Shatter\_22, Ligma\_22
- Track 104 : Yago84\_22, Sisko\_22
- Track 105 : MakoManhole\_24
- Track 106 : LittleMunchkin\_24
- Track 107 : Sour\_26
- Track 108 : Evaa\_23
- Track 109 : Wooper\_24
- Track 110 : Mariokart\_22
- Track 111 : GMA2\_25
- Track 112 : Sixama\_94
- Track 113 : Mareelih\_94, BlueNGold\_95, Forza\_96, Boopy\_96
- Track 114 : Mashley\_31, Gazebo\_32, Blab\_31, AluminumJesus\_31
- Track 115 : Kelcole\_31
- Track 116 : Pepe25\_31, Wilca\_32, BirdInFrench\_32
- Track 117 : Fransoyer\_35
- Track 118 : Llemily\_33
- Track 119 : Rowlf\_30, Nike\_33, Zagie\_33, Hyperion\_32, Grassboy\_34, Squash\_35, StrawberryJamm\_35, Kyva\_35, Namago\_33
- Track 120 : Sillytadpoles\_34, Phabia\_33, Jehoshaphat\_35, Teehee\_34, Lonelysoil\_32, Zhafia\_36, Wheelie\_32, DonaldDuck\_33, Casend\_34, Wayne3\_34
- Track 121 : SallyK\_34
- Track 122 : Quammi\_31, Viceroy\_32
- Track 123 : SadLad\_37
- Track 124 : OneinaGillian\_32, Fregley\_33, CandC\_31
- Track 125 : Fizzles\_33
- Track 126 : BabyDotz\_32
- Track 127 : Rudy\_31



- Track 128 : RobinRose\_34, Romm\_34
- Track 129 : Marcie\_37
- Track 130 : Tissue\_33, Judebell\_35
- Track 131 : Tempo\_32
- Track 132 : Altheas\_35
- Track 133 : RubyRalph\_35
- Track 134 : Phinky\_39
- Track 135 : SJReid\_93
- Track 136 : Bloom\_91, Racecar\_88
- Track 137 : Atuin\_85
- Track 138 : DunneganBoMo\_81
- Track 139 : Patbob\_88
- Track 140 : A3Wally\_94, PauloDiaboli\_94
- Track 141 : Big4\_83
- Track 142 : Zooman\_79
- Track 143 : Cece\_77
- Track 144 : Pumpnickel\_91
- Track 145 : Taptic\_19, PR\_19, Megabear\_19, Cepens\_19, D12\_19
- Track 146 : GodPhather\_20, Argie\_20, Jeon\_19
- Track 147 : Pine5\_25
- Track 148 : TPA2\_31
- Track 149 : phiAsp2\_21
- Track 150 : TurkishDelight\_25
- Track 151 : Tonitrus\_41

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

The start number called the most often in the published annotations is 47, it was called in 263 of the 547 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU\_25, AbsoluteMadLad\_24, Adriana\_25, Aelin\_24, Allegro\_27, AltPhacts\_25, Altheas\_35, Altwerkus\_24, AluminumJesus\_31, Anderson\_25, Andre\_25, Antonia\_24, Arbiter\_27, Ares\_27, BabyDotz\_32, Badfish\_25, Bananafish\_27, Banjo\_24, Basato\_26, Beaglebox\_24, BirdInFrench\_32, Bishoperium\_24, Blab\_31, BlackStallion\_25, Blocker23\_27, BlueHusk\_25, Bluephacebaby\_24, Boehler\_25, Boyle\_27, Brownie5\_27, Buckeye\_25, Burr\_24, Calamitous\_27, CamL\_25, CampRoach\_24, CandC\_31, Cannibal\_25, Carthage\_23, Casend\_34, Charles1\_25, CheetO\_25, Cher\_24, Childish\_24, Chorkpop\_25, Chunky\_25, Cobra\_25, Coffee\_27, Colbert\_25, Cornobble\_24, Cosmolli16\_24, Craff\_25, Crownjwl\_25, Daffy\_25, Daka\_25, Dice\_26, Dingo\_25, Dione\_24, DirtJuice\_25, DoesntMatter\_25, DonSanchon\_24, DonaldDuck\_33, Eaglehorse\_27, Emiris\_25, EmpTee\_25, Eremos\_25, Eugenia\_25, Fang\_25, Faze9\_27, Fizzles\_33, FluffyNinja\_25, Fozzie\_24, Frankicide\_25, Fransoyer\_35, Fregley\_33, FrenchFry\_27, Freya\_24, FriarPreacher\_25, Fringe\_25, FugateOSU\_24, Gareth\_24, Gazebo\_32, Giraffe\_25, Glass\_27, Godines\_27, Gophee\_25, Grand2040\_24, Grassboy\_34, Gwilliam\_25, Gyarad\_0025, HSavage\_25, Haimas\_25, Haleema\_24, Hamish\_25, Harvey\_25, Hedgerow\_27, Held\_25, HenryJackson\_24, Hertubise\_25, Hetaeria\_25, HighStump\_24, Holeinone\_27, Horchata\_25, Hyperion\_32, Inchworm\_25, Inverness\_25, Iridoclysis\_25, IsaacEli\_25, ItsyBitsy1\_27, JacAttac\_25,

JangoPhett\_25, Jehoshaphat\_35, Jillium\_24, Judebell\_35, KLucky39\_25, Kahve\_24, Kaleb\_27, Katniss\_25, Kelcole\_31, Kheth\_27, Kikipoo\_25, Kimbrough\_25, KingVeVeVe\_25, KlimbOn\_25, Kloppinator\_25, Kwadwo\_24, Kyva\_35, Lars\_27, LasagnaCat\_25, Lasso\_25, Laurie\_27, LeeLot\_25, Lego3393\_25, Legolas\_24, LeiMonet\_25, LemonSlice\_25, Lephleur\_27, LizLemon\_27, Lonelysoil\_32, Lopsy\_24, LostAndPhound\_24, LuckyMarjie\_24, Lulumae\_24, Lulwa\_25, Lumine\_24, MRabcd\_24, Mana\_24, Manad\_24, Marcie\_37, Maru\_24, Mashley\_31, MasterPo\_27, Matalotodo\_24, Mcshane\_24, Mecca\_24, Megamind20\_25, Megatron\_25, Mesh1\_25, Mikota\_25, MiniBoss\_25, MitKao\_25, Morgushi\_25, Morty\_25, Mosaic\_24, Mulan\_24, Murdoc\_25, Mutante\_24, Nacho\_0025, Namago\_33, Newman\_25, Nicole21\_25, Nike\_33, Numberben\_25, Nyala\_24, Olak\_25, Olive\_25, OliverWalter\_25, Omniscient\_25, OneinaGillian\_32, Oosterbaan\_25, Opia\_27, Orfeu\_24, Orion\_25, Orwigg\_25, PG1\_25, Pacifista\_26, Pepe25\_31, Phabia\_33, Phamished\_25, Phantasmagoria\_27, Phareon\_25, PhatCats2014\_25, Pherdinand\_25, Phinky\_39, Phipps\_25, PhrodoBaggins\_24, Phunky\_25, Piglet\_0024, PinheadLarry\_25, Pipsqueak\_25, Placalicious\_24, Plmatters\_25, Podrick\_25, Pops\_25, Potter\_24, Prickles\_25, ProfessorX\_25, Puhltonio\_25, Quammi\_31, QueenBeane\_25, Quisquilliae\_25, Qyrzula\_25, RedMaple\_24, Rhinoforte\_27, Ricotta\_25, Riggan\_25, RobinRose\_34, Robyn\_24, Roliet\_25, Romm\_34, Roscoe\_26, Rosebush\_27, Rowlf\_30, Roy17\_25, RubyRalph\_35, Rudy\_31, SDcharge11\_25, Sabella\_27, SadLad\_37, SallyK\_34, Samaymay\_25, SassyCat97\_24, Schadenfreude\_24, Scoot17C\_25, Scrick\_25, Selr12\_25, Serendipity\_25, Serpentine\_0025, Sheila\_25, ShiVal\_25, Sigman\_25, Sillytadpoles\_34, Simielle\_24, Skippy\_25, Slatt\_25, Solosis\_24, Sophia\_24, Soto\_25, Spartan300\_25, Squash\_35, Squid\_25, Squiggle\_25, StrawberryJamm\_35, Suffolk\_25, Surely\_25, Swish\_25, TA17A\_27, TallGrassMM\_25, Teehee\_34, Telesworld\_24, Tempo\_32, Thora\_25, ThreeOh3D2\_25, Timmi\_24, Tinciduntolum\_28, Tissue\_33, TomBombadil\_25, Tomlarah\_25, Toni\_24, Tooj\_25, Tres\_27, True\_24, UAch1\_25, UncleHowie\_25, Usavi\_25, Valjean\_25, Vaticameos\_25, Viceroy\_32, Virapocalypse\_25, Vista\_25, Vivaldi\_25, Vortex\_25, Waterdiva\_25, Wayne3\_34, West99\_27, Wheelie\_32, Wilca\_32, Xavier\_24, Yoshand\_25, YouGoGlencoco\_25, Zegie\_33, Zaider\_26, Zelda\_25, Zhafia\_36,

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

- Chah\_26, Llemily\_33,

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

- 39HC\_021, 40BC\_021, A3Wally\_94, APunk\_31, Abblin\_30, Abinghost\_26, Abt2graduatex2\_20, Acadian\_25, Affeca\_28, Ailee\_28, Akoma\_26, AlanGrant\_24, Ali17\_26, AnClar\_23, AnarQue\_24, Angelicage\_28, Apex\_23, Apizium\_24, Argie\_20, Arri\_29, Ashertheman\_30, Ashraf\_24, Asis\_19, Athena\_27, Atuin\_85, Audrey\_26, Austelle\_24, Axumite\_22, BabyGotBac\_19, Baddon\_29, Bae\_24, Bakery\_27, Baloo\_26, Barb\_28, Barsten\_30, BatteryCK\_24, Baumdotcom\_29, BayC\_19, Belphegor\_28, Ben11\_25, Bernardo\_26, Bibwit\_29, Big4\_83, BiggityBass\_22, BirdsNest\_28, Bizzy\_30, Bloom\_91, BlueNGold\_95, BobBob\_27, BobbyK\_23, Boopy\_96, Brandonk123\_31, Briakila\_26, Brilliant\_25, BrownCNA\_24, CRB2\_27, CaiB\_24, Casbah\_25, Cece\_77, Cepens\_19, ChaChing\_26, ChadMasterC\_30, Chaelin\_24, Chandler\_26, CharlieGBrown\_24, CharlottesWeb\_22, Charming\_30, Chickadee\_27, ChrisnMich\_22, Chute\_24, ClamChowder\_28, Clawz\_53, CloverMinnie\_24, Clown\_30, Coletti\_24, Compostia\_27, Cooper\_23, Corofin\_26, D12\_19, DaddyDaniels\_25, Daisy\_26, Danyall\_28, Dati\_25, Deenasa\_26, DelRivs\_24, Delrey21\_29, Derg\_27, Derpp\_24, Devonte\_26, Dextert\_28, DigitDog\_25, DoctorFroggo\_29, Doddsville\_25, DonTron\_53, Donny\_25, Dori\_22,

DuchessDung\_23, Duggie\_24, DunneganBoMo\_81, Durga\_25, EMoore\_26, EastView9101\_25, EdmundFerry\_26, Etaye\_25, Evaa\_23, Evamon\_26, Fireball\_27, Fitzgerald\_28, Flatwoods\_30, Fortunato\_23, Forza\_96, Fosterous\_28, Frederick\_23, Fresco\_22, Fugax\_28, Funsized\_28, GMA2\_25, GTE6\_27, Gadget\_27, Gaea\_29, Galadriel\_30, GeneCoco\_25, Geodirt\_27, Gervas\_26, Gezellig\_27, GlenHope\_27, GodPhather\_20, GodonK\_84, Gustavo\_29, Halfpint\_25, Halo3\_27, Hangman\_23, Hans\_30, Hartsy\_24, HarveySr\_26, Hashim76\_29, Heath\_22, Heathcliff\_26, Hocus\_24, Hosp\_019, Hydro\_23, ImtiyazSitla\_24, Imvubu\_19, Indlovu\_23, Inspectinfecti\_29, JAMaL\_23, JDog\_25, JKSyngboy\_27, Jabberwocky\_28, JaguarMi\_23, JakeO\_24, Jambalaya\_26, Jeon\_19, Jiminy\_24, Jolie1\_021, Kailash\_25, Kamashten\_29, Kamiyu\_26, KayaCho\_21, Keitabear\_30, Keitherie\_25, Kewpiedoll\_29, KimmyK\_28, Knocker\_27, Kronus\_25, Kroos\_30, Kwekel\_27, Kwksand96\_24, Kwobi\_30, Labeouficaum\_24, Lennon\_30, Leonard\_28, LestyG\_26, Ligma\_22, LilHam\_27, LilMcDreamy\_22, Lilbeanie\_25, LittleMunchkin\_24, Lolalove\_23, Longacauda\_24, Love\_33, Mag7\_24, Magic8\_25, Magpie\_22, Maih\_19, MakoManhole\_24, Mao1\_21, Mareelih\_94, Mariokart\_22, Marley1013\_26, Mask\_22, Maskar\_24, McKinley\_32, Megabear\_19, MelBins\_29, Melc17\_25, MelsMeow\_24, MichaelPhcott\_24, Mischief19\_27, Mithril\_23, MmasiCarm\_26, MoontowerMania\_29, Mortcellus\_25, Morty007\_26, MossRose\_24, MrPhizzler\_24, Mudslide\_23, Mutzi\_28, Mysterious\_26, Nanao\_22, Nangang\_25, Natkenzie\_30, Neos5\_26, Nigel\_21, Nordenberg\_24, Nozo\_26, Nubi\_26, OSmaximus\_25, Obutu\_26, Oline\_24, OrangeOswald\_26, PR\_19, Paries\_32, Patbob\_88, PauloDiaboli\_94, PenguinLover67\_27, Phaedrus\_24, PhatLouie\_25, Phauci\_21, Phayeta\_26, Phelemich\_25, Phendrix\_82, PhenghisKhan\_24, Phergie\_24, Philly\_25, Phinally\_28, Phleuron\_24, Phlop\_26, Phlyer\_26, PhrankReynolds\_24, Pine5\_25, PinkCoffee\_28, Pinkman\_24, Pipefish\_26, Portcullis\_26, Poster\_22, Prince\_24, PullumCavea\_26, Pumpernickel\_91, Quesadilla\_26, Racecar\_88, RagingRooster\_26, RainyPolka\_20, RawrgerThat\_23, Reprobate\_25, Ribeye\_30, Rich\_24, Rimu\_26, Rita1961\_26, RiverRaider\_31, RoadKill\_25, Rofo\_30, RogerDodger\_29, RomaT\_26, SJReid\_93, Saguaro\_26, Salete\_19, Salvador\_26, Sampson\_30, Sanjuju\_28, Saronaya\_29, Savbucketdawg\_26, SchottB\_28, Schueller\_25, Scioto\_30, Sedona\_30, Sejanus\_22, Serendipitous\_24, Shatter\_22, Shinji\_26, Shivanishola\_31, SirJeffery\_25, Sisko\_22, Sitar\_30, Sixama\_94, SlippinJimmy\_26, SmokingBunny\_26, Soile\_25, Soos\_49, Sour\_26, Sting\_53, Stinger\_21, StinkyVeggy\_27, StorminNorm\_29, Struggle\_24, Stultus\_28, Suigeneris\_25, Swiphy\_26, SynergyX\_26, TP1604\_19, TPA2\_31, Tangent\_30, Tangerine\_29, Taptic\_19, Tardus\_31, Thing3\_29, Thonko\_24, Tiamoceli\_28, TillyBobJoe\_26, Togo\_26, Tonitrus\_41, Trypo\_25, TurkishDelight\_25, Twister6\_28, Twonlo\_25, Tycho\_29, Tydolla\_26, TyrionL\_24, Vaishali24\_24, Valary\_29, VanDeWege\_29, Veritas\_24, Verity\_29, ViaConlectus\_30, Vincenzo\_24, VioletZ\_23, Virgeve\_24, Vivi2\_32, Waleliano\_23, Wallhey\_24, Weher20\_25, Windsor\_24, Wizard\_26, Wooper\_24, Xkcd426\_25, YDN12\_20, Yago84\_22, Yahalom\_26, Yinz\_26, YorkOnyx\_30, YungMoney\_28, Zemanar\_24, Zenteno07\_29, Zipp\_29, Zitch\_31, Zonia\_25, Zooman\_79, phiAsp2\_21,

### Summary by start number:

Start 39:

- Found in 3 of 643 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 547
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Sour\_26 (DR),

Start 41:

- Found in 1 of 643 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA2\_31 (singleton),

#### Start 42:

- Found in 1 of 643 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 547
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pumpernickel\_91 (GD4),

#### Start 43:

- Found in 23 of 643 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 2 of 547
- Called 8.7% of time when present
- Phage (with cluster) where this start called: A3Wally\_94 (GD1), PauloDiaboli\_94 (GD1),

#### Start 44:

- Found in 8 of 643 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 6 of 547
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Big4\_83 (GD2), Clawz\_53 (CP), DonTron\_53 (CP), GodonK\_84 (DK), Phendrix\_82 (DK), Soos\_49 (CP), Sting\_53 (CP), Zooman\_79 (GD2),

#### Start 45:

- Found in 1 of 643 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 547
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cece\_77 (GD3),

#### Start 46:

- Found in 64 of 643 ( 10.0% ) of genes in pham
- Manual Annotations of this start: 52 of 547
- Called 96.9% of time when present
- Phage (with cluster) where this start called: 39HC\_021 (B6), 40BC\_021 (B6), Apizium\_24 (B1), Ashraf\_24 (B1), BatteryCK\_24 (B1), Brilliant\_25 (B1), Chaelin\_24 (B1), CharlieGBrown\_24 (B1), Chute\_24 (B1), Coletti\_24 (B1), DaddyDaniels\_25 (B1), Dati\_25 (B1), DelRivs\_24 (B1), Derpp\_24 (B1), Doddsville\_25 (B1), DuchessDung\_23 (B1), Duggie\_24 (B1), Durga\_25 (B1), Etaye\_25 (B1), GeneCoco\_25 (B1), Hocus\_24 (B1), Hosp\_019 (B6), ImtiyazSitla\_24 (B1), Indlovu\_23 (B11), JDog\_25 (B1), JakeO\_24 (B1), Jiminy\_24 (B1), Jolie1\_021 (B6), Kailash\_25 (B1), KayaCho\_21 (B6), Keitherie\_25 (B1), Kwksand96\_24 (B1), Labeouficaum\_24 (B1), Longacauda\_24 (B1), Mag7\_24 (B1), Magic8\_25 (B1), Maskar\_24 (B1), Melc17\_25 (B1), MelsMeow\_24 (B1), MichaelPhcott\_24 (B1), MrPhizzler\_24 (B1), OSmaximus\_25 (B1), Oline\_24 (B1), PhatLouie\_25 (B1), PhenghisKhan\_24 (B1), Phergie\_24 (B1), Phleuron\_24 (B1), PhrankReynolds\_24 (B1), Pinkman\_24 (B1), Schueller\_25 (B1), Soile\_25 (B1), Struggle\_24 (B1), Swiphy\_26 (B1), Trypo\_25 (B1), TyrionL\_24 (B1), Vaishali24\_24 (B1), Veritas\_24 (B1), Virgeve\_24 (B1), Wallhey\_24 (B1), Weher20\_25 (B1), Windsor\_24 (B1), Zonia\_25 (B1),

Start 47:

- Found in 295 of 643 ( 45.9% ) of genes in pham
- Manual Annotations of this start: 263 of 547
- Called 99.3% of time when present
- Phage (with cluster) where this start called: ABU\_25 (B1), AbsoluteMadLad\_24 (B1), Adriana\_25 (B1), Aelin\_24 (B1), Allegro\_27 (B2), AltPhacts\_25 (B1), Altheas\_35 (EG), Altwerkus\_24 (B1), AluminumJesus\_31 (EG), Anderson\_25 (B1), Andre\_25 (B1), Antonia\_24 (B1), Arbitrator\_27 (B2), Ares\_27 (B2), BabyDotz\_32 (EG), Badfish\_25 (B1), Bananafish\_27 (B2), Banjo\_24 (B1), Basato\_26 (B1), Beaglebox\_24 (B1), BirdInFrench\_32 (EG), Bishoperium\_24 (B1), Blab\_31 (EG), BlackStallion\_25 (B1), Blocker23\_27 (B2), BlueHusk\_25 (B1), Bluephacebaby\_24 (B1), Boehler\_25 (B1), Boyle\_27 (B2), Brownie5\_27 (B2), Buckeye\_25 (B1), Burr\_24 (B1), Calamitous\_27 (B2), CamL\_25 (B1), CampRoach\_24 (B1), CandC\_31 (EG), Cannibal\_25 (B1), Carthage\_23 (B1), Casend\_34 (EG), Charles1\_25 (B1), CheetO\_25 (B1), Cher\_24 (B1), Childish\_24 (B1), Chorkpop\_25 (B1), Chunky\_25 (B1), Cobra\_25 (B1), Coffee\_27 (B2), Colbert\_25 (B1), Cornobble\_24 (B1), Cosmolli16\_24 (B1), Craff\_25 (B1), Crownjwl\_25 (B1), Daffy\_25 (B1), Daka\_25 (B1), Dice\_26 (B1), Dingo\_25 (B1), Dione\_24 (B1), DirtJuice\_25 (B1), DoesntMatter\_25 (B1), DonSanchon\_24 (B1), DonaldDuck\_33 (EG), Eaglehorse\_27 (B2), Emiris\_25 (B1), EmpTee\_25 (B1), Eremos\_25 (B1), Eugenia\_25 (B1), Fang\_25 (B1), Faze9\_27 (B2), Fizzles\_33 (EG), FluffyNinja\_25 (B1), Fozzie\_24 (B1), Frankicide\_25 (B1), Fransoyer\_35 (EG), Fregley\_33 (EG), FrenchFry\_27 (B2), Freya\_24 (B1), FriarPreacher\_25 (B1), Fringe\_25 (B1), FugateOSU\_24 (B1), Gareth\_24 (B1), Gazebo\_32 (EG), Giraffe\_25 (B1), Glass\_27 (B2), Godines\_27 (B2), Gophee\_25 (B1), Grand2040\_24 (B1), Grassboy\_34 (EG), Gwilliam\_25 (B1), Gyarad\_0025 (B1), HSavage\_25 (B1), Haimas\_25 (B1), Haleema\_24 (B1), Hamish\_25 (B1), Harvey\_25 (B1), Hedgerow\_27 (B2), Held\_25 (B1), HenryJackson\_24 (B1), Hertubise\_25 (B1), Hetaeria\_25 (B1), HighStump\_24 (B1), Holeinone\_27 (B2), Horchata\_25 (B1), Hyperion\_32 (EG), Inchworm\_25 (B1), Inverness\_25 (B1), Iridoclysis\_25 (B1), IsaacEli\_25 (B1), ItsyBitsy1\_27 (B2), JacAttac\_25 (B1), JangoPhett\_25 (B1), Jehoshaphat\_35 (EG), Jillium\_24 (B1), Judebell\_35 (EG), KLucky39\_25 (B1), Kahve\_24 (B1), Kaleb\_27 (B2), Katniss\_25 (B1), Kelcole\_31 (EG), Kheth\_27 (B2), Kikipoo\_25 (B1), Kimbrough\_25 (B1), KingVeVeVe\_25 (B1), KlimbOn\_25 (B1), Kloppinator\_25 (B1), Kwadwo\_24 (B1), Kyva\_35 (EG), Lars\_27 (B2), LasagnaCat\_25 (B1), Lasso\_25 (B1), Laurie\_27 (B2), LeeLot\_25 (B1), Lego3393\_25 (B1), Legolas\_24 (B1), LeiMonet\_25 (B1), LemonSlice\_25 (B1), Lephleur\_27 (B2), LizLemon\_27 (B2), Lonelysoil\_32 (EG), Lopsy\_24 (B1), LostAndPhound\_24 (B1), LuckyMarjie\_24 (B1), Lulumae\_24 (B1), Lulwa\_25 (B1), Lumine\_24 (B1), MRabcd\_24 (B1), Mana\_24 (B1), Manad\_24 (B1), Marcie\_37 (EG), Maru\_24 (B1), Mashley\_31 (EG), MasterPo\_27 (B2), Matalotodo\_24 (B1), Mcshane\_24 (B1), Mecca\_24 (B1), Megamind20\_25 (B1), Megatron\_25 (B1), Mesh1\_25 (B1), Mikota\_25 (B1), MiniBoss\_25 (B1), MitKao\_25 (B1), Morgushi\_25 (B1), Morty\_25 (B1), Mosaic\_24 (B1), Mulan\_24 (B1), Murdoc\_25 (B1), Mutante\_24 (B1), Nacho\_0025 (B1), Namago\_33 (EG), Newman\_25 (B1), Nicole21\_25 (B1), Nike\_33 (EG), Numberten\_25 (B1), Nyala\_24 (B1), Olak\_25 (B1), Olive\_25 (B1), OliverWalter\_25 (B1), Omniscient\_25 (B1), OneinaGillian\_32 (EG), Oosterbaan\_25 (B1), Opia\_27 (B2), Orfeu\_24 (B1), Orion\_25 (B1), Orwigg\_25 (B1), PG1\_25 (B1), Pacifista\_26 (B1), Pepe25\_31 (EG), Phabia\_33 (EG), Phamished\_25 (B1), Phantasmagoria\_27 (B2), Phareon\_25 (B1), PhatCats2014\_25 (B1), Pherdinand\_25 (B1), Phinky\_39 (EG), Phipps\_25 (B1), PhrodoBaggins\_24 (B1), Phunky\_25 (B1), Piglet\_0024 (B1), PinheadLarry\_25 (B1), Pipsqueak\_25 (B1), Placalicious\_24 (B1), Plmatters\_25 (B1), Podrick\_25 (B1), Pops\_25 (B1), Potter\_24 (B1), Prickles\_25 (B1), ProfessorX\_25 (B1), Puhltonio\_25 (B1), Quammi\_31 (EG), QueenBeane\_25 (B1),

Quisquilliae\_25 (B1), Qyrzula\_25 (B2), RedMaple\_24 (B1), Rhinoforte\_27 (B2), Ricotta\_25 (B1), Riggan\_25 (B1), RobinRose\_34 (EG), Robyn\_24 (B1), Roliet\_25 (B1), Romm\_34 (EG), Roscoe\_26 (B1), Rosebush\_27 (B2), Rowlf\_30 (EG), Roy17\_25 (B1), RubyRalph\_35 (EG), Rudy\_31 (EG), SDcharge11\_25 (B1), Sabella\_27 (B2), SadLad\_37 (EG), SallyK\_34 (EG), Samaymay\_25 (B1), SassyCat97\_24 (B1), Schadenfreude\_24 (B1), Scoot17C\_25 (B1), Scrick\_25 (B1), Selr12\_25 (B1), Serendipity\_25 (B1), Serpentine\_0025 (B1), Sheila\_25 (B1), ShiVal\_25 (B1), Sigman\_25 (B1), Sillytadpoles\_34 (EG), Simielle\_24 (B1), Skippy\_25 (B1), Slatt\_25 (B1), Solosis\_24 (B1), Sophia\_24 (B1), Soto\_25 (B1), Spartan300\_25 (B1), Squash\_35 (EG), Squid\_25 (B1), Squiggle\_25 (B1), StrawberryJamm\_35 (EG), Suffolk\_25 (B1), Surely\_25 (B1), Swish\_25 (B1), TA17A\_27 (B2), TallGrassMM\_25 (B1), Teehee\_34 (EG), Telesworld\_24 (B1), Tempo\_32 (EG), Thora\_25 (B1), ThreeOh3D2\_25 (B1), Timmi\_24 (B1), Tinciduntolum\_28 (B2), Tissue\_33 (EG), TomBombadil\_25 (B1), Tomlarah\_25 (B1), Toni\_24 (B1), Tooj\_25 (B1), Tres\_27 (B2), True\_24 (B1), UAch1\_25 (B1), UncleHowie\_25 (B1), Usavi\_25 (B1), Valjean\_25 (B1), Vaticameos\_25 (B1), Viceroy\_32 (EG), Virapocalypse\_25 (B1), Vista\_25 (B1), Vivaldi\_25 (B1), Vortex\_25 (B1), Waterdiva\_25 (B1), Wayne3\_34 (EG), West99\_27 (B2), Wheelie\_32 (EG), Wilca\_32 (EG), Xavier\_24 (B1), Yoshand\_25 (B1), YouGoGlencoco\_25 (B1), Zagie\_33 (EG), Zaider\_26 (B1), Zelda\_25 (B1), Zhafia\_36 (EG),

#### Start 49:

- Found in 1 of 643 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pine5\_25 (singleton),

#### Start 50:

- Found in 23 of 643 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 17 of 547
- Called 91.3% of time when present
- Phage (with cluster) where this start called: AnClar\_23 (DR), AnarQue\_24 (DR), Axumite\_22 (DR), BiggityBass\_22 (DR), CRB2\_27 (B9), CaiB\_24 (DR), CharlottesWeb\_22 (DR), CloverMinnie\_24 (DR), Evaa\_23 (DR), Fresco\_22 (DR), Ligma\_22 (DR), LittleMunchkin\_24 (DR), MakoManhole\_24 (DR), Mariokart\_22 (DR), MossRose\_24 (DR), PenguinLover67\_27 (B9), Quesadilla\_26 (B9), Shatter\_22 (DR), Sisko\_22 (DR), Wooper\_24 (DR), Yago84\_22 (DR),

#### Start 52:

- Found in 22 of 643 ( 3.4% ) of genes in pham
- Manual Annotations of this start: 15 of 547
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acadian\_25 (B5), Bae\_24 (B5), BirdsNest\_28 (B13), DigitDog\_25 (B5), Donny\_25 (B5), EastView9101\_25 (B5), Funsized\_28 (B9), Hashim76\_29 (B13), Imvubu\_19 (B10), Knocker\_27 (B9), LilMcDreamy\_22 (B12), Mysterious\_26 (B5), Nangang\_25 (B5), Phelemich\_25 (B5), Reprobate\_25 (B5), Rich\_24 (B5), Saguaro\_26 (B7), Serendipitous\_24 (B5), SirJeffery\_25 (B5), StinkyVeggy\_27 (B5), Suigeneris\_25 (B5), Zenteno07\_29 (B13),

#### Start 53:

- Found in 12 of 643 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 10 of 547
- Called 91.7% of time when present

- Phage (with cluster) where this start called: Baddon\_29 (DE1), Bizzy\_30 (DE1), Derg\_27 (DE1), Dori\_22 (AD), Flatwoods\_30 (DE1), Gaea\_29 (DE1), JKSyngboy\_27 (DE1), Mask\_22 (AD), Ribeye\_30 (DE1), Sejanus\_22 (AD), YorkOnyx\_30 (DE1),

#### Start 54:

- Found in 30 of 643 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 23 of 547
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlanGrant\_24 (B4), Apex\_23 (B4), Austelle\_24 (B4), BobbyK\_23 (B4), BrownCNA\_24 (B4), ChrisnMich\_22 (B4), Cooper\_23 (B4), Fortunato\_23 (B4), Frederick\_23 (B4), Hangman\_23 (B4), Heath\_22 (B4), Hydro\_23 (B4), JAMaL\_23 (B4), JaguarMi\_23 (B4), Lolalove\_23 (B4), Magpie\_22 (B4), Mithril\_23 (B4), Mudslide\_23 (B4), Nanao\_22 (B4), Nigel\_21 (B4), Poster\_22 (B4), Prince\_24 (B4), RawrgerThat\_23 (B4), Stinger\_21 (B4), Thonko\_24 (B8), Vincenzo\_24 (B4), VioletZ\_23 (B4), Waleliano\_23 (B4), Zemanar\_24 (B4), phiAsp2\_21 (singleton),

#### Start 55:

- Found in 20 of 643 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 8 of 547
- Called 45.0% of time when present
- Phage (with cluster) where this start called: Argie\_20 (W), Cepens\_19 (W), D12\_19 (W), GMA2\_25 (DS), GodPhather\_20 (W), Jeon\_19 (W), Megabear\_19 (W), PR\_19 (W), Taptic\_19 (W),

#### Start 56:

- Found in 50 of 643 ( 7.8% ) of genes in pham
- Manual Annotations of this start: 42 of 547
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Abinghost\_26 (B3), Akoma\_26 (B3), Athena\_27 (B3), Audrey\_26 (B3), Baloo\_26 (B3), Ben11\_25 (B3), Bernardo\_26 (B3), Briakila\_26 (B3), Casbah\_25 (B3), ChaChing\_26 (B3), Chandler\_26 (B3), Compostia\_27 (B3), Corofin\_26 (B3), Daisy\_26 (B3), Deenasa\_26 (B3), Devonte\_26 (B3), Gadget\_27 (B3), Gervas\_26 (B3), GlenHope\_27 (B3), Halfpint\_25 (B3), HarveySr\_26 (B3), Heathcliff\_26 (B3), Kamiyu\_26 (B3), Kronus\_25 (B3), LestyG\_26 (B3), Marley1013\_26 (B3), MmasiCarm\_26 (B3), Mortcellus\_25 (B3), Morty007\_26 (B3), Neos5\_26 (B3), Nozo\_26 (B3), Obutu\_26 (B3), OrangeOswald\_26 (B3), Phayeta\_26 (B3), Philly\_25 (B3), Phlyer\_26 (B3), Pipefish\_26 (B3), RagingRooster\_26 (B3), Rita1961\_26 (B3), RomaT\_26 (B3), SlippinJimmy\_26 (B3), SynergyX\_26 (B3), Tydolla\_26 (B3), Yahalom\_26 (B3), Yinz\_26 (B3),

#### Start 60:

- Found in 12 of 643 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 7 of 547
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Atuin\_85 (FC), Bloom\_91 (FC), BlueNGold\_95 (DS), Boopy\_96 (DS), Forza\_96 (DS), Lilbeanie\_25 (DE5), Mareelih\_94 (DS), Patbob\_88 (FC), Racecar\_88 (FC), Sixama\_94 (DS),

#### Start 61:

- Found in 105 of 643 ( 16.3% ) of genes in pham
- Manual Annotations of this start: 86 of 547
- Called 100.0% of time when present

- Phage (with cluster) where this start called: APunk\_31 (DE4), Abblin\_30 (DE4), Affeca\_28 (DE1), Ailee\_28 (DE1), Ali17\_26 (DE2), Angelicage\_28 (DE1), Arri\_29 (DC1), Ashertheman\_30 (DE1), Bakery\_27 (DC1), Barb\_28 (DC1), Barsten\_30 (DE1), Baumdotcom\_29 (DE1), Belphegor\_28 (DE), Bibwit\_29 (DE1), BobBob\_27 (DE1), Brandonk123\_31 (DE1), ChadMasterC\_30 (DE1), Charming\_30 (DE1), Chickadee\_27 (DE3), ClamChowder\_28 (DC1), Clown\_30 (DC2), Danyall\_28 (DC1), Delrey21\_29 (DE4), Dextert\_28 (DE3), DoctorFroggo\_29 (DE4), EMoore\_26 (DE2), EdmundFerry\_26 (DE3), Evamon\_26 (DC1), Fireball\_27 (DC1), Fitzgerald\_28 (DE1), Fosterous\_28 (DE1), Fugax\_28 (DC1), GTE6\_27 (DE3), Galadriel\_30 (DE1), Geodirt\_27 (DE1), Gezellig\_27 (DC1), Gustavo\_29 (DE1), Halo3\_27 (DC1), Hans\_30 (DE2), Inspectinfecti\_29 (DE2), Jabberwocky\_28 (DE1), Jambalaya\_26 (DC1), Kamashten\_29 (DE1), Keitabear\_30 (DE1), Kewpiedoll\_29 (DE1), KimmyK\_28 (DC1), Kroos\_30 (DE1), Kwekel\_27 (DE3), Kwobi\_30 (DE1), Lennon\_30 (DE1), Leonard\_28 (DE2), LilHam\_27 (DE1), Love\_33 (DE1), McKinley\_32 (DE1), MelBins\_29 (DE2), MoontowerMania\_29 (DE1), Mutzi\_28 (DC1), Natkenzie\_30 (DE4), Nordenberg\_24 (DE1), Nubi\_26 (DC1), Paries\_32 (DE1), Phauci\_21 (DE2), Phinally\_28 (DE2), Phlop\_26 (DC1), PinkCoffee\_28 (DC1), Portcullis\_26 (DC1), PullumCavea\_26 (DC1), RiverRaider\_31 (DE1), RoadKill\_25 (DE3), Rofo\_30 (DE1), RogerDodger\_29 (DC1), SJReid\_93 (FC), Salvador\_26 (DC1), Sampson\_30 (DE4), Sanjuju\_28 (DE1), Saronaya\_29 (DE1), Savbucketdawg\_26 (DC1), SchottB\_28 (DE1), Scioto\_30 (DE4), Sedona\_30 (DE1), Shinji\_26 (DC1), Shivanishola\_31 (DE1), Sitar\_30 (DE1), SmokingBunny\_26 (DC1), StorminNorm\_29 (DE1), Stultus\_28 (DE1), Tangent\_30 (DE1), Tangerine\_29 (DE1), Tardus\_31 (DE4), Thing3\_29 (DE1), Tiamoceli\_28 (DE3), TillyBobJoe\_26 (DC1), Togo\_26 (DC1), Twister6\_28 (DC1), Twonlo\_25 (DE3), Tycho\_29 (DE1), Valary\_29 (DC1), VanDeWege\_29 (DC1), Verity\_29 (DE4), ViaConlectus\_30 (DE4), Vivi2\_32 (DE1), Wizard\_26 (DC1), YungMoney\_28 (DC1), Zipp\_29 (DE4), Zitch\_31 (DE4),

Start 65:

- Found in 18 of 643 ( 2.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Llemily\_33 (EG),

Start 71:

- Found in 12 of 643 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 8.3% of time when present
- Phage (with cluster) where this start called: DunneganBoMo\_81 (FC),

Start 72:

- Found in 3 of 643 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Tonitrus\_41 (singleton),

Start 73:

- Found in 8 of 643 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 7 of 547
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abt2graduatex2\_20 (BG), Asis\_19 (BG), BabyGotBac\_19 (BG), BayC\_19 (BG), Maih\_19 (BG), RainyPolka\_20 (BG), Salete\_19 (BG), TP1604\_19 (BG),



Start 75:

- Found in 4 of 643 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 4 of 547
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mischief19\_27 (BG), TurkishDelight\_25 (singleton), Xkcd426\_25 (BG), YDN12\_20 (BG),

Start 81:

- Found in 22 of 643 ( 3.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Hartsy\_24 (B1), Rimu\_26 (B1),

Start 86:

- Found in 42 of 643 ( 6.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.4% of time when present
- Phage (with cluster) where this start called: Mao1\_21 (AD),

Start 95:

- Found in 303 of 643 ( 47.1% ) of genes in pham
- Manual Annotations of this start: 1 of 547
- Called 0.3% of time when present
- Phage (with cluster) where this start called: Chah\_26 (B1),

Start 96:

- Found in 407 of 643 ( 63.3% ) of genes in pham
- Manual Annotations of this start: 1 of 547
- Called 0.2% of time when present
- Phage (with cluster) where this start called: Phaedrus\_24 (B3),

**Summary by clusters:**

There are 35 clusters represented in this pham: GD1, GD2, BG, GD4, DK, DE, singleton, FC, B12, B13, B10, B11, GD3, DR, DS, AD, EG, W, CP, DC2, DC1, DE1, DE2, DE3, DE4, DE5, B4, B5, B6, B7, B1, B2, B3, B8, B9,

Info for manual annotations of cluster AD:

- Start number 53 was manually annotated 3 times for cluster AD.

Info for manual annotations of cluster B1:

- Start number 46 was manually annotated 50 times for cluster B1.
- Start number 47 was manually annotated 195 times for cluster B1.
- Start number 95 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B10:

- Start number 52 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:

- Start number 46 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 52 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 52 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 47 was manually annotated 32 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 56 was manually annotated 42 times for cluster B3.
- Start number 96 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster B4:

- Start number 54 was manually annotated 22 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 52 was manually annotated 8 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 46 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 52 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 54 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 50 was manually annotated 3 times for cluster B9.
- Start number 52 was manually annotated 2 times for cluster B9.

Info for manual annotations of cluster BG:

- Start number 73 was manually annotated 7 times for cluster BG.
- Start number 75 was manually annotated 3 times for cluster BG.

Info for manual annotations of cluster CP:

- Start number 44 was manually annotated 2 times for cluster CP.

Info for manual annotations of cluster DC1:

- Start number 61 was manually annotated 28 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 61 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DE1:

- Start number 53 was manually annotated 7 times for cluster DE1.
- Start number 61 was manually annotated 35 times for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 61 was manually annotated 7 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 61 was manually annotated 6 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 61 was manually annotated 9 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 60 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DK:

- Start number 44 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DR:

- Start number 39 was manually annotated 1 time for cluster DR.
- Start number 50 was manually annotated 14 times for cluster DR.

Info for manual annotations of cluster DS:

- Start number 60 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster EG:

- Start number 47 was manually annotated 36 times for cluster EG.

Info for manual annotations of cluster FC:

- Start number 60 was manually annotated 1 time for cluster FC.

Info for manual annotations of cluster GD1:

- Start number 43 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 44 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 45 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 42 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster W:

- Start number 55 was manually annotated 8 times for cluster W.

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

Gene: 39HC\_021 Start: 17860, Stop: 18273, Start Num: 46

Candidate Starts for 39HC\_021:

(Start: 46 @17860 has 52 MA's), (105, 18028), (117, 18055), (152, 18172),

Gene: 40BC\_021 Start: 17860, Stop: 18273, Start Num: 46

Candidate Starts for 40BC\_021:

(Start: 46 @17860 has 52 MA's), (105, 18028), (117, 18055), (152, 18172),

Gene: A3Wally\_94 Start: 50689, Stop: 51099, Start Num: 43

Candidate Starts for A3Wally\_94:

(Start: 43 @50689 has 2 MA's), (82, 50776), (84, 50779), (92, 50809), (153, 51019), (159, 51037),

Gene: ABU\_25 Start: 18669, Stop: 19091, Start Num: 47

Candidate Starts for ABU\_25:

(30, 18603), (Start: 47 @18669 has 263 MA's), (Start: 95 @18792 has 1 MA's), (Start: 96 @18798 has 1 MA's), (97, 18804), (117, 18867), (128, 18909), (153, 18987), (166, 19035), (172, 19059), (176, 19077), (177, 19083),

Gene: APunk\_31 Start: 22352, Stop: 22783, Start Num: 61

Candidate Starts for APunk\_31:

(33, 22292), (Start: 43 @22325 has 2 MA's), (Start: 61 @22352 has 86 MA's), (98, 22481), (109, 22511), (136, 22613), (137, 22619), (142, 22634), (165, 22691), (169, 22706), (179, 22754), (180, 22757),

Gene: Abblin\_30 Start: 22964, Stop: 23395, Start Num: 61

Candidate Starts for Abblin\_30:

(33, 22904), (Start: 43 @22937 has 2 MA's), (Start: 61 @22964 has 86 MA's), (98, 23093), (109, 23123), (136, 23225), (137, 23231), (142, 23246), (165, 23303), (169, 23318), (179, 23366), (180, 23369),

Gene: Abinghost\_26 Start: 19363, Stop: 19776, Start Num: 56

Candidate Starts for Abinghost\_26:

(Start: 56 @19363 has 42 MA's), (86, 19438), (Start: 96 @19483 has 1 MA's), (97, 19489), (132, 19621), (171, 19747),

Gene: AbsoluteMadLad\_24 Start: 18670, Stop: 19092, Start Num: 47

Candidate Starts for AbsoluteMadLad\_24:

(30, 18604), (Start: 47 @18670 has 263 MA's), (Start: 95 @18793 has 1 MA's), (Start: 96 @18799 has 1 MA's), (97, 18805), (117, 18868), (128, 18910), (153, 18988), (166, 19036), (172, 19060), (176, 19078), (177, 19084),

Gene: Abt2graduatex2\_20 Start: 19744, Stop: 20124, Start Num: 73

Candidate Starts for Abt2graduatex2\_20:

(Start: 73 @19744 has 7 MA's), (82, 19759), (94, 19801), (101, 19846), (130, 19936), (136, 19966), (155, 20017), (161, 20032), (167, 20059), (168, 20062),

Gene: Acadian\_25 Start: 19389, Stop: 19805, Start Num: 52

Candidate Starts for Acadian\_25:

(Start: 52 @19389 has 15 MA's), (76, 19449), (97, 19518), (128, 19623), (133, 19653), (178, 19800),

Gene: Adriana\_25 Start: 18672, Stop: 19094, Start Num: 47

Candidate Starts for Adriana\_25:

(30, 18606), (Start: 47 @18672 has 263 MA's), (Start: 95 @18795 has 1 MA's), (Start: 96 @18801 has 1 MA's), (97, 18807), (117, 18870), (128, 18912), (153, 18990), (166, 19038), (172, 19062), (176, 19080), (177, 19086),

Gene: Aelin\_24 Start: 18235, Stop: 18657, Start Num: 47

Candidate Starts for Aelin\_24:

(30, 18169), (Start: 47 @18235 has 263 MA's), (Start: 95 @18358 has 1 MA's), (Start: 96 @18364 has 1 MA's), (97, 18370), (117, 18433), (128, 18475), (153, 18553), (166, 18601), (172, 18625), (176, 18643), (177, 18649),

Gene: Affeca\_28 Start: 22852, Stop: 23286, Start Num: 61

Candidate Starts for Affeca\_28:

(40, 22822), (Start: 61 @22852 has 86 MA's), (92, 22936), (109, 23011), (120, 23035), (136, 23113), (142, 23134), (169, 23206), (180, 23257),

Gene: Ailee\_28 Start: 23561, Stop: 23995, Start Num: 61

Candidate Starts for Ailee\_28:

(Start: 61 @23561 has 86 MA's), (92, 23645), (109, 23720), (120, 23744), (136, 23822), (142, 23843), (169, 23915), (180, 23966),

Gene: Akoma\_26 Start: 19364, Stop: 19777, Start Num: 56

Candidate Starts for Akoma\_26:

(Start: 56 @19364 has 42 MA's), (Start: 96 @19484 has 1 MA's), (97, 19490), (110, 19538), (132, 19622), (171, 19748),

Gene: AlanGrant\_24 Start: 20089, Stop: 20502, Start Num: 54

Candidate Starts for AlanGrant\_24:

(35, 20038), (Start: 54 @20089 has 23 MA's), (Start: 96 @20209 has 1 MA's), (97, 20215), (121, 20290), (128, 20320), (152, 20395), (158, 20413), (177, 20494),

Gene: Ali17\_26 Start: 20746, Stop: 21177, Start Num: 61

Candidate Starts for Ali17\_26:

(13, 20518), (16, 20554), (28, 20659), (Start: 43 @20719 has 2 MA's), (Start: 61 @20746 has 86 MA's), (92, 20830), (118, 20926), (136, 21007), (137, 21013), (141, 21025), (165, 21085), (171, 21109), (179, 21148), (180, 21151),

Gene: Allegro\_27 Start: 20836, Stop: 21264, Start Num: 47

Candidate Starts for Allegro\_27:

(37, 20809), (Start: 47 @20836 has 263 MA's), (57, 20851), (Start: 96 @20968 has 1 MA's), (97, 20974), (102, 21001), (110, 21022), (117, 21040), (153, 21160), (154, 21166), (171, 21229), (177, 21256),

Gene: AltPhacts\_25 Start: 18664, Stop: 19086, Start Num: 47

Candidate Starts for AltPhacts\_25:

(30, 18598), (Start: 47 @18664 has 263 MA's), (Start: 95 @18787 has 1 MA's), (Start: 96 @18793 has 1 MA's), (97, 18799), (117, 18862), (128, 18904), (153, 18982), (166, 19030), (172, 19054), (176, 19072), (177, 19078),

Gene: Altheas\_35 Start: 22433, Stop: 22843, Start Num: 47

Candidate Starts for Altheas\_35:

(Start: 47 @22433 has 263 MA's), (102, 22592), (124, 22649), (128, 22667), (135, 22706), (140, 22721),

Gene: Altwerkus\_24 Start: 18364, Stop: 18786, Start Num: 47

Candidate Starts for Altwerkus\_24:

(30, 18298), (Start: 47 @18364 has 263 MA's), (Start: 95 @18487 has 1 MA's), (Start: 96 @18493 has 1 MA's), (97, 18499), (117, 18562), (128, 18604), (153, 18682), (166, 18730), (172, 18754), (176, 18772), (177, 18778),

Gene: AluminumJesus\_31 Start: 21927, Stop: 22340, Start Num: 47

Candidate Starts for AluminumJesus\_31:

(31, 21870), (Start: 47 @21927 has 263 MA's), (79, 21999), (102, 22086), (135, 22203), (140, 22218),

Gene: AnClar\_23 Start: 19435, Stop: 19848, Start Num: 50

Candidate Starts for AnClar\_23:

(Start: 50 @19435 has 17 MA's), (78, 19504), (97, 19570), (110, 19618), (129, 19684), (139, 19726), (171, 19825),

Gene: AnarQue\_24 Start: 18618, Stop: 19028, Start Num: 50

Candidate Starts for AnarQue\_24:

(Start: 50 @18618 has 17 MA's), (103, 18780), (107, 18792), (128, 18858), (132, 18882), (145, 18921), (153, 18936), (172, 19008),

Gene: Anderson\_25 Start: 18662, Stop: 19084, Start Num: 47

Candidate Starts for Anderson\_25:

(30, 18596), (Start: 47 @18662 has 263 MA's), (Start: 95 @18785 has 1 MA's), (Start: 96 @18791 has 1 MA's), (97, 18797), (117, 18860), (128, 18902), (153, 18980), (166, 19028), (172, 19052), (176, 19070), (177, 19076),

Gene: Andre\_25 Start: 18660, Stop: 19082, Start Num: 47

Candidate Starts for Andre\_25:

(30, 18594), (Start: 47 @18660 has 263 MA's), (Start: 95 @18783 has 1 MA's), (Start: 96 @18789 has 1 MA's), (97, 18795), (117, 18858), (128, 18900), (153, 18978), (166, 19026), (172, 19050), (176, 19068), (177, 19074),

Gene: Angelicage\_28 Start: 23269, Stop: 23703, Start Num: 61

Candidate Starts for Angelicage\_28:

(40, 23239), (Start: 61 @23269 has 86 MA's), (92, 23353), (109, 23428), (120, 23452), (136, 23530), (142, 23551), (169, 23623), (180, 23674),

Gene: Antonia\_24 Start: 18235, Stop: 18657, Start Num: 47

Candidate Starts for Antonia\_24:

(30, 18169), (Start: 47 @18235 has 263 MA's), (Start: 95 @18358 has 1 MA's), (Start: 96 @18364 has 1 MA's), (97, 18370), (117, 18433), (128, 18475), (153, 18553), (166, 18601), (172, 18625), (176, 18643), (177, 18649),

Gene: Apex\_23 Start: 19517, Stop: 19930, Start Num: 54

Candidate Starts for Apex\_23:

(Start: 54 @19517 has 23 MA's), (Start: 95 @19631 has 1 MA's), (Start: 96 @19637 has 1 MA's), (97, 19643), (105, 19679), (121, 19718), (124, 19730), (128, 19748), (153, 19826), (158, 19841), (171, 19895), (172, 19898), (177, 19922),

Gene: Apizium\_24 Start: 18422, Stop: 18844, Start Num: 46

Candidate Starts for Apizium\_24:

(Start: 46 @18422 has 52 MA's), (81, 18494), (Start: 95 @18545 has 1 MA's), (Start: 96 @18551 has 1 MA's), (97, 18557), (117, 18620), (128, 18662), (153, 18740), (166, 18788), (172, 18812), (176, 18830), (177, 18836),

Gene: Arbiter\_27 Start: 20921, Stop: 21349, Start Num: 47

Candidate Starts for Arbiter\_27:

(37, 20894), (Start: 47 @20921 has 263 MA's), (57, 20936), (Start: 96 @21053 has 1 MA's), (97, 21059), (102, 21086), (110, 21107), (117, 21125), (153, 21245), (154, 21251), (171, 21314), (177, 21341),

Gene: Ares\_27 Start: 20837, Stop: 21265, Start Num: 47

Candidate Starts for Ares\_27:

(37, 20810), (Start: 47 @20837 has 263 MA's), (57, 20852), (Start: 96 @20969 has 1 MA's), (97, 20975), (102, 21002), (110, 21023), (117, 21041), (153, 21161), (154, 21167), (171, 21230), (177, 21257),

Gene: Argie\_20 Start: 18470, Stop: 18880, Start Num: 55

Candidate Starts for Argie\_20:

(Start: 55 @18470 has 8 MA's), (86, 18545), (Start: 96 @18590 has 1 MA's), (97, 18596), (107, 18638), (117, 18662), (123, 18683), (152, 18785), (166, 18830),

Gene: Arri\_29 Start: 18253, Stop: 18696, Start Num: 61

Candidate Starts for Arri\_29:

(Start: 61 @18253 has 86 MA's), (136, 18514), (180, 18670),

Gene: Ashertheman\_30 Start: 22146, Stop: 22580, Start Num: 61

Candidate Starts for Ashertheman\_30:

(Start: 55 @22137 has 8 MA's), (Start: 61 @22146 has 86 MA's), (92, 22230), (109, 22305), (136, 22407), (142, 22428), (165, 22485), (169, 22500), (180, 22551),

Gene: Ashraf\_24 Start: 18226, Stop: 18648, Start Num: 46

Candidate Starts for Ashraf\_24:

(Start: 46 @18226 has 52 MA's), (Start: 95 @18349 has 1 MA's), (Start: 96 @18355 has 1 MA's), (97, 18361), (117, 18424), (128, 18466), (153, 18544), (166, 18592), (172, 18616), (176, 18634), (177, 18640),

Gene: Asis\_19 Start: 19235, Stop: 19615, Start Num: 73

Candidate Starts for Asis\_19:

(10, 18785), (23, 19067), (Start: 73 @19235 has 7 MA's), (82, 19250), (94, 19292), (101, 19337), (130, 19427), (136, 19457), (155, 19508), (161, 19523), (167, 19550), (168, 19553),

Gene: Athena\_27 Start: 20126, Stop: 20539, Start Num: 56

Candidate Starts for Athena\_27:

(Start: 56 @20126 has 42 MA's), (86, 20201), (Start: 96 @20246 has 1 MA's), (97, 20252), (132, 20384), (171, 20510),

Gene: Atuin\_85 Start: 52030, Stop: 52410, Start Num: 60

Candidate Starts for Atuin\_85:

(Start: 60 @52030 has 7 MA's), (64, 52039), (71, 52066), (112, 52207), (126, 52252), (133, 52285), (158, 52348),

Gene: Audrey\_26 Start: 19363, Stop: 19776, Start Num: 56

Candidate Starts for Audrey\_26:

(Start: 56 @19363 has 42 MA's), (Start: 96 @19483 has 1 MA's), (97, 19489), (110, 19537), (132, 19621), (171, 19747),

Gene: Austelle\_24 Start: 19973, Stop: 20386, Start Num: 54

Candidate Starts for Austelle\_24:

(Start: 54 @19973 has 23 MA's), (Start: 95 @20087 has 1 MA's), (Start: 96 @20093 has 1 MA's), (97, 20099), (105, 20135), (121, 20174), (124, 20186), (128, 20204), (153, 20282), (158, 20297), (171, 20351), (172, 20354), (177, 20378),

Gene: Axumite\_22 Start: 17225, Stop: 17635, Start Num: 50

Candidate Starts for Axumite\_22:

(Start: 50 @17225 has 17 MA's), (86, 17306), (Start: 95 @17345 has 1 MA's), (97, 17357), (107, 17399), (110, 17405), (117, 17423), (139, 17513),

Gene: BabyDotz\_32 Start: 22195, Stop: 22599, Start Num: 47

Candidate Starts for BabyDotz\_32:

(34, 22150), (Start: 47 @22195 has 263 MA's), (Start: 56 @22207 has 42 MA's), (65, 22231), (123, 22405), (128, 22426), (137, 22471), (140, 22480), (177, 22585), (179, 22594),

Gene: BabyGotBac\_19 Start: 19235, Stop: 19615, Start Num: 73

Candidate Starts for BabyGotBac\_19:

(10, 18785), (23, 19067), (Start: 73 @19235 has 7 MA's), (82, 19250), (94, 19292), (101, 19337), (130, 19427), (136, 19457), (155, 19508), (161, 19523), (167, 19550), (168, 19553),

Gene: Baddon\_29 Start: 22946, Stop: 23380, Start Num: 53

Candidate Starts for Baddon\_29:

(Start: 53 @22946 has 10 MA's), (83, 23000), (92, 23030), (109, 23105), (136, 23207), (142, 23228), (169, 23300), (180, 23351),

Gene: Badfish\_25 Start: 18694, Stop: 19116, Start Num: 47

Candidate Starts for Badfish\_25:

(30, 18628), (Start: 47 @18694 has 263 MA's), (Start: 95 @18817 has 1 MA's), (Start: 96 @18823 has 1 MA's), (97, 18829), (117, 18892), (128, 18934), (153, 19012), (166, 19060), (172, 19084), (176, 19102), (177, 19108),

Gene: Bae\_24 Start: 19145, Stop: 19561, Start Num: 52

Candidate Starts for Bae\_24:

(Start: 52 @19145 has 15 MA's), (Start: 95 @19262 has 1 MA's), (97, 19274), (117, 19337), (171, 19526), (178, 19556),

Gene: Bakery\_27 Start: 17507, Stop: 17950, Start Num: 61

Candidate Starts for Bakery\_27:

(Start: 61 @17507 has 86 MA's), (180, 17924),

Gene: Baloo\_26 Start: 19363, Stop: 19776, Start Num: 56

Candidate Starts for Baloo\_26:

(Start: 56 @19363 has 42 MA's), (Start: 96 @19483 has 1 MA's), (97, 19489), (110, 19537), (132, 19621), (171, 19747),

Gene: Bananafish\_27 Start: 20833, Stop: 21261, Start Num: 47

Candidate Starts for Bananafish\_27:

(37, 20806), (Start: 47 @20833 has 263 MA's), (57, 20848), (Start: 96 @20965 has 1 MA's), (97, 20971), (102, 20998), (110, 21019), (117, 21037), (153, 21157), (154, 21163), (171, 21226), (177, 21253),

Gene: Banjo\_24 Start: 18371, Stop: 18793, Start Num: 47

Candidate Starts for Banjo\_24:

(30, 18305), (Start: 47 @18371 has 263 MA's), (Start: 95 @18494 has 1 MA's), (Start: 96 @18500 has 1 MA's), (97, 18506), (117, 18569), (128, 18611), (153, 18689), (166, 18737), (172, 18761), (176, 18779), (177, 18785),

Gene: Barb\_28 Start: 18286, Stop: 18729, Start Num: 61

Candidate Starts for Barb\_28:

(Start: 61 @18286 has 86 MA's), (136, 18547), (180, 18703),



Gene: Barsten\_30 Start: 22693, Stop: 23127, Start Num: 61

Candidate Starts for Barsten\_30:

(40, 22663), (Start: 61 @22693 has 86 MA's), (92, 22777), (109, 22852), (120, 22876), (136, 22954), (142, 22975), (169, 23047), (180, 23098),

Gene: Basato\_26 Start: 18896, Stop: 19318, Start Num: 47

Candidate Starts for Basato\_26:

(30, 18830), (Start: 47 @18896 has 263 MA's), (Start: 95 @19019 has 1 MA's), (Start: 96 @19025 has 1 MA's), (97, 19031), (117, 19094), (128, 19136), (153, 19214), (166, 19262), (172, 19286), (176, 19304), (177, 19310),

Gene: BatteryCK\_24 Start: 18248, Stop: 18670, Start Num: 46

Candidate Starts for BatteryCK\_24:

(Start: 46 @18248 has 52 MA's), (81, 18320), (Start: 95 @18371 has 1 MA's), (Start: 96 @18377 has 1 MA's), (97, 18383), (117, 18446), (128, 18488), (153, 18566), (166, 18614), (172, 18638), (176, 18656), (177, 18662),

Gene: Baumdotcom\_29 Start: 21761, Stop: 22195, Start Num: 61

Candidate Starts for Baumdotcom\_29:

(Start: 55 @21752 has 8 MA's), (Start: 61 @21761 has 86 MA's), (92, 21845), (109, 21920), (136, 22022), (142, 22043), (165, 22100), (169, 22115), (180, 22166),

Gene: BayC\_19 Start: 19235, Stop: 19615, Start Num: 73

Candidate Starts for BayC\_19:

(10, 18785), (23, 19067), (Start: 73 @19235 has 7 MA's), (82, 19250), (94, 19292), (101, 19337), (130, 19427), (136, 19457), (155, 19508), (161, 19523), (167, 19550), (168, 19553),

Gene: Beaglebox\_24 Start: 18391, Stop: 18813, Start Num: 47

Candidate Starts for Beaglebox\_24:

(30, 18325), (Start: 47 @18391 has 263 MA's), (Start: 95 @18514 has 1 MA's), (Start: 96 @18520 has 1 MA's), (97, 18526), (117, 18589), (128, 18631), (153, 18709), (166, 18757), (172, 18781), (176, 18799), (177, 18805),

Gene: Belphegor\_28 Start: 22298, Stop: 22729, Start Num: 61

Candidate Starts for Belphegor\_28:

(36, 22247), (Start: 43 @22271 has 2 MA's), (Start: 61 @22298 has 86 MA's), (92, 22382), (118, 22478), (136, 22559), (137, 22565), (141, 22577), (165, 22637), (169, 22652), (171, 22661), (175, 22679), (179, 22700), (180, 22703),

Gene: Ben11\_25 Start: 19185, Stop: 19598, Start Num: 56

Candidate Starts for Ben11\_25:

(Start: 56 @19185 has 42 MA's), (Start: 96 @19305 has 1 MA's), (97, 19311), (110, 19359), (132, 19443), (171, 19569),

Gene: Bernardo\_26 Start: 19363, Stop: 19776, Start Num: 56

Candidate Starts for Bernardo\_26:

(Start: 56 @19363 has 42 MA's), (Start: 96 @19483 has 1 MA's), (97, 19489), (110, 19537), (132, 19621), (171, 19747),

Gene: Bibwit\_29 Start: 22880, Stop: 23314, Start Num: 61

Candidate Starts for Bibwit\_29:

(Start: 61 @22880 has 86 MA's), (92, 22964), (109, 23039), (120, 23063), (136, 23141), (142, 23162), (165, 23219), (169, 23234), (180, 23285),

Gene: Big4\_83 Start: 49711, Stop: 50121, Start Num: 44

Candidate Starts for Big4\_83:

(17, 49555), (21, 49585), (Start: 44 @49711 has 6 MA's), (71, 49771), (84, 49798), (88, 49807), (106, 49897), (159, 50059),

Gene: BiggityBass\_22 Start: 19520, Stop: 19933, Start Num: 50

Candidate Starts for BiggityBass\_22:

(Start: 50 @19520 has 17 MA's), (78, 19589), (110, 19703), (129, 19769), (171, 19910),

Gene: BirdInFrench\_32 Start: 20827, Stop: 21222, Start Num: 47

Candidate Starts for BirdInFrench\_32:

(Start: 47 @20827 has 263 MA's), (66, 20869), (70, 20878), (102, 20986), (150, 21127), (173, 21196), (177, 21214),

Gene: BirdsNest\_28 Start: 18737, Stop: 19153, Start Num: 52

Candidate Starts for BirdsNest\_28:

(Start: 52 @18737 has 15 MA's), (100, 18890), (102, 18893), (153, 19049), (158, 19064), (177, 19145),

Gene: Bishoperium\_24 Start: 18377, Stop: 18799, Start Num: 47

Candidate Starts for Bishoperium\_24:

(30, 18311), (Start: 47 @18377 has 263 MA's), (Start: 95 @18500 has 1 MA's), (Start: 96 @18506 has 1 MA's), (97, 18512), (117, 18575), (128, 18617), (153, 18695), (166, 18743), (172, 18767), (176, 18785), (177, 18791),

Gene: Bizzy\_30 Start: 22093, Stop: 22527, Start Num: 53

Candidate Starts for Bizzy\_30:

(Start: 53 @22093 has 10 MA's), (83, 22147), (92, 22177), (109, 22252), (136, 22354), (142, 22375), (169, 22447), (180, 22498),

Gene: Blab\_31 Start: 21852, Stop: 22265, Start Num: 47

Candidate Starts for Blab\_31:

(31, 21795), (Start: 47 @21852 has 263 MA's), (79, 21924), (102, 22011), (135, 22128), (140, 22143),

Gene: BlackStallion\_25 Start: 18682, Stop: 19104, Start Num: 47

Candidate Starts for BlackStallion\_25:

(30, 18616), (Start: 47 @18682 has 263 MA's), (Start: 95 @18805 has 1 MA's), (Start: 96 @18811 has 1 MA's), (97, 18817), (117, 18880), (128, 18922), (153, 19000), (166, 19048), (172, 19072), (176, 19090), (177, 19096),

Gene: Blocker23\_27 Start: 20954, Stop: 21382, Start Num: 47

Candidate Starts for Blocker23\_27:

(37, 20927), (Start: 47 @20954 has 263 MA's), (57, 20969), (Start: 96 @21086 has 1 MA's), (97, 21092), (102, 21119), (110, 21140), (117, 21158), (153, 21278), (154, 21284), (171, 21347), (177, 21374),

Gene: Bloom\_91 Start: 53421, Stop: 53804, Start Num: 60

Candidate Starts for Bloom\_91:

(Start: 60 @53421 has 7 MA's), (71, 53460), (72, 53463), (98, 53562), (106, 53586), (124, 53637), (126, 53646), (140, 53700), (153, 53727), (156, 53739),

Gene: BlueHusk\_25 Start: 18178, Stop: 18600, Start Num: 47

Candidate Starts for BlueHusk\_25:

(30, 18112), (Start: 47 @18178 has 263 MA's), (Start: 95 @18301 has 1 MA's), (Start: 96 @18307 has 1 MA's), (97, 18313), (117, 18376), (128, 18418), (153, 18496), (166, 18544), (172, 18568), (176, 18586), (177, 18592),

Gene: BlueNGold\_95 Start: 51971, Stop: 52378, Start Num: 60

Candidate Starts for BlueNGold\_95:

(59, 51968), (Start: 60 @51971 has 7 MA's), (71, 52007), (91, 52061), (Start: 95 @52082 has 1 MA's), (124, 52184), (127, 52196), (131, 52238), (132, 52247), (140, 52274), (158, 52316), (166, 52349), (169, 52361), (171, 52370),

Gene: Bluephacebaby\_24 Start: 18377, Stop: 18799, Start Num: 47

Candidate Starts for Bluephacebaby\_24:

(30, 18311), (Start: 47 @18377 has 263 MA's), (Start: 95 @18500 has 1 MA's), (Start: 96 @18506 has 1 MA's), (97, 18512), (117, 18575), (128, 18617), (153, 18695), (166, 18743), (172, 18767), (176, 18785), (177, 18791),

Gene: BobBob\_27 Start: 22158, Stop: 22592, Start Num: 61

Candidate Starts for BobBob\_27:

(40, 22128), (Start: 61 @22158 has 86 MA's), (92, 22242), (109, 22317), (120, 22341), (136, 22419), (169, 22512), (180, 22563),

Gene: BobbyK\_23 Start: 19336, Stop: 19749, Start Num: 54

Candidate Starts for BobbyK\_23:

(Start: 54 @19336 has 23 MA's), (Start: 95 @19450 has 1 MA's), (Start: 96 @19456 has 1 MA's), (97, 19462), (105, 19498), (121, 19537), (124, 19549), (128, 19567), (153, 19645), (158, 19660), (171, 19714), (172, 19717), (177, 19741),

Gene: Boehler\_25 Start: 18687, Stop: 19109, Start Num: 47

Candidate Starts for Boehler\_25:

(30, 18621), (Start: 47 @18687 has 263 MA's), (Start: 95 @18810 has 1 MA's), (Start: 96 @18816 has 1 MA's), (97, 18822), (117, 18885), (128, 18927), (153, 19005), (166, 19053), (172, 19077), (176, 19095), (177, 19101),

Gene: Boopy\_96 Start: 51983, Stop: 52390, Start Num: 60

Candidate Starts for Boopy\_96:

(59, 51980), (Start: 60 @51983 has 7 MA's), (71, 52019), (91, 52073), (Start: 95 @52094 has 1 MA's), (124, 52196), (127, 52208), (131, 52250), (132, 52259), (140, 52286), (158, 52328), (166, 52361), (169, 52373), (171, 52382),

Gene: Boyle\_27 Start: 20955, Stop: 21383, Start Num: 47

Candidate Starts for Boyle\_27:

(37, 20928), (Start: 47 @20955 has 263 MA's), (57, 20970), (Start: 96 @21087 has 1 MA's), (97, 21093), (102, 21120), (110, 21141), (117, 21159), (153, 21279), (154, 21285), (171, 21348), (177, 21375),

Gene: Brandonk123\_31 Start: 23227, Stop: 23661, Start Num: 61

Candidate Starts for Brandonk123\_31:

(40, 23197), (Start: 61 @23227 has 86 MA's), (92, 23311), (109, 23386), (120, 23410), (136, 23488), (169, 23581), (180, 23632),

Gene: Briakila\_26 Start: 20128, Stop: 20541, Start Num: 56

Candidate Starts for Briakila\_26:

(Start: 56 @20128 has 42 MA's), (Start: 96 @20248 has 1 MA's), (97, 20254), (110, 20302), (132, 20386), (171, 20512),

Gene: Brilliant\_25 Start: 18382, Stop: 18804, Start Num: 46

Candidate Starts for Brilliant\_25:

(Start: 46 @18382 has 52 MA's), (Start: 95 @18505 has 1 MA's), (Start: 96 @18511 has 1 MA's), (97, 18517), (117, 18580), (128, 18622), (153, 18700), (166, 18748), (172, 18772), (176, 18790), (177, 18796),

Gene: BrownCNA\_24 Start: 19588, Stop: 20001, Start Num: 54

Candidate Starts for BrownCNA\_24:

(Start: 54 @19588 has 23 MA's), (Start: 95 @19702 has 1 MA's), (Start: 96 @19708 has 1 MA's), (97, 19714), (105, 19750), (121, 19789), (124, 19801), (128, 19819), (153, 19897), (171, 19966), (172, 19969), (177, 19993),

Gene: Brownie5\_27 Start: 20954, Stop: 21382, Start Num: 47

Candidate Starts for Brownie5\_27:

(37, 20927), (Start: 47 @20954 has 263 MA's), (57, 20969), (Start: 96 @21086 has 1 MA's), (97, 21092), (102, 21119), (110, 21140), (117, 21158), (153, 21278), (154, 21284), (171, 21347), (177, 21374),

Gene: Buckeye\_25 Start: 18701, Stop: 19123, Start Num: 47

Candidate Starts for Buckeye\_25:

(30, 18635), (Start: 47 @18701 has 263 MA's), (Start: 95 @18824 has 1 MA's), (Start: 96 @18830 has 1 MA's), (97, 18836), (117, 18899), (128, 18941), (153, 19019), (166, 19067), (172, 19091), (176, 19109), (177, 19115),

Gene: Burr\_24 Start: 18376, Stop: 18798, Start Num: 47

Candidate Starts for Burr\_24:

(30, 18310), (Start: 47 @18376 has 263 MA's), (Start: 95 @18499 has 1 MA's), (Start: 96 @18505 has 1 MA's), (97, 18511), (117, 18574), (128, 18616), (153, 18694), (166, 18742), (172, 18766), (176, 18784), (177, 18790),

Gene: CRB2\_27 Start: 21048, Stop: 21482, Start Num: 50

Candidate Starts for CRB2\_27:

(Start: 50 @21048 has 17 MA's), (76, 21111), (78, 21114), (Start: 96 @21174 has 1 MA's), (97, 21180), (105, 21216), (117, 21243), (121, 21255), (153, 21363), (171, 21432),

Gene: CaiB\_24 Start: 18604, Stop: 19014, Start Num: 50

Candidate Starts for CaiB\_24:

(Start: 50 @18604 has 17 MA's), (107, 18778), (153, 18922),

Gene: Calamitous\_27 Start: 20834, Stop: 21262, Start Num: 47

Candidate Starts for Calamitous\_27:

(37, 20807), (Start: 47 @20834 has 263 MA's), (57, 20849), (Start: 96 @20966 has 1 MA's), (97, 20972), (102, 20999), (110, 21020), (117, 21038), (153, 21158), (154, 21164), (171, 21227), (177, 21254),

Gene: CamL\_25 Start: 18675, Stop: 19097, Start Num: 47

Candidate Starts for CamL\_25:

(30, 18609), (Start: 47 @18675 has 263 MA's), (Start: 95 @18798 has 1 MA's), (Start: 96 @18804 has 1 MA's), (97, 18810), (117, 18873), (128, 18915), (153, 18993), (166, 19041), (172, 19065), (176, 19083), (177, 19089),

Gene: CampRoach\_24 Start: 18668, Stop: 19090, Start Num: 47

Candidate Starts for CampRoach\_24:

(30, 18602), (Start: 47 @18668 has 263 MA's), (Start: 95 @18791 has 1 MA's), (Start: 96 @18797 has 1 MA's), (97, 18803), (117, 18866), (128, 18908), (153, 18986), (166, 19034), (172, 19058), (176, 19076), (177, 19082),

Gene: CandC\_31 Start: 20527, Stop: 20922, Start Num: 47

Candidate Starts for CandC\_31:

(Start: 47 @20527 has 263 MA's), (70, 20578), (102, 20686), (128, 20761), (150, 20827), (177, 20914),

Gene: Cannibal\_25 Start: 18661, Stop: 19083, Start Num: 47

Candidate Starts for Cannibal\_25:

(30, 18595), (Start: 47 @18661 has 263 MA's), (Start: 95 @18784 has 1 MA's), (Start: 96 @18790 has 1 MA's), (97, 18796), (117, 18859), (128, 18901), (153, 18979), (166, 19027), (172, 19051), (176, 19069), (177, 19075),

Gene: Carthage\_23 Start: 17587, Stop: 18009, Start Num: 47

Candidate Starts for Carthage\_23:

(30, 17521), (Start: 47 @17587 has 263 MA's), (Start: 95 @17710 has 1 MA's), (Start: 96 @17716 has 1 MA's), (97, 17722), (117, 17785), (128, 17827), (153, 17905), (166, 17953), (172, 17977), (176, 17995), (177, 18001),

Gene: Casbah\_25 Start: 19215, Stop: 19628, Start Num: 56

Candidate Starts for Casbah\_25:

(Start: 56 @19215 has 42 MA's), (86, 19290), (Start: 96 @19335 has 1 MA's), (97, 19341), (132, 19473), (171, 19599),

Gene: Casend\_34 Start: 22604, Stop: 23008, Start Num: 47

Candidate Starts for Casend\_34:

(31, 22547), (Start: 47 @22604 has 263 MA's), (65, 22640), (123, 22814), (128, 22835), (137, 22880), (140, 22889), (177, 22994), (179, 23003),

Gene: Cece\_77 Start: 45674, Stop: 46081, Start Num: 45

Candidate Starts for Cece\_77:

(Start: 45 @45674 has 1 MA's), (69, 45725), (90, 45779), (Start: 96 @45815 has 1 MA's), (99, 45839), (106, 45860), (108, 45866), (140, 45974), (153, 46001), (159, 46019),

Gene: Cepens\_19 Start: 18194, Stop: 18604, Start Num: 55

Candidate Starts for Cepens\_19:

(Start: 55 @18194 has 8 MA's), (86, 18269), (Start: 96 @18314 has 1 MA's), (97, 18320), (107, 18362), (117, 18386), (123, 18407), (152, 18509), (166, 18554),

Gene: ChaChing\_26 Start: 19378, Stop: 19791, Start Num: 56

Candidate Starts for ChaChing\_26:

(Start: 56 @19378 has 42 MA's), (86, 19453), (Start: 96 @19498 has 1 MA's), (97, 19504), (132, 19636), (171, 19762),

Gene: ChadMasterC\_30 Start: 23885, Stop: 24319, Start Num: 61

Candidate Starts for ChadMasterC\_30:

(40, 23855), (Start: 61 @23885 has 86 MA's), (92, 23969), (109, 24044), (120, 24068), (136, 24146), (142, 24167), (169, 24239), (180, 24290),

Gene: Chaelin\_24 Start: 18361, Stop: 18783, Start Num: 46

Candidate Starts for Chaelin\_24:

(Start: 46 @18361 has 52 MA's), (81, 18433), (Start: 95 @18484 has 1 MA's), (Start: 96 @18490 has 1 MA's), (97, 18496), (117, 18559), (128, 18601), (153, 18679), (166, 18727), (172, 18751), (176, 18769), (177, 18775),

Gene: Chah\_26 Start: 18818, Stop: 19117, Start Num: 95

Candidate Starts for Chah\_26:

(30, 18629), (Start: 47 @18695 has 263 MA's), (Start: 95 @18818 has 1 MA's), (Start: 96 @18824 has 1 MA's), (97, 18830), (117, 18893), (128, 18935), (140, 18986), (153, 19013), (166, 19061), (172, 19085), (176, 19103), (177, 19109),

Gene: Chandler\_26 Start: 20137, Stop: 20550, Start Num: 56

Candidate Starts for Chandler\_26:

(Start: 56 @20137 has 42 MA's), (86, 20212), (Start: 96 @20257 has 1 MA's), (97, 20263), (132, 20395), (171, 20521),

Gene: Charles1\_25 Start: 18659, Stop: 19081, Start Num: 47

Candidate Starts for Charles1\_25:

(30, 18593), (Start: 47 @18659 has 263 MA's), (Start: 95 @18782 has 1 MA's), (Start: 96 @18788 has 1 MA's), (97, 18794), (117, 18857), (128, 18899), (153, 18977), (166, 19025), (172, 19049), (176, 19067), (177, 19073),

Gene: CharlieGBrown\_24 Start: 18246, Stop: 18668, Start Num: 46

Candidate Starts for CharlieGBrown\_24:

(Start: 46 @18246 has 52 MA's), (Start: 95 @18369 has 1 MA's), (Start: 96 @18375 has 1 MA's), (97, 18381), (117, 18444), (128, 18486), (153, 18564), (166, 18612), (172, 18636), (176, 18654), (177, 18660),

Gene: CharlottesWeb\_22 Start: 17120, Stop: 17533, Start Num: 50

Candidate Starts for CharlottesWeb\_22:

(Start: 39 @17099 has 1 MA's), (Start: 50 @17120 has 17 MA's), (68, 17162), (86, 17201), (Start: 96 @17246 has 1 MA's), (97, 17252), (110, 17300),

Gene: Charming\_30 Start: 22736, Stop: 23170, Start Num: 61

Candidate Starts for Charming\_30:

(40, 22706), (Start: 61 @22736 has 86 MA's), (92, 22820), (109, 22895), (120, 22919), (136, 22997), (142, 23018), (169, 23090), (180, 23141),

Gene: CheetO\_25 Start: 18674, Stop: 19096, Start Num: 47

Candidate Starts for CheetO\_25:

(30, 18608), (Start: 47 @18674 has 263 MA's), (Start: 95 @18797 has 1 MA's), (Start: 96 @18803 has 1 MA's), (97, 18809), (117, 18872), (128, 18914), (153, 18992), (166, 19040), (172, 19064), (176, 19082), (177, 19088),

Gene: Cher\_24 Start: 18400, Stop: 18822, Start Num: 47

Candidate Starts for Cher\_24:

(30, 18334), (Start: 47 @18400 has 263 MA's), (Start: 95 @18523 has 1 MA's), (Start: 96 @18529 has 1 MA's), (97, 18535), (117, 18598), (128, 18640), (153, 18718), (166, 18766), (172, 18790), (176,

18808), (177, 18814),

Gene: Chickadee\_27 Start: 19601, Stop: 20032, Start Num: 61

Candidate Starts for Chickadee\_27:

(20, 19433), (Start: 61 @19601 has 86 MA's), (92, 19685), (109, 19760), (141, 19880), (149, 19895), (169, 19955), (171, 19964), (179, 20003), (180, 20006),

Gene: Childish\_24 Start: 18388, Stop: 18810, Start Num: 47

Candidate Starts for Childish\_24:

(30, 18322), (Start: 47 @18388 has 263 MA's), (Start: 95 @18511 has 1 MA's), (Start: 96 @18517 has 1 MA's), (97, 18523), (117, 18586), (128, 18628), (153, 18706), (166, 18754), (172, 18778), (176, 18796), (177, 18802),

Gene: Chorkpop\_25 Start: 18399, Stop: 18821, Start Num: 47

Candidate Starts for Chorkpop\_25:

(30, 18333), (Start: 47 @18399 has 263 MA's), (Start: 95 @18522 has 1 MA's), (Start: 96 @18528 has 1 MA's), (97, 18534), (117, 18597), (128, 18639), (140, 18690), (153, 18717), (166, 18765), (172, 18789), (176, 18807), (177, 18813),

Gene: ChrisnMich\_22 Start: 18293, Stop: 18706, Start Num: 54

Candidate Starts for ChrisnMich\_22:

(Start: 54 @18293 has 23 MA's), (Start: 95 @18407 has 1 MA's), (Start: 96 @18413 has 1 MA's), (97, 18419), (105, 18455), (121, 18494), (124, 18506), (128, 18524), (153, 18602), (171, 18671), (177, 18698),

Gene: Chunky\_25 Start: 18687, Stop: 19109, Start Num: 47

Candidate Starts for Chunky\_25:

(30, 18621), (Start: 47 @18687 has 263 MA's), (Start: 95 @18810 has 1 MA's), (Start: 96 @18816 has 1 MA's), (97, 18822), (117, 18885), (128, 18927), (153, 19005), (166, 19053), (172, 19077), (176, 19095), (177, 19101),

Gene: Chute\_24 Start: 18712, Stop: 19134, Start Num: 46

Candidate Starts for Chute\_24:

(Start: 46 @18712 has 52 MA's), (81, 18784), (Start: 95 @18835 has 1 MA's), (Start: 96 @18841 has 1 MA's), (97, 18847), (117, 18910), (128, 18952), (153, 19030), (166, 19078), (172, 19102), (176, 19120), (177, 19126),

Gene: ClamChowder\_28 Start: 18286, Stop: 18729, Start Num: 61

Candidate Starts for ClamChowder\_28:

(Start: 61 @18286 has 86 MA's), (136, 18547), (180, 18703),

Gene: Clawz\_53 Start: 29439, Stop: 29873, Start Num: 44

Candidate Starts for Clawz\_53:

(Start: 44 @29439 has 6 MA's), (79, 29511), (87, 29526), (Start: 95 @29565 has 1 MA's), (114, 29637), (117, 29643), (128, 29685), (132, 29709), (139, 29733), (152, 29763), (157, 29778),

Gene: CloverMinnie\_24 Start: 18544, Stop: 18954, Start Num: 50

Candidate Starts for CloverMinnie\_24:

(Start: 50 @18544 has 17 MA's), (103, 18706), (107, 18718), (128, 18784), (132, 18808), (145, 18847), (153, 18862), (172, 18934),

Gene: Clown\_30 Start: 20227, Stop: 20670, Start Num: 61

Candidate Starts for Clown\_30:

(27, 20125), (29, 20134), (Start: 61 @20227 has 86 MA's), (89, 20299), (180, 20644),

Gene: Cobra\_25 Start: 18680, Stop: 19102, Start Num: 47

Candidate Starts for Cobra\_25:

(30, 18614), (Start: 47 @18680 has 263 MA's), (Start: 95 @18803 has 1 MA's), (Start: 96 @18809 has 1 MA's), (97, 18815), (117, 18878), (128, 18920), (153, 18998), (166, 19046), (172, 19070), (176, 19088), (177, 19094),

Gene: Coffee\_27 Start: 20947, Stop: 21375, Start Num: 47

Candidate Starts for Coffee\_27:

(37, 20920), (Start: 47 @20947 has 263 MA's), (57, 20962), (Start: 96 @21079 has 1 MA's), (97, 21085), (102, 21112), (110, 21133), (117, 21151), (153, 21271), (154, 21277), (171, 21340), (177, 21367),

Gene: Colbert\_25 Start: 18677, Stop: 19099, Start Num: 47

Candidate Starts for Colbert\_25:

(30, 18611), (Start: 47 @18677 has 263 MA's), (Start: 95 @18800 has 1 MA's), (Start: 96 @18806 has 1 MA's), (97, 18812), (117, 18875), (128, 18917), (153, 18995), (166, 19043), (172, 19067), (176, 19085), (177, 19091),

Gene: Coletti\_24 Start: 18712, Stop: 19134, Start Num: 46

Candidate Starts for Coletti\_24:

(Start: 46 @18712 has 52 MA's), (81, 18784), (Start: 95 @18835 has 1 MA's), (Start: 96 @18841 has 1 MA's), (97, 18847), (117, 18910), (128, 18952), (153, 19030), (166, 19078), (172, 19102), (176, 19120), (177, 19126),

Gene: Compostia\_27 Start: 19796, Stop: 20209, Start Num: 56

Candidate Starts for Compostia\_27:

(Start: 56 @19796 has 42 MA's), (86, 19871), (Start: 96 @19916 has 1 MA's), (97, 19922), (132, 20054), (171, 20180),

Gene: Cooper\_23 Start: 18410, Stop: 18823, Start Num: 54

Candidate Starts for Cooper\_23:

(Start: 54 @18410 has 23 MA's), (Start: 96 @18530 has 1 MA's), (97, 18536), (105, 18572), (117, 18599), (124, 18623), (128, 18641), (153, 18719), (171, 18788), (177, 18815),

Gene: Cornobble\_24 Start: 18235, Stop: 18657, Start Num: 47

Candidate Starts for Cornobble\_24:

(30, 18169), (Start: 47 @18235 has 263 MA's), (Start: 95 @18358 has 1 MA's), (Start: 96 @18364 has 1 MA's), (97, 18370), (117, 18433), (128, 18475), (153, 18553), (166, 18601), (172, 18625), (176, 18643), (177, 18649),

Gene: Corofin\_26 Start: 19388, Stop: 19801, Start Num: 56

Candidate Starts for Corofin\_26:

(Start: 56 @19388 has 42 MA's), (86, 19463), (Start: 96 @19508 has 1 MA's), (97, 19514), (132, 19646), (171, 19772),

Gene: Cosmolli16\_24 Start: 18394, Stop: 18816, Start Num: 47

Candidate Starts for Cosmolli16\_24:

(30, 18328), (Start: 47 @18394 has 263 MA's), (Start: 95 @18517 has 1 MA's), (Start: 96 @18523 has 1 MA's), (97, 18529), (117, 18592), (128, 18634), (140, 18685), (153, 18712), (166, 18760), (172, 18784), (176, 18802), (177, 18808),



Gene: Craff\_25 Start: 18681, Stop: 19103, Start Num: 47

Candidate Starts for Craff\_25:

(30, 18615), (Start: 47 @18681 has 263 MA's), (Start: 95 @18804 has 1 MA's), (Start: 96 @18810 has 1 MA's), (97, 18816), (117, 18879), (128, 18921), (153, 18999), (166, 19047), (172, 19071), (176, 19089), (177, 19095),

Gene: Crownjwl\_25 Start: 18448, Stop: 18870, Start Num: 47

Candidate Starts for Crownjwl\_25:

(30, 18382), (Start: 47 @18448 has 263 MA's), (Start: 95 @18571 has 1 MA's), (Start: 96 @18577 has 1 MA's), (97, 18583), (117, 18646), (128, 18688), (153, 18766), (166, 18814), (172, 18838), (176, 18856), (177, 18862),

Gene: D12\_19 Start: 18187, Stop: 18597, Start Num: 55

Candidate Starts for D12\_19:

(Start: 55 @18187 has 8 MA's), (86, 18262), (Start: 96 @18307 has 1 MA's), (97, 18313), (107, 18355), (117, 18379), (123, 18400), (152, 18502), (166, 18547),

Gene: DaddyDaniels\_25 Start: 18373, Stop: 18795, Start Num: 46

Candidate Starts for DaddyDaniels\_25:

(Start: 46 @18373 has 52 MA's), (Start: 95 @18496 has 1 MA's), (Start: 96 @18502 has 1 MA's), (97, 18508), (117, 18571), (128, 18613), (153, 18691), (166, 18739), (172, 18763), (176, 18781), (177, 18787),

Gene: Daffy\_25 Start: 18400, Stop: 18822, Start Num: 47

Candidate Starts for Daffy\_25:

(30, 18334), (Start: 47 @18400 has 263 MA's), (Start: 95 @18523 has 1 MA's), (Start: 96 @18529 has 1 MA's), (97, 18535), (117, 18598), (128, 18640), (153, 18718), (166, 18766), (172, 18790), (176, 18808), (177, 18814),

Gene: Daisy\_26 Start: 19384, Stop: 19797, Start Num: 56

Candidate Starts for Daisy\_26:

(Start: 56 @19384 has 42 MA's), (Start: 96 @19504 has 1 MA's), (97, 19510), (132, 19642), (171, 19768),

Gene: Daka\_25 Start: 18677, Stop: 19099, Start Num: 47

Candidate Starts for Daka\_25:

(30, 18611), (Start: 47 @18677 has 263 MA's), (Start: 95 @18800 has 1 MA's), (Start: 96 @18806 has 1 MA's), (97, 18812), (117, 18875), (128, 18917), (153, 18995), (166, 19043), (172, 19067), (176, 19085), (177, 19091),

Gene: Danyall\_28 Start: 18086, Stop: 18529, Start Num: 61

Candidate Starts for Danyall\_28:

(Start: 61 @18086 has 86 MA's), (136, 18347), (180, 18503),

Gene: Dati\_25 Start: 18390, Stop: 18812, Start Num: 46

Candidate Starts for Dati\_25:

(Start: 46 @18390 has 52 MA's), (Start: 95 @18513 has 1 MA's), (Start: 96 @18519 has 1 MA's), (97, 18525), (117, 18588), (128, 18630), (153, 18708), (166, 18756), (172, 18780), (176, 18798), (177, 18804),

Gene: Deenasa\_26 Start: 20126, Stop: 20539, Start Num: 56

Candidate Starts for Deenasa\_26:

(Start: 56 @20126 has 42 MA's), (86, 20201), (Start: 96 @20246 has 1 MA's), (97, 20252), (132, 20384), (171, 20510),

Gene: DelRivs\_24 Start: 18389, Stop: 18811, Start Num: 46

Candidate Starts for DelRivs\_24:

(Start: 46 @18389 has 52 MA's), (Start: 96 @18518 has 1 MA's), (97, 18524), (117, 18587), (128, 18629), (153, 18707), (166, 18755), (172, 18779), (176, 18797), (177, 18803),

Gene: Delrey21\_29 Start: 23097, Stop: 23528, Start Num: 61

Candidate Starts for Delrey21\_29:

(Start: 43 @23070 has 2 MA's), (Start: 61 @23097 has 86 MA's), (92, 23181), (97, 23211), (98, 23226), (109, 23256), (118, 23277), (136, 23358), (137, 23364), (149, 23391), (165, 23436), (169, 23451), (179, 23499), (180, 23502),

Gene: Derg\_27 Start: 21689, Stop: 22123, Start Num: 53

Candidate Starts for Derg\_27:

(Start: 53 @21689 has 10 MA's), (83, 21743), (92, 21773), (109, 21848), (136, 21950), (142, 21971), (169, 22043), (180, 22094),

Gene: Derpp\_24 Start: 18236, Stop: 18658, Start Num: 46

Candidate Starts for Derpp\_24:

(Start: 46 @18236 has 52 MA's), (Start: 95 @18359 has 1 MA's), (Start: 96 @18365 has 1 MA's), (97, 18371), (117, 18434), (128, 18476), (153, 18554), (166, 18602), (172, 18626), (176, 18644), (177, 18650),

Gene: Devonte\_26 Start: 19363, Stop: 19776, Start Num: 56

Candidate Starts for Devonte\_26:

(Start: 56 @19363 has 42 MA's), (86, 19438), (Start: 96 @19483 has 1 MA's), (97, 19489), (132, 19621), (171, 19747),

Gene: Dxdert\_28 Start: 20032, Stop: 20463, Start Num: 61

Candidate Starts for Dxdert\_28:

(Start: 61 @20032 has 86 MA's), (92, 20116), (109, 20191), (118, 20212), (141, 20311), (149, 20326), (169, 20386), (179, 20434), (180, 20437), (181, 20446),

Gene: Dice\_26 Start: 18377, Stop: 18799, Start Num: 47

Candidate Starts for Dice\_26:

(30, 18311), (Start: 47 @18377 has 263 MA's), (Start: 95 @18500 has 1 MA's), (Start: 96 @18506 has 1 MA's), (97, 18512), (117, 18575), (128, 18617), (153, 18695), (166, 18743), (172, 18767), (176, 18785), (177, 18791),

Gene: DigitDog\_25 Start: 18981, Stop: 19397, Start Num: 52

Candidate Starts for DigitDog\_25:

(Start: 52 @18981 has 15 MA's), (117, 19173), (128, 19215), (140, 19266), (178, 19392),

Gene: Dingo\_25 Start: 18661, Stop: 19083, Start Num: 47

Candidate Starts for Dingo\_25:

(30, 18595), (Start: 47 @18661 has 263 MA's), (Start: 95 @18784 has 1 MA's), (Start: 96 @18790 has 1 MA's), (97, 18796), (117, 18859), (128, 18901), (153, 18979), (166, 19027), (172, 19051), (176, 19069), (177, 19075),

Gene: Dione\_24 Start: 18378, Stop: 18800, Start Num: 47

Candidate Starts for Dione\_24:

(30, 18312), (Start: 47 @18378 has 263 MA's), (Start: 95 @18501 has 1 MA's), (Start: 96 @18507 has 1 MA's), (97, 18513), (117, 18576), (128, 18618), (153, 18696), (166, 18744), (172, 18768), (176, 18786), (177, 18792),

Gene: DirtJuice\_25 Start: 18663, Stop: 19085, Start Num: 47

Candidate Starts for DirtJuice\_25:

(30, 18597), (Start: 47 @18663 has 263 MA's), (Start: 95 @18786 has 1 MA's), (Start: 96 @18792 has 1 MA's), (97, 18798), (117, 18861), (128, 18903), (153, 18981), (166, 19029), (172, 19053), (176, 19071), (177, 19077),

Gene: DoctorFroggo\_29 Start: 23097, Stop: 23528, Start Num: 61

Candidate Starts for DoctorFroggo\_29:

(Start: 43 @23070 has 2 MA's), (Start: 61 @23097 has 86 MA's), (92, 23181), (97, 23211), (98, 23226), (109, 23256), (118, 23277), (136, 23358), (137, 23364), (149, 23391), (165, 23436), (169, 23451), (179, 23499), (180, 23502),

Gene: Doddsville\_25 Start: 18390, Stop: 18812, Start Num: 46

Candidate Starts for Doddsville\_25:

(Start: 46 @18390 has 52 MA's), (Start: 95 @18513 has 1 MA's), (Start: 96 @18519 has 1 MA's), (97, 18525), (117, 18588), (128, 18630), (153, 18708), (166, 18756), (172, 18780), (176, 18798), (177, 18804),

Gene: DoesntMatter\_25 Start: 18659, Stop: 19081, Start Num: 47

Candidate Starts for DoesntMatter\_25:

(30, 18593), (Start: 47 @18659 has 263 MA's), (Start: 95 @18782 has 1 MA's), (Start: 96 @18788 has 1 MA's), (97, 18794), (117, 18857), (128, 18899), (140, 18950), (153, 18977), (166, 19025), (172, 19049), (176, 19067), (177, 19073),

Gene: DonSanchon\_24 Start: 18376, Stop: 18798, Start Num: 47

Candidate Starts for DonSanchon\_24:

(30, 18310), (Start: 47 @18376 has 263 MA's), (Start: 95 @18499 has 1 MA's), (Start: 96 @18505 has 1 MA's), (97, 18511), (117, 18574), (128, 18616), (153, 18694), (166, 18742), (172, 18766), (176, 18784), (177, 18790),

Gene: DonTron\_53 Start: 29575, Stop: 30000, Start Num: 44

Candidate Starts for DonTron\_53:

(Start: 44 @29575 has 6 MA's), (114, 29773), (132, 29845), (152, 29899), (157, 29914),

Gene: DonaldDuck\_33 Start: 21950, Stop: 22354, Start Num: 47

Candidate Starts for DonaldDuck\_33:

(31, 21893), (Start: 47 @21950 has 263 MA's), (65, 21986), (123, 22160), (128, 22181), (137, 22226), (140, 22235), (177, 22340), (179, 22349),

Gene: Donny\_25 Start: 19394, Stop: 19810, Start Num: 52

Candidate Starts for Donny\_25:

(Start: 52 @19394 has 15 MA's), (76, 19454), (97, 19523), (128, 19628), (133, 19658), (178, 19805),

Gene: Dori\_22 Start: 16225, Stop: 16629, Start Num: 53

Candidate Starts for Dori\_22:

(Start: 53 @16225 has 10 MA's), (86, 16303), (Start: 96 @16348 has 1 MA's), (97, 16354), (108, 16399), (117, 16420), (128, 16462), (132, 16486), (140, 16513), (147, 16525), (170, 16603),

Gene: DuchessDung\_23 Start: 17527, Stop: 17949, Start Num: 46

Candidate Starts for DuchessDung\_23:

(Start: 46 @17527 has 52 MA's), (Start: 95 @17650 has 1 MA's), (Start: 96 @17656 has 1 MA's), (97, 17662), (117, 17725), (128, 17767), (153, 17845), (166, 17893), (172, 17917), (176, 17935), (177, 17941),

Gene: Duggie\_24 Start: 18392, Stop: 18814, Start Num: 46

Candidate Starts for Duggie\_24:

(Start: 46 @18392 has 52 MA's), (Start: 95 @18515 has 1 MA's), (Start: 96 @18521 has 1 MA's), (97, 18527), (117, 18590), (128, 18632), (153, 18710), (166, 18758), (172, 18782), (176, 18800), (177, 18806),

Gene: DunneganBoMo\_81 Start: 48911, Stop: 49255, Start Num: 71

Candidate Starts for DunneganBoMo\_81:

(Start: 60 @48875 has 7 MA's), (71, 48911), (97, 48998), (116, 49061), (124, 49088), (126, 49097), (158, 49193),

Gene: Durga\_25 Start: 18689, Stop: 19111, Start Num: 46

Candidate Starts for Durga\_25:

(Start: 46 @18689 has 52 MA's), (Start: 95 @18812 has 1 MA's), (Start: 96 @18818 has 1 MA's), (97, 18824), (117, 18887), (128, 18929), (153, 19007), (166, 19055), (172, 19079), (176, 19097), (177, 19103),

Gene: EMoore\_26 Start: 21587, Stop: 22018, Start Num: 61

Candidate Starts for EMoore\_26:

(36, 21536), (Start: 43 @21560 has 2 MA's), (48, 21563), (Start: 61 @21587 has 86 MA's), (92, 21671), (98, 21716), (136, 21848), (165, 21926), (171, 21950), (179, 21989), (180, 21992),

Gene: Eaglehorse\_27 Start: 20855, Stop: 21283, Start Num: 47

Candidate Starts for Eaglehorse\_27:

(37, 20828), (Start: 47 @20855 has 263 MA's), (57, 20870), (Start: 96 @20987 has 1 MA's), (97, 20993), (102, 21020), (110, 21041), (117, 21059), (153, 21179), (154, 21185), (171, 21248), (177, 21275),

Gene: EastView9101\_25 Start: 19041, Stop: 19457, Start Num: 52

Candidate Starts for EastView9101\_25:

(Start: 52 @19041 has 15 MA's), (97, 19170), (117, 19233), (178, 19452),

Gene: EdmundFerry\_26 Start: 19630, Stop: 20061, Start Num: 61

Candidate Starts for EdmundFerry\_26:

(20, 19462), (Start: 61 @19630 has 86 MA's), (92, 19714), (109, 19789), (141, 19909), (149, 19924), (169, 19984), (171, 19993), (179, 20032), (180, 20035),

Gene: Emiris\_25 Start: 18670, Stop: 19092, Start Num: 47

Candidate Starts for Emiris\_25:

(30, 18604), (Start: 47 @18670 has 263 MA's), (Start: 95 @18793 has 1 MA's), (Start: 96 @18799 has 1 MA's), (97, 18805), (117, 18868), (128, 18910), (153, 18988), (166, 19036), (172, 19060), (176, 19078), (177, 19084),

Gene: EmpTee\_25 Start: 18676, Stop: 19098, Start Num: 47

Candidate Starts for EmpTee\_25:

(30, 18610), (Start: 47 @18676 has 263 MA's), (Start: 95 @18799 has 1 MA's), (Start: 96 @18805 has 1 MA's), (97, 18811), (117, 18874), (128, 18916), (153, 18994), (166, 19042), (172, 19066), (176, 19084), (177, 19090),

Gene: Eremos\_25 Start: 18676, Stop: 19098, Start Num: 47

Candidate Starts for Eremos\_25:

(30, 18610), (Start: 47 @18676 has 263 MA's), (Start: 95 @18799 has 1 MA's), (Start: 96 @18805 has 1 MA's), (97, 18811), (117, 18874), (128, 18916), (153, 18994), (166, 19042), (172, 19066), (176, 19084), (177, 19090),

Gene: Etaye\_25 Start: 18662, Stop: 19084, Start Num: 46

Candidate Starts for Etaye\_25:

(Start: 46 @18662 has 52 MA's), (Start: 95 @18785 has 1 MA's), (Start: 96 @18791 has 1 MA's), (97, 18797), (117, 18860), (128, 18902), (153, 18980), (166, 19028), (172, 19052), (176, 19070), (177, 19076),

Gene: Eugenia\_25 Start: 18689, Stop: 19111, Start Num: 47

Candidate Starts for Eugenia\_25:

(30, 18623), (Start: 47 @18689 has 263 MA's), (Start: 95 @18812 has 1 MA's), (Start: 96 @18818 has 1 MA's), (97, 18824), (117, 18887), (128, 18929), (153, 19007), (166, 19055), (172, 19079), (176, 19097), (177, 19103),

Gene: Evaa\_23 Start: 18465, Stop: 18881, Start Num: 50

Candidate Starts for Evaa\_23:

(Start: 50 @18465 has 17 MA's), (86, 18549), (97, 18600), (108, 18645), (132, 18732), (139, 18756),

Gene: Evamon\_26 Start: 17572, Stop: 18015, Start Num: 61

Candidate Starts for Evamon\_26:

(Start: 61 @17572 has 86 MA's), (136, 17833), (180, 17989),

Gene: Fang\_25 Start: 18690, Stop: 19112, Start Num: 47

Candidate Starts for Fang\_25:

(30, 18624), (Start: 47 @18690 has 263 MA's), (Start: 95 @18813 has 1 MA's), (Start: 96 @18819 has 1 MA's), (97, 18825), (117, 18888), (128, 18930), (153, 19008), (166, 19056), (172, 19080), (176, 19098), (177, 19104),

Gene: Faze9\_27 Start: 20951, Stop: 21379, Start Num: 47

Candidate Starts for Faze9\_27:

(37, 20924), (Start: 47 @20951 has 263 MA's), (57, 20966), (Start: 96 @21083 has 1 MA's), (97, 21089), (102, 21116), (110, 21137), (117, 21155), (153, 21275), (154, 21281), (171, 21344), (177, 21371),

Gene: Fireball\_27 Start: 17704, Stop: 18147, Start Num: 61

Candidate Starts for Fireball\_27:

(Start: 61 @17704 has 86 MA's), (136, 17965), (180, 18121),

Gene: Fitzgerald\_28 Start: 23319, Stop: 23753, Start Num: 61

Candidate Starts for Fitzgerald\_28:

(40, 23289), (Start: 61 @23319 has 86 MA's), (92, 23403), (109, 23478), (136, 23580), (142, 23601), (169, 23673), (180, 23724),

Gene: Fizzles\_33 Start: 21660, Stop: 22067, Start Num: 47

Candidate Starts for Fizzles\_33:

(32, 21606), (Start: 47 @21660 has 263 MA's), (Start: 56 @21672 has 42 MA's), (65, 21696), (128, 21891), (137, 21936), (140, 21945), (163, 21993), (177, 22053), (179, 22062),

Gene: Flatwoods\_30 Start: 22050, Stop: 22484, Start Num: 53

Candidate Starts for Flatwoods\_30:

(Start: 53 @22050 has 10 MA's), (83, 22104), (92, 22134), (109, 22209), (136, 22311), (142, 22332), (169, 22404), (180, 22455),

Gene: FluffyNinja\_25 Start: 18682, Stop: 19104, Start Num: 47

Candidate Starts for FluffyNinja\_25:

(30, 18616), (Start: 47 @18682 has 263 MA's), (Start: 95 @18805 has 1 MA's), (Start: 96 @18811 has 1 MA's), (97, 18817), (117, 18880), (128, 18922), (153, 19000), (166, 19048), (172, 19072), (176, 19090), (177, 19096),

Gene: Fortunato\_23 Start: 19330, Stop: 19743, Start Num: 54

Candidate Starts for Fortunato\_23:

(Start: 54 @19330 has 23 MA's), (Start: 95 @19444 has 1 MA's), (Start: 96 @19450 has 1 MA's), (97, 19456), (105, 19492), (121, 19531), (124, 19543), (128, 19561), (153, 19639), (158, 19654), (171, 19708), (172, 19711), (177, 19735),

Gene: Forza\_96 Start: 51899, Stop: 52306, Start Num: 60

Candidate Starts for Forza\_96:

(59, 51896), (Start: 60 @51899 has 7 MA's), (71, 51935), (91, 51989), (Start: 95 @52010 has 1 MA's), (124, 52112), (127, 52124), (131, 52166), (132, 52175), (140, 52202), (158, 52244), (166, 52277), (169, 52289), (171, 52298),

Gene: Fosterous\_28 Start: 23152, Stop: 23586, Start Num: 61

Candidate Starts for Fosterous\_28:

(40, 23122), (Start: 61 @23152 has 86 MA's), (92, 23236), (109, 23311), (120, 23335), (136, 23413), (169, 23506), (180, 23557),

Gene: Fozzie\_24 Start: 18685, Stop: 19107, Start Num: 47

Candidate Starts for Fozzie\_24:

(30, 18619), (Start: 47 @18685 has 263 MA's), (Start: 95 @18808 has 1 MA's), (Start: 96 @18814 has 1 MA's), (97, 18820), (117, 18883), (128, 18925), (153, 19003), (166, 19051), (172, 19075), (176, 19093), (177, 19099),

Gene: Frankicide\_25 Start: 18676, Stop: 19098, Start Num: 47

Candidate Starts for Frankicide\_25:

(30, 18610), (Start: 47 @18676 has 263 MA's), (Start: 95 @18799 has 1 MA's), (Start: 96 @18805 has 1 MA's), (97, 18811), (117, 18874), (128, 18916), (153, 18994), (166, 19042), (172, 19066), (176, 19084), (177, 19090),

Gene: Fransoyer\_35 Start: 21775, Stop: 22191, Start Num: 47

Candidate Starts for Fransoyer\_35:

(22, 21652), (36, 21742), (Start: 47 @21775 has 263 MA's), (93, 21886), (142, 22072), (146, 22075), (179, 22186),

Gene: Frederick\_23 Start: 19339, Stop: 19752, Start Num: 54

Candidate Starts for Frederick\_23:

(Start: 54 @19339 has 23 MA's), (Start: 95 @19453 has 1 MA's), (Start: 96 @19459 has 1 MA's), (97, 19465), (105, 19501), (121, 19540), (124, 19552), (128, 19570), (153, 19648), (158, 19663), (171, 19717), (172, 19720), (177, 19744),

Gene: Fregley\_33 Start: 21097, Stop: 21492, Start Num: 47

Candidate Starts for Fregley\_33:

(Start: 47 @21097 has 263 MA's), (70, 21148), (102, 21256), (128, 21331), (150, 21397), (177, 21484),

Gene: FrenchFry\_27 Start: 20954, Stop: 21382, Start Num: 47

Candidate Starts for FrenchFry\_27:

(37, 20927), (Start: 47 @20954 has 263 MA's), (57, 20969), (Start: 96 @21086 has 1 MA's), (97, 21092), (102, 21119), (110, 21140), (117, 21158), (153, 21278), (154, 21284), (171, 21347), (177, 21374),

Gene: Fresco\_22 Start: 17225, Stop: 17635, Start Num: 50

Candidate Starts for Fresco\_22:

(Start: 50 @17225 has 17 MA's), (86, 17306), (Start: 95 @17345 has 1 MA's), (97, 17357), (107, 17399), (110, 17405), (117, 17423), (139, 17513),

Gene: Freya\_24 Start: 18371, Stop: 18793, Start Num: 47

Candidate Starts for Freya\_24:

(30, 18305), (Start: 47 @18371 has 263 MA's), (Start: 95 @18494 has 1 MA's), (Start: 96 @18500 has 1 MA's), (97, 18506), (117, 18569), (128, 18611), (153, 18689), (166, 18737), (172, 18761), (176, 18779), (177, 18785),

Gene: FriarPreacher\_25 Start: 18696, Stop: 19118, Start Num: 47

Candidate Starts for FriarPreacher\_25:

(30, 18630), (Start: 47 @18696 has 263 MA's), (Start: 95 @18819 has 1 MA's), (Start: 96 @18825 has 1 MA's), (97, 18831), (117, 18894), (128, 18936), (153, 19014), (166, 19062), (172, 19086), (176, 19104), (177, 19110),

Gene: Fringe\_25 Start: 18660, Stop: 19082, Start Num: 47

Candidate Starts for Fringe\_25:

(30, 18594), (Start: 47 @18660 has 263 MA's), (Start: 95 @18783 has 1 MA's), (Start: 96 @18789 has 1 MA's), (97, 18795), (117, 18858), (128, 18900), (153, 18978), (166, 19026), (172, 19050), (176, 19068), (177, 19074),

Gene: FugateOSU\_24 Start: 18382, Stop: 18804, Start Num: 47

Candidate Starts for FugateOSU\_24:

(30, 18316), (Start: 47 @18382 has 263 MA's), (Start: 95 @18505 has 1 MA's), (Start: 96 @18511 has 1 MA's), (97, 18517), (117, 18580), (128, 18622), (140, 18673), (153, 18700), (166, 18748), (172, 18772), (176, 18790), (177, 18796),

Gene: Fugax\_28 Start: 18286, Stop: 18729, Start Num: 61

Candidate Starts for Fugax\_28:

(Start: 61 @18286 has 86 MA's), (136, 18547), (180, 18703),

Gene: Funsized\_28 Start: 21759, Stop: 22175, Start Num: 52

Candidate Starts for Funsized\_28:

(Start: 52 @21759 has 15 MA's), (Start: 96 @21882 has 1 MA's), (97, 21888), (105, 21924), (128, 21993), (140, 22044), (153, 22071), (158, 22086), (177, 22167),

Gene: GMA2\_25 Start: 22256, Stop: 22675, Start Num: 55

Candidate Starts for GMA2\_25:

(Start: 55 @22256 has 8 MA's), (Start: 60 @22268 has 7 MA's), (80, 22325), (104, 22424), (124, 22481), (131, 22535), (132, 22544), (153, 22595), (169, 22655),

Gene: GTE6\_27 Start: 20119, Stop: 20550, Start Num: 61

Candidate Starts for GTE6\_27:

(20, 19951), (Start: 61 @20119 has 86 MA's), (92, 20203), (109, 20278), (141, 20398), (149, 20413), (171, 20482), (179, 20521), (180, 20524),

Gene: Gadget\_27 Start: 19373, Stop: 19786, Start Num: 56

Candidate Starts for Gadget\_27:

(Start: 56 @19373 has 42 MA's), (Start: 96 @19493 has 1 MA's), (97, 19499), (110, 19547), (132, 19631), (171, 19757),

Gene: Gaea\_29 Start: 21701, Stop: 22135, Start Num: 53

Candidate Starts for Gaea\_29:

(Start: 53 @21701 has 10 MA's), (83, 21755), (92, 21785), (109, 21860), (136, 21962), (142, 21983), (169, 22055), (180, 22106),

Gene: Galadriel\_30 Start: 23641, Stop: 24075, Start Num: 61

Candidate Starts for Galadriel\_30:

(40, 23611), (Start: 61 @23641 has 86 MA's), (92, 23725), (109, 23800), (120, 23824), (136, 23902), (169, 23995), (180, 24046),

Gene: Gareth\_24 Start: 18379, Stop: 18801, Start Num: 47

Candidate Starts for Gareth\_24:

(30, 18313), (Start: 47 @18379 has 263 MA's), (Start: 95 @18502 has 1 MA's), (Start: 96 @18508 has 1 MA's), (97, 18514), (117, 18577), (128, 18619), (153, 18697), (166, 18745), (172, 18769), (176, 18787), (177, 18793),

Gene: Gazebo\_32 Start: 22390, Stop: 22803, Start Num: 47

Candidate Starts for Gazebo\_32:

(31, 22333), (Start: 47 @22390 has 263 MA's), (79, 22462), (102, 22549), (135, 22666), (140, 22681),

Gene: GeneCoco\_25 Start: 18681, Stop: 19103, Start Num: 46

Candidate Starts for GeneCoco\_25:

(Start: 46 @18681 has 52 MA's), (Start: 95 @18804 has 1 MA's), (Start: 96 @18810 has 1 MA's), (97, 18816), (117, 18879), (128, 18921), (153, 18999), (166, 19047), (172, 19071), (176, 19089), (177, 19095),

Gene: Geodirt\_27 Start: 22624, Stop: 23058, Start Num: 61

Candidate Starts for Geodirt\_27:

(40, 22594), (Start: 61 @22624 has 86 MA's), (92, 22708), (109, 22783), (120, 22807), (136, 22885), (169, 22978), (180, 23029),

Gene: Gervas\_26 Start: 19347, Stop: 19760, Start Num: 56

Candidate Starts for Gervas\_26:

(Start: 56 @19347 has 42 MA's), (Start: 96 @19467 has 1 MA's), (97, 19473), (110, 19521), (132, 19605), (171, 19731),

Gene: Gezellig\_27 Start: 17704, Stop: 18147, Start Num: 61

Candidate Starts for Gezellig\_27:

(Start: 61 @17704 has 86 MA's), (136, 17965), (180, 18121),

Gene: Giraffe\_25 Start: 18384, Stop: 18806, Start Num: 47

Candidate Starts for Giraffe\_25:

(30, 18318), (Start: 47 @18384 has 263 MA's), (Start: 95 @18507 has 1 MA's), (Start: 96 @18513 has 1 MA's), (97, 18519), (117, 18582), (128, 18624), (140, 18675), (153, 18702), (166, 18750), (172,



18774), (176, 18792), (177, 18798),

Gene: Glass\_27 Start: 20954, Stop: 21382, Start Num: 47

Candidate Starts for Glass\_27:

(37, 20927), (Start: 47 @20954 has 263 MA's), (57, 20969), (Start: 96 @21086 has 1 MA's), (97, 21092), (102, 21119), (110, 21140), (117, 21158), (153, 21278), (154, 21284), (171, 21347), (177, 21374),

Gene: GlenHope\_27 Start: 19356, Stop: 19769, Start Num: 56

Candidate Starts for GlenHope\_27:

(Start: 56 @19356 has 42 MA's), (Start: 96 @19476 has 1 MA's), (97, 19482), (110, 19530), (132, 19614), (171, 19740),

Gene: GodPhather\_20 Start: 18473, Stop: 18883, Start Num: 55

Candidate Starts for GodPhather\_20:

(Start: 55 @18473 has 8 MA's), (86, 18548), (Start: 96 @18593 has 1 MA's), (97, 18599), (107, 18641), (117, 18665), (123, 18686), (152, 18788), (166, 18833),

Gene: Godines\_27 Start: 20847, Stop: 21275, Start Num: 47

Candidate Starts for Godines\_27:

(37, 20820), (Start: 47 @20847 has 263 MA's), (Start: 96 @20979 has 1 MA's), (97, 20985), (102, 21012), (110, 21033), (117, 21051), (153, 21171), (154, 21177), (171, 21240), (177, 21267),

Gene: GodonK\_84 Start: 43620, Stop: 44033, Start Num: 44

Candidate Starts for GodonK\_84:

(Start: 44 @43620 has 6 MA's), (62, 43653), (93, 43746), (97, 43770), (104, 43803), (113, 43830), (115, 43833), (133, 43905), (140, 43926), (156, 43965), (172, 44025),

Gene: Gophee\_25 Start: 18662, Stop: 19084, Start Num: 47

Candidate Starts for Gophee\_25:

(30, 18596), (Start: 47 @18662 has 263 MA's), (Start: 95 @18785 has 1 MA's), (Start: 96 @18791 has 1 MA's), (97, 18797), (117, 18860), (128, 18902), (153, 18980), (166, 19028), (172, 19052), (176, 19070), (177, 19076),

Gene: Grand2040\_24 Start: 18399, Stop: 18821, Start Num: 47

Candidate Starts for Grand2040\_24:

(30, 18333), (Start: 47 @18399 has 263 MA's), (Start: 95 @18522 has 1 MA's), (Start: 96 @18528 has 1 MA's), (97, 18534), (117, 18597), (128, 18639), (140, 18690), (153, 18717), (166, 18765), (172, 18789), (176, 18807), (177, 18813),

Gene: Grassboy\_34 Start: 22564, Stop: 22977, Start Num: 47

Candidate Starts for Grassboy\_34:

(31, 22507), (Start: 47 @22564 has 263 MA's), (102, 22723), (135, 22840), (140, 22855),

Gene: Gustavo\_29 Start: 21853, Stop: 22287, Start Num: 61

Candidate Starts for Gustavo\_29:

(Start: 55 @21844 has 8 MA's), (Start: 61 @21853 has 86 MA's), (92, 21937), (109, 22012), (136, 22114), (142, 22135), (165, 22192), (169, 22207), (180, 22258),

Gene: Gwilliam\_25 Start: 18672, Stop: 19094, Start Num: 47

Candidate Starts for Gwilliam\_25:

(30, 18606), (Start: 47 @18672 has 263 MA's), (Start: 95 @18795 has 1 MA's), (Start: 96 @18801 has 1 MA's), (97, 18807), (117, 18870), (128, 18912), (153, 18990), (166, 19038), (172, 19062), (176,

19080), (177, 19086),

Gene: Gyarad\_0025 Start: 18674, Stop: 19096, Start Num: 47

Candidate Starts for Gyarad\_0025:

(30, 18608), (Start: 47 @18674 has 263 MA's), (Start: 95 @18797 has 1 MA's), (Start: 96 @18803 has 1 MA's), (97, 18809), (117, 18872), (128, 18914), (153, 18992), (166, 19040), (172, 19064), (176, 19082), (177, 19088),

Gene: HSavage\_25 Start: 18682, Stop: 19104, Start Num: 47

Candidate Starts for HSavage\_25:

(30, 18616), (Start: 47 @18682 has 263 MA's), (Start: 95 @18805 has 1 MA's), (Start: 96 @18811 has 1 MA's), (97, 18817), (117, 18880), (128, 18922), (153, 19000), (166, 19048), (172, 19072), (176, 19090), (177, 19096),

Gene: Haimas\_25 Start: 18677, Stop: 19099, Start Num: 47

Candidate Starts for Haimas\_25:

(30, 18611), (Start: 47 @18677 has 263 MA's), (Start: 95 @18800 has 1 MA's), (Start: 96 @18806 has 1 MA's), (97, 18812), (117, 18875), (128, 18917), (153, 18995), (166, 19043), (172, 19067), (176, 19085), (177, 19091),

Gene: Haleema\_24 Start: 18399, Stop: 18821, Start Num: 47

Candidate Starts for Haleema\_24:

(30, 18333), (Start: 47 @18399 has 263 MA's), (Start: 95 @18522 has 1 MA's), (Start: 96 @18528 has 1 MA's), (97, 18534), (117, 18597), (128, 18639), (153, 18717), (166, 18765), (172, 18789), (176, 18807), (177, 18813),

Gene: Halfpint\_25 Start: 19188, Stop: 19601, Start Num: 56

Candidate Starts for Halfpint\_25:

(Start: 56 @19188 has 42 MA's), (Start: 96 @19308 has 1 MA's), (97, 19314), (110, 19362), (132, 19446), (171, 19572),

Gene: Halo3\_27 Start: 17997, Stop: 18440, Start Num: 61

Candidate Starts for Halo3\_27:

(Start: 61 @17997 has 86 MA's), (136, 18258), (180, 18414),

Gene: Hamish\_25 Start: 18669, Stop: 19091, Start Num: 47

Candidate Starts for Hamish\_25:

(30, 18603), (Start: 47 @18669 has 263 MA's), (Start: 95 @18792 has 1 MA's), (Start: 96 @18798 has 1 MA's), (97, 18804), (117, 18867), (128, 18909), (153, 18987), (166, 19035), (172, 19059), (176, 19077), (177, 19083),

Gene: Hangman\_23 Start: 19331, Stop: 19744, Start Num: 54

Candidate Starts for Hangman\_23:

(Start: 54 @19331 has 23 MA's), (Start: 95 @19445 has 1 MA's), (Start: 96 @19451 has 1 MA's), (97, 19457), (105, 19493), (121, 19532), (124, 19544), (128, 19562), (153, 19640), (171, 19709), (172, 19712), (177, 19736),

Gene: Hans\_30 Start: 21408, Stop: 21839, Start Num: 61

Candidate Starts for Hans\_30:

(16, 21216), (Start: 43 @21381 has 2 MA's), (Start: 61 @21408 has 86 MA's), (92, 21492), (118, 21588), (136, 21669), (137, 21675), (141, 21687), (165, 21747), (171, 21771), (179, 21810), (180, 21813),

Gene: Hartsy\_24 Start: 18764, Stop: 19114, Start Num: 81

Candidate Starts for Hartsy\_24:

(Start: 46 @18692 has 52 MA's), (81, 18764), (Start: 95 @18815 has 1 MA's), (Start: 96 @18821 has 1 MA's), (97, 18827), (117, 18890), (128, 18932), (153, 19010), (166, 19058), (172, 19082), (176, 19100), (177, 19106),

Gene: Harvey\_25 Start: 18698, Stop: 19120, Start Num: 47

Candidate Starts for Harvey\_25:

(30, 18632), (Start: 47 @18698 has 263 MA's), (Start: 95 @18821 has 1 MA's), (Start: 96 @18827 has 1 MA's), (97, 18833), (117, 18896), (128, 18938), (153, 19016), (166, 19064), (172, 19088), (176, 19106), (177, 19112),

Gene: HarveySr\_26 Start: 19343, Stop: 19756, Start Num: 56

Candidate Starts for HarveySr\_26:

(Start: 56 @19343 has 42 MA's), (Start: 96 @19463 has 1 MA's), (97, 19469), (132, 19601), (171, 19727),

Gene: Hashim76\_29 Start: 19154, Stop: 19570, Start Num: 52

Candidate Starts for Hashim76\_29:

(Start: 52 @19154 has 15 MA's), (Start: 96 @19277 has 1 MA's), (100, 19307), (153, 19466), (158, 19481), (177, 19562),

Gene: Heath\_22 Start: 18962, Stop: 19375, Start Num: 54

Candidate Starts for Heath\_22:

(Start: 54 @18962 has 23 MA's), (Start: 95 @19076 has 1 MA's), (Start: 96 @19082 has 1 MA's), (97, 19088), (105, 19124), (121, 19163), (124, 19175), (128, 19193), (153, 19271), (171, 19340), (172, 19343), (177, 19367),

Gene: Heathcliff\_26 Start: 19325, Stop: 19738, Start Num: 56

Candidate Starts for Heathcliff\_26:

(Start: 56 @19325 has 42 MA's), (Start: 96 @19445 has 1 MA's), (97, 19451), (110, 19499), (132, 19583), (171, 19709),

Gene: Hedgerow\_27 Start: 20936, Stop: 21364, Start Num: 47

Candidate Starts for Hedgerow\_27:

(37, 20909), (Start: 47 @20936 has 263 MA's), (57, 20951), (Start: 96 @21068 has 1 MA's), (97, 21074), (102, 21101), (110, 21122), (117, 21140), (153, 21260), (154, 21266), (171, 21329), (177, 21356),

Gene: Held\_25 Start: 18383, Stop: 18805, Start Num: 47

Candidate Starts for Held\_25:

(30, 18317), (Start: 47 @18383 has 263 MA's), (Start: 95 @18506 has 1 MA's), (Start: 96 @18512 has 1 MA's), (97, 18518), (117, 18581), (128, 18623), (153, 18701), (166, 18749), (172, 18773), (176, 18791), (177, 18797),

Gene: HenryJackson\_24 Start: 18399, Stop: 18821, Start Num: 47

Candidate Starts for HenryJackson\_24:

(30, 18333), (Start: 47 @18399 has 263 MA's), (Start: 95 @18522 has 1 MA's), (Start: 96 @18528 has 1 MA's), (97, 18534), (117, 18597), (128, 18639), (153, 18717), (166, 18765), (172, 18789), (176, 18807), (177, 18813),

Gene: Hertubise\_25 Start: 18691, Stop: 19113, Start Num: 47

Candidate Starts for Hertubise\_25:

(30, 18625), (Start: 47 @18691 has 263 MA's), (Start: 95 @18814 has 1 MA's), (Start: 96 @18820 has 1 MA's), (97, 18826), (117, 18889), (128, 18931), (153, 19009), (166, 19057), (172, 19081), (176, 19099), (177, 19105),

Gene: Hetaeria\_25 Start: 18692, Stop: 19114, Start Num: 47

Candidate Starts for Hetaeria\_25:

(30, 18626), (Start: 47 @18692 has 263 MA's), (Start: 95 @18815 has 1 MA's), (Start: 96 @18821 has 1 MA's), (97, 18827), (117, 18890), (128, 18932), (140, 18983), (153, 19010), (166, 19058), (172, 19082), (176, 19100), (177, 19106),

Gene: HighStump\_24 Start: 18382, Stop: 18804, Start Num: 47

Candidate Starts for HighStump\_24:

(30, 18316), (Start: 47 @18382 has 263 MA's), (Start: 95 @18505 has 1 MA's), (Start: 96 @18511 has 1 MA's), (97, 18517), (117, 18580), (128, 18622), (140, 18673), (153, 18700), (166, 18748), (172, 18772), (176, 18790), (177, 18796),

Gene: Hocus\_24 Start: 18385, Stop: 18807, Start Num: 46

Candidate Starts for Hocus\_24:

(Start: 46 @18385 has 52 MA's), (Start: 95 @18508 has 1 MA's), (Start: 96 @18514 has 1 MA's), (97, 18520), (117, 18583), (128, 18625), (153, 18703), (166, 18751), (172, 18775), (176, 18793), (177, 18799),

Gene: Holeinone\_27 Start: 20832, Stop: 21260, Start Num: 47

Candidate Starts for Holeinone\_27:

(37, 20805), (Start: 47 @20832 has 263 MA's), (57, 20847), (Start: 96 @20964 has 1 MA's), (97, 20970), (102, 20997), (110, 21018), (117, 21036), (153, 21156), (154, 21162), (171, 21225), (177, 21252),

Gene: Horchata\_25 Start: 18661, Stop: 19083, Start Num: 47

Candidate Starts for Horchata\_25:

(30, 18595), (Start: 47 @18661 has 263 MA's), (Start: 95 @18784 has 1 MA's), (Start: 96 @18790 has 1 MA's), (97, 18796), (117, 18859), (128, 18901), (153, 18979), (166, 19027), (172, 19051), (176, 19069), (177, 19075),

Gene: Hosp\_019 Start: 16062, Stop: 16475, Start Num: 46

Candidate Starts for Hosp\_019:

(Start: 46 @16062 has 52 MA's), (89, 16152), (105, 16230), (117, 16257), (128, 16299), (152, 16374),

Gene: Hydro\_23 Start: 19336, Stop: 19749, Start Num: 54

Candidate Starts for Hydro\_23:

(Start: 54 @19336 has 23 MA's), (Start: 95 @19450 has 1 MA's), (Start: 96 @19456 has 1 MA's), (97, 19462), (105, 19498), (121, 19537), (124, 19549), (128, 19567), (153, 19645), (166, 19693), (171, 19714), (172, 19717), (177, 19741),

Gene: Hyperion\_32 Start: 22347, Stop: 22760, Start Num: 47

Candidate Starts for Hyperion\_32:

(31, 22290), (Start: 47 @22347 has 263 MA's), (102, 22506), (135, 22623), (140, 22638),

Gene: ImtiyazSitla\_24 Start: 18226, Stop: 18648, Start Num: 46

Candidate Starts for ImtiyazSitla\_24:

(Start: 46 @18226 has 52 MA's), (Start: 95 @18349 has 1 MA's), (Start: 96 @18355 has 1 MA's), (97, 18361), (117, 18424), (128, 18466), (153, 18544), (166, 18592), (172, 18616), (176, 18634), (177, 18640),

Gene: Imvubu\_19 Start: 16429, Stop: 16845, Start Num: 52

Candidate Starts for Imvubu\_19:

(Start: 52 @16429 has 15 MA's), (57, 16438), (Start: 96 @16552 has 1 MA's), (121, 16633), (144, 16723), (176, 16831), (177, 16837),

Gene: Inchworm\_25 Start: 18668, Stop: 19090, Start Num: 47

Candidate Starts for Inchworm\_25:

(30, 18602), (Start: 47 @18668 has 263 MA's), (Start: 95 @18791 has 1 MA's), (Start: 96 @18797 has 1 MA's), (97, 18803), (117, 18866), (128, 18908), (153, 18986), (166, 19034), (172, 19058), (176, 19076), (177, 19082),

Gene: Indlovu\_23 Start: 19044, Stop: 19460, Start Num: 46

Candidate Starts for Indlovu\_23:

(Start: 46 @19044 has 52 MA's), (105, 19212), (128, 19281), (153, 19359), (171, 19428), (172, 19431),

Gene: Inspectinfecti\_29 Start: 21832, Stop: 22263, Start Num: 61

Candidate Starts for Inspectinfecti\_29:

(13, 21604), (16, 21640), (Start: 43 @21805 has 2 MA's), (Start: 61 @21832 has 86 MA's), (92, 21916), (118, 22012), (136, 22093), (137, 22099), (141, 22111), (165, 22171), (171, 22195), (179, 22234), (180, 22237),

Gene: Inverness\_25 Start: 18682, Stop: 19104, Start Num: 47

Candidate Starts for Inverness\_25:

(30, 18616), (Start: 47 @18682 has 263 MA's), (Start: 95 @18805 has 1 MA's), (Start: 96 @18811 has 1 MA's), (97, 18817), (117, 18880), (128, 18922), (153, 19000), (166, 19048), (172, 19072), (176, 19090), (177, 19096),

Gene: Iridoclysis\_25 Start: 18656, Stop: 19078, Start Num: 47

Candidate Starts for Iridoclysis\_25:

(30, 18590), (Start: 47 @18656 has 263 MA's), (Start: 95 @18779 has 1 MA's), (Start: 96 @18785 has 1 MA's), (97, 18791), (117, 18854), (128, 18896), (153, 18974), (166, 19022), (172, 19046), (176, 19064), (177, 19070),

Gene: IsaacEli\_25 Start: 18686, Stop: 19108, Start Num: 47

Candidate Starts for IsaacEli\_25:

(30, 18620), (Start: 47 @18686 has 263 MA's), (Start: 95 @18809 has 1 MA's), (Start: 96 @18815 has 1 MA's), (97, 18821), (117, 18884), (128, 18926), (140, 18977), (153, 19004), (166, 19052), (172, 19076), (176, 19094), (177, 19100),

Gene: ItsyBitsy1\_27 Start: 20825, Stop: 21253, Start Num: 47

Candidate Starts for ItsyBitsy1\_27:

(37, 20798), (Start: 47 @20825 has 263 MA's), (57, 20840), (Start: 96 @20957 has 1 MA's), (97, 20963), (102, 20990), (110, 21011), (117, 21029), (153, 21149), (154, 21155), (171, 21218), (177, 21245),

Gene: JAMaL\_23 Start: 19500, Stop: 19913, Start Num: 54

Candidate Starts for JAMaL\_23:

(Start: 54 @19500 has 23 MA's), (69, 19539), (97, 19626), (117, 19689), (121, 19701), (128, 19731), (177, 19905),

Gene: JDog\_25 Start: 18392, Stop: 18814, Start Num: 46

Candidate Starts for JDog\_25:

(Start: 46 @18392 has 52 MA's), (Start: 95 @18515 has 1 MA's), (Start: 96 @18521 has 1 MA's), (97, 18527), (117, 18590), (128, 18632), (153, 18710), (166, 18758), (172, 18782), (176, 18800), (177, 18806),

Gene: JKSyngboy\_27 Start: 22410, Stop: 22844, Start Num: 53

Candidate Starts for JKSyngboy\_27:

(Start: 53 @22410 has 10 MA's), (83, 22464), (92, 22494), (97, 22524), (109, 22569), (136, 22671), (142, 22692), (169, 22764), (180, 22815),

Gene: Jabberwocky\_28 Start: 23780, Stop: 24214, Start Num: 61

Candidate Starts for Jabberwocky\_28:

(40, 23750), (Start: 61 @23780 has 86 MA's), (92, 23864), (109, 23939), (120, 23963), (136, 24041), (142, 24062), (169, 24134), (180, 24185),

Gene: JacAttac\_25 Start: 18668, Stop: 19090, Start Num: 47

Candidate Starts for JacAttac\_25:

(30, 18602), (Start: 47 @18668 has 263 MA's), (Start: 95 @18791 has 1 MA's), (Start: 96 @18797 has 1 MA's), (97, 18803), (117, 18866), (128, 18908), (153, 18986), (166, 19034), (172, 19058), (176, 19076), (177, 19082),

Gene: JaguarMi\_23 Start: 18798, Stop: 19211, Start Num: 54

Candidate Starts for JaguarMi\_23:

(Start: 54 @18798 has 23 MA's), (Start: 95 @18912 has 1 MA's), (Start: 96 @18918 has 1 MA's), (97, 18924), (105, 18960), (121, 18999), (124, 19011), (128, 19029), (153, 19107), (171, 19176), (172, 19179), (177, 19203),

Gene: JakeO\_24 Start: 18392, Stop: 18814, Start Num: 46

Candidate Starts for JakeO\_24:

(Start: 46 @18392 has 52 MA's), (Start: 95 @18515 has 1 MA's), (Start: 96 @18521 has 1 MA's), (97, 18527), (117, 18590), (128, 18632), (153, 18710), (166, 18758), (172, 18782), (176, 18800), (177, 18806),

Gene: Jambalaya\_26 Start: 17351, Stop: 17794, Start Num: 61

Candidate Starts for Jambalaya\_26:

(Start: 61 @17351 has 86 MA's), (136, 17612), (180, 17768),

Gene: JangoPhett\_25 Start: 18666, Stop: 19088, Start Num: 47

Candidate Starts for JangoPhett\_25:

(30, 18600), (Start: 47 @18666 has 263 MA's), (Start: 95 @18789 has 1 MA's), (Start: 96 @18795 has 1 MA's), (97, 18801), (117, 18864), (128, 18906), (153, 18984), (166, 19032), (172, 19056), (176, 19074), (177, 19080),

Gene: Jehoshaphat\_35 Start: 22869, Stop: 23273, Start Num: 47

Candidate Starts for Jehoshaphat\_35:

(31, 22812), (Start: 47 @22869 has 263 MA's), (65, 22905), (123, 23079), (128, 23100), (137, 23145), (140, 23154), (177, 23259), (179, 23268),

Gene: Jeon\_19 Start: 18215, Stop: 18625, Start Num: 55

Candidate Starts for Jeon\_19:

(Start: 55 @18215 has 8 MA's), (86, 18290), (Start: 96 @18335 has 1 MA's), (97, 18341), (107, 18383), (117, 18407), (123, 18428), (152, 18530), (166, 18575),

Gene: Jillium\_24 Start: 18392, Stop: 18814, Start Num: 47

Candidate Starts for Jillium\_24:

(30, 18326), (Start: 47 @18392 has 263 MA's), (Start: 95 @18515 has 1 MA's), (Start: 96 @18521 has 1 MA's), (97, 18527), (117, 18590), (128, 18632), (153, 18710), (166, 18758), (172, 18782), (176, 18800), (177, 18806),

Gene: Jiminy\_24 Start: 18230, Stop: 18652, Start Num: 46

Candidate Starts for Jiminy\_24:

(Start: 46 @18230 has 52 MA's), (Start: 95 @18353 has 1 MA's), (Start: 96 @18359 has 1 MA's), (97, 18365), (117, 18428), (128, 18470), (153, 18548), (166, 18596), (172, 18620), (176, 18638), (177, 18644),

Gene: Jolie1\_021 Start: 17832, Stop: 18245, Start Num: 46

Candidate Starts for Jolie1\_021:

(Start: 46 @17832 has 52 MA's), (105, 18000), (108, 18009), (117, 18027), (152, 18144),

Gene: Judebell\_35 Start: 22375, Stop: 22779, Start Num: 47

Candidate Starts for Judebell\_35:

(Start: 47 @22375 has 263 MA's), (Start: 56 @22387 has 42 MA's), (123, 22585), (128, 22606), (137, 22651), (140, 22660), (177, 22765), (179, 22774),

Gene: KLucky39\_25 Start: 18674, Stop: 19096, Start Num: 47

Candidate Starts for KLucky39\_25:

(30, 18608), (Start: 47 @18674 has 263 MA's), (Start: 95 @18797 has 1 MA's), (Start: 96 @18803 has 1 MA's), (97, 18809), (117, 18872), (128, 18914), (153, 18992), (166, 19040), (172, 19064), (176, 19082), (177, 19088),

Gene: Kahve\_24 Start: 18396, Stop: 18818, Start Num: 47

Candidate Starts for Kahve\_24:

(30, 18330), (Start: 47 @18396 has 263 MA's), (Start: 95 @18519 has 1 MA's), (Start: 96 @18525 has 1 MA's), (97, 18531), (117, 18594), (128, 18636), (140, 18687), (153, 18714), (166, 18762), (172, 18786), (176, 18804), (177, 18810),

Gene: Kailash\_25 Start: 18704, Stop: 19126, Start Num: 46

Candidate Starts for Kailash\_25:

(Start: 46 @18704 has 52 MA's), (81, 18776), (Start: 95 @18827 has 1 MA's), (Start: 96 @18833 has 1 MA's), (97, 18839), (117, 18902), (128, 18944), (153, 19022), (166, 19070), (172, 19094), (176, 19112), (177, 19118),

Gene: Kaleb\_27 Start: 20951, Stop: 21379, Start Num: 47

Candidate Starts for Kaleb\_27:

(37, 20924), (Start: 47 @20951 has 263 MA's), (57, 20966), (Start: 96 @21083 has 1 MA's), (97, 21089), (102, 21116), (110, 21137), (117, 21155), (153, 21275), (154, 21281), (171, 21344), (177, 21371),

Gene: Kamashten\_29 Start: 23229, Stop: 23663, Start Num: 61

Candidate Starts for Kamashten\_29:

(40, 23199), (Start: 61 @23229 has 86 MA's), (92, 23313), (109, 23388), (120, 23412), (136, 23490), (142, 23511), (169, 23583), (180, 23634),

Gene: Kamiyu\_26 Start: 19332, Stop: 19745, Start Num: 56

Candidate Starts for Kamiyu\_26:

(Start: 56 @19332 has 42 MA's), (86, 19407), (Start: 96 @19452 has 1 MA's), (97, 19458), (132, 19590), (171, 19716),

Gene: Katniss\_25 Start: 18694, Stop: 19116, Start Num: 47

Candidate Starts for Katniss\_25:

(30, 18628), (Start: 47 @18694 has 263 MA's), (Start: 95 @18817 has 1 MA's), (Start: 96 @18823 has 1 MA's), (97, 18829), (117, 18892), (128, 18934), (153, 19012), (166, 19060), (172, 19084), (176, 19102), (177, 19108),

Gene: KayaCho\_21 Start: 17836, Stop: 18249, Start Num: 46

Candidate Starts for KayaCho\_21:

(Start: 46 @17836 has 52 MA's), (97, 17968), (105, 18004), (117, 18031), (128, 18073), (152, 18148), (153, 18151),

Gene: Keitabear\_30 Start: 24585, Stop: 25019, Start Num: 61

Candidate Starts for Keitabear\_30:

(40, 24555), (Start: 61 @24585 has 86 MA's), (92, 24669), (109, 24744), (120, 24768), (136, 24846), (142, 24867), (169, 24939), (180, 24990),

Gene: Keitherie\_25 Start: 18714, Stop: 19136, Start Num: 46

Candidate Starts for Keitherie\_25:

(Start: 46 @18714 has 52 MA's), (81, 18786), (Start: 95 @18837 has 1 MA's), (Start: 96 @18843 has 1 MA's), (97, 18849), (117, 18912), (128, 18954), (153, 19032), (166, 19080), (172, 19104), (176, 19122), (177, 19128),

Gene: Kelcole\_31 Start: 20979, Stop: 21374, Start Num: 47

Candidate Starts for Kelcole\_31:

(Start: 47 @20979 has 263 MA's), (66, 21021), (70, 21030), (102, 21138), (135, 21252), (150, 21279), (177, 21366),

Gene: Kewpiedoll\_29 Start: 22426, Stop: 22860, Start Num: 61

Candidate Starts for Kewpiedoll\_29:

(40, 22396), (Start: 61 @22426 has 86 MA's), (92, 22510), (109, 22585), (120, 22609), (136, 22687), (142, 22708), (169, 22780), (180, 22831),

Gene: Kheth\_27 Start: 20837, Stop: 21265, Start Num: 47

Candidate Starts for Kheth\_27:

(37, 20810), (Start: 47 @20837 has 263 MA's), (57, 20852), (Start: 96 @20969 has 1 MA's), (97, 20975), (102, 21002), (110, 21023), (117, 21041), (153, 21161), (154, 21167), (171, 21230), (177, 21257),

Gene: Kikipoo\_25 Start: 18686, Stop: 19108, Start Num: 47

Candidate Starts for Kikipoo\_25:

(30, 18620), (Start: 47 @18686 has 263 MA's), (Start: 95 @18809 has 1 MA's), (Start: 96 @18815 has 1 MA's), (97, 18821), (117, 18884), (128, 18926), (140, 18977), (153, 19004), (166, 19052), (172, 19076), (176, 19094), (177, 19100),

Gene: Kimbrough\_25 Start: 18388, Stop: 18810, Start Num: 47

Candidate Starts for Kimbrough\_25:

(30, 18322), (Start: 47 @18388 has 263 MA's), (Start: 95 @18511 has 1 MA's), (Start: 96 @18517 has 1 MA's), (97, 18523), (117, 18586), (128, 18628), (153, 18706), (166, 18754), (172, 18778), (176, 18796), (177, 18802),



Gene: KimmyK\_28 Start: 18286, Stop: 18729, Start Num: 61  
Candidate Starts for KimmyK\_28:  
(Start: 61 @18286 has 86 MA's), (136, 18547), (180, 18703),

Gene: KingVeVeVe\_25 Start: 18665, Stop: 19087, Start Num: 47  
Candidate Starts for KingVeVeVe\_25:  
(30, 18599), (Start: 47 @18665 has 263 MA's), (Start: 95 @18788 has 1 MA's), (Start: 96 @18794 has 1 MA's), (97, 18800), (117, 18863), (128, 18905), (153, 18983), (166, 19031), (172, 19055), (176, 19073), (177, 19079),

Gene: KlimbOn\_25 Start: 18674, Stop: 19096, Start Num: 47  
Candidate Starts for KlimbOn\_25:  
(30, 18608), (Start: 47 @18674 has 263 MA's), (Start: 95 @18797 has 1 MA's), (Start: 96 @18803 has 1 MA's), (97, 18809), (117, 18872), (128, 18914), (153, 18992), (166, 19040), (172, 19064), (176, 19082), (177, 19088),

Gene: Kloppinator\_25 Start: 18694, Stop: 19116, Start Num: 47  
Candidate Starts for Kloppinator\_25:  
(30, 18628), (Start: 47 @18694 has 263 MA's), (Start: 95 @18817 has 1 MA's), (Start: 96 @18823 has 1 MA's), (97, 18829), (117, 18892), (128, 18934), (153, 19012), (166, 19060), (172, 19084), (176, 19102), (177, 19108),

Gene: Knocker\_27 Start: 21795, Stop: 22214, Start Num: 52  
Candidate Starts for Knocker\_27:  
(Start: 52 @21795 has 15 MA's), (97, 21924), (105, 21960), (124, 22011), (128, 22029), (140, 22080), (153, 22107), (158, 22122), (172, 22179), (176, 22197), (177, 22203),

Gene: Kronus\_25 Start: 19946, Stop: 20359, Start Num: 56  
Candidate Starts for Kronus\_25:  
(Start: 56 @19946 has 42 MA's), (Start: 96 @20066 has 1 MA's), (97, 20072), (110, 20120), (132, 20204), (171, 20330),

Gene: Kroos\_30 Start: 22606, Stop: 23040, Start Num: 61  
Candidate Starts for Kroos\_30:  
(Start: 55 @22597 has 8 MA's), (Start: 61 @22606 has 86 MA's), (92, 22690), (109, 22765), (136, 22867), (142, 22888), (165, 22945), (169, 22960), (180, 23011),

Gene: Kwadwo\_24 Start: 18378, Stop: 18800, Start Num: 47  
Candidate Starts for Kwadwo\_24:  
(30, 18312), (Start: 47 @18378 has 263 MA's), (Start: 95 @18501 has 1 MA's), (Start: 96 @18507 has 1 MA's), (97, 18513), (117, 18576), (128, 18618), (153, 18696), (166, 18744), (172, 18768), (176, 18786), (177, 18792),

Gene: Kwekel\_27 Start: 19551, Stop: 19982, Start Num: 61  
Candidate Starts for Kwekel\_27:  
(Start: 61 @19551 has 86 MA's), (92, 19635), (109, 19710), (118, 19731), (141, 19830), (149, 19845), (169, 19905), (179, 19953), (180, 19956), (181, 19965),

Gene: Kwksand96\_24 Start: 18240, Stop: 18662, Start Num: 46  
Candidate Starts for Kwksand96\_24:  
(Start: 46 @18240 has 52 MA's), (Start: 95 @18363 has 1 MA's), (Start: 96 @18369 has 1 MA's), (97, 18375), (117, 18438), (128, 18480), (153, 18558), (166, 18606), (172, 18630), (176, 18648), (177, 18654),

Gene: Kwobi\_30 Start: 22592, Stop: 23026, Start Num: 61

Candidate Starts for Kwobi\_30:

(Start: 55 @22583 has 8 MA's), (Start: 61 @22592 has 86 MA's), (92, 22676), (109, 22751), (136, 22853), (142, 22874), (165, 22931), (169, 22946), (180, 22997),

Gene: Kyva\_35 Start: 22599, Stop: 23012, Start Num: 47

Candidate Starts for Kyva\_35:

(31, 22542), (Start: 47 @22599 has 263 MA's), (102, 22758), (135, 22875), (140, 22890),

Gene: Labeouficaum\_24 Start: 18236, Stop: 18658, Start Num: 46

Candidate Starts for Labeouficaum\_24:

(Start: 46 @18236 has 52 MA's), (Start: 95 @18359 has 1 MA's), (Start: 96 @18365 has 1 MA's), (97, 18371), (117, 18434), (128, 18476), (153, 18554), (166, 18602), (172, 18626), (176, 18644), (177, 18650),

Gene: Lars\_27 Start: 20954, Stop: 21382, Start Num: 47

Candidate Starts for Lars\_27:

(37, 20927), (Start: 47 @20954 has 263 MA's), (57, 20969), (Start: 96 @21086 has 1 MA's), (97, 21092), (102, 21119), (110, 21140), (117, 21158), (153, 21278), (154, 21284), (171, 21347), (177, 21374),

Gene: LasagnaCat\_25 Start: 18680, Stop: 19102, Start Num: 47

Candidate Starts for LasagnaCat\_25:

(26, 18590), (30, 18614), (Start: 47 @18680 has 263 MA's), (Start: 95 @18803 has 1 MA's), (Start: 96 @18809 has 1 MA's), (97, 18815), (117, 18878), (128, 18920), (153, 18998), (166, 19046), (172, 19070), (176, 19088), (177, 19094),

Gene: Lasso\_25 Start: 18653, Stop: 19075, Start Num: 47

Candidate Starts for Lasso\_25:

(30, 18587), (Start: 47 @18653 has 263 MA's), (Start: 95 @18776 has 1 MA's), (Start: 96 @18782 has 1 MA's), (97, 18788), (117, 18851), (128, 18893), (140, 18944), (153, 18971), (166, 19019), (172, 19043), (176, 19061), (177, 19067),

Gene: Laurie\_27 Start: 20832, Stop: 21260, Start Num: 47

Candidate Starts for Laurie\_27:

(37, 20805), (Start: 47 @20832 has 263 MA's), (57, 20847), (Start: 96 @20964 has 1 MA's), (97, 20970), (102, 20997), (110, 21018), (117, 21036), (128, 21078), (153, 21156), (154, 21162), (171, 21225), (177, 21252),

Gene: LeeLot\_25 Start: 18678, Stop: 19100, Start Num: 47

Candidate Starts for LeeLot\_25:

(30, 18612), (Start: 47 @18678 has 263 MA's), (Start: 95 @18801 has 1 MA's), (Start: 96 @18807 has 1 MA's), (97, 18813), (117, 18876), (128, 18918), (153, 18996), (166, 19044), (172, 19068), (176, 19086), (177, 19092),

Gene: Lego3393\_25 Start: 18690, Stop: 19112, Start Num: 47

Candidate Starts for Lego3393\_25:

(30, 18624), (Start: 47 @18690 has 263 MA's), (Start: 95 @18813 has 1 MA's), (Start: 96 @18819 has 1 MA's), (97, 18825), (117, 18888), (128, 18930), (153, 19008), (166, 19056), (172, 19080), (176, 19098), (177, 19104),

Gene: Legolas\_24 Start: 18394, Stop: 18816, Start Num: 47

Candidate Starts for Legolas\_24:

(30, 18328), (Start: 47 @18394 has 263 MA's), (Start: 95 @18517 has 1 MA's), (Start: 96 @18523 has 1 MA's), (97, 18529), (117, 18592), (128, 18634), (153, 18712), (166, 18760), (172, 18784), (176, 18802), (177, 18808),

Gene: LeiMonet\_25 Start: 18385, Stop: 18807, Start Num: 47

Candidate Starts for LeiMonet\_25:

(30, 18319), (Start: 47 @18385 has 263 MA's), (Start: 95 @18508 has 1 MA's), (Start: 96 @18514 has 1 MA's), (97, 18520), (117, 18583), (128, 18625), (140, 18676), (153, 18703), (166, 18751), (172, 18775), (176, 18793), (177, 18799),

Gene: LemonSlice\_25 Start: 18385, Stop: 18807, Start Num: 47

Candidate Starts for LemonSlice\_25:

(30, 18319), (Start: 47 @18385 has 263 MA's), (Start: 95 @18508 has 1 MA's), (Start: 96 @18514 has 1 MA's), (97, 18520), (117, 18583), (128, 18625), (153, 18703), (166, 18751), (172, 18775), (176, 18793), (177, 18799),

Gene: Lennon\_30 Start: 24387, Stop: 24821, Start Num: 61

Candidate Starts for Lennon\_30:

(40, 24357), (Start: 61 @24387 has 86 MA's), (92, 24471), (109, 24546), (136, 24648), (142, 24669), (169, 24741), (180, 24792),

Gene: Leonard\_28 Start: 21406, Stop: 21837, Start Num: 61

Candidate Starts for Leonard\_28:

(13, 21178), (16, 21214), (Start: 43 @21379 has 2 MA's), (48, 21382), (Start: 61 @21406 has 86 MA's), (92, 21490), (118, 21586), (136, 21667), (137, 21673), (141, 21685), (165, 21745), (171, 21769), (179, 21808), (180, 21811),

Gene: Lephleur\_27 Start: 20837, Stop: 21265, Start Num: 47

Candidate Starts for Lephleur\_27:

(37, 20810), (Start: 47 @20837 has 263 MA's), (57, 20852), (Start: 96 @20969 has 1 MA's), (97, 20975), (102, 21002), (110, 21023), (117, 21041), (153, 21161), (154, 21167), (171, 21230), (177, 21257),

Gene: LestyG\_26 Start: 19367, Stop: 19780, Start Num: 56

Candidate Starts for LestyG\_26:

(Start: 56 @19367 has 42 MA's), (86, 19442), (Start: 96 @19487 has 1 MA's), (97, 19493), (132, 19625), (171, 19751),

Gene: Ligma\_22 Start: 17225, Stop: 17635, Start Num: 50

Candidate Starts for Ligma\_22:

(Start: 50 @17225 has 17 MA's), (86, 17306), (Start: 95 @17345 has 1 MA's), (97, 17357), (107, 17399), (110, 17405), (117, 17423), (139, 17513),

Gene: LilHam\_27 Start: 21186, Stop: 21620, Start Num: 61

Candidate Starts for LilHam\_27:

(Start: 55 @21177 has 8 MA's), (Start: 61 @21186 has 86 MA's), (92, 21270), (109, 21345), (136, 21447), (142, 21468), (165, 21525), (169, 21540), (180, 21591),

Gene: LilMcDreamy\_22 Start: 19306, Stop: 19722, Start Num: 52

Candidate Starts for LilMcDreamy\_22:

(Start: 52 @19306 has 15 MA's), (89, 19393), (Start: 96 @19429 has 1 MA's), (97, 19435), (133, 19570), (153, 19618),

Gene: Lilbeanie\_25 Start: 16498, Stop: 16914, Start Num: 60  
Candidate Starts for Lilbeanie\_25:  
(Start: 60 @16498 has 7 MA's), (92, 16585), (149, 16795), (180, 16888),

Gene: LittleMunchkin\_24 Start: 20052, Stop: 20465, Start Num: 50  
Candidate Starts for LittleMunchkin\_24:  
(Start: 50 @20052 has 17 MA's), (81, 20121), (86, 20133), (97, 20184), (110, 20232), (153, 20370),  
(171, 20439),

Gene: LizLemon\_27 Start: 20954, Stop: 21382, Start Num: 47  
Candidate Starts for LizLemon\_27:  
(37, 20927), (Start: 47 @20954 has 263 MA's), (57, 20969), (Start: 96 @21086 has 1 MA's), (97,  
21092), (102, 21119), (110, 21140), (117, 21158), (153, 21278), (154, 21284), (171, 21347), (177,  
21374),

Gene: Llemily\_33 Start: 21681, Stop: 22049, Start Num: 65  
Candidate Starts for Llemily\_33:  
(31, 21588), (Start: 47 @21645 has 263 MA's), (65, 21681), (123, 21855), (128, 21876), (137, 21921),  
(140, 21930), (177, 22035), (179, 22044),

Gene: Lolalove\_23 Start: 19333, Stop: 19746, Start Num: 54  
Candidate Starts for Lolalove\_23:  
(Start: 54 @19333 has 23 MA's), (Start: 95 @19447 has 1 MA's), (Start: 96 @19453 has 1 MA's), (97,  
19459), (105, 19495), (121, 19534), (124, 19546), (128, 19564), (153, 19642), (166, 19690), (171,  
19711), (172, 19714), (177, 19738),

Gene: Lonelysoil\_32 Start: 21890, Stop: 22294, Start Num: 47  
Candidate Starts for Lonelysoil\_32:  
(31, 21833), (Start: 47 @21890 has 263 MA's), (65, 21926), (123, 22100), (128, 22121), (137, 22166),  
(140, 22175), (177, 22280), (179, 22289),

Gene: Longacauda\_24 Start: 18380, Stop: 18802, Start Num: 46  
Candidate Starts for Longacauda\_24:  
(Start: 46 @18380 has 52 MA's), (Start: 95 @18503 has 1 MA's), (Start: 96 @18509 has 1 MA's), (97,  
18515), (117, 18578), (128, 18620), (153, 18698), (166, 18746), (172, 18770), (176, 18788), (177,  
18794),

Gene: Lopsy\_24 Start: 18236, Stop: 18658, Start Num: 47  
Candidate Starts for Lopsy\_24:  
(30, 18170), (Start: 47 @18236 has 263 MA's), (Start: 95 @18359 has 1 MA's), (Start: 96 @18365 has  
1 MA's), (97, 18371), (117, 18434), (128, 18476), (153, 18554), (166, 18602), (172, 18626), (176,  
18644), (177, 18650),

Gene: LostAndPhound\_24 Start: 18387, Stop: 18809, Start Num: 47  
Candidate Starts for LostAndPhound\_24:  
(30, 18321), (Start: 47 @18387 has 263 MA's), (Start: 95 @18510 has 1 MA's), (Start: 96 @18516 has  
1 MA's), (97, 18522), (117, 18585), (128, 18627), (140, 18678), (153, 18705), (166, 18753), (172,  
18777), (176, 18795), (177, 18801),

Gene: Love\_33 Start: 24151, Stop: 24585, Start Num: 61  
Candidate Starts for Love\_33:

(40, 24121), (Start: 61 @24151 has 86 MA's), (92, 24235), (109, 24310), (120, 24334), (136, 24412), (169, 24505), (180, 24556),

Gene: LuckyMarjie\_24 Start: 18400, Stop: 18822, Start Num: 47

Candidate Starts for LuckyMarjie\_24:

(30, 18334), (Start: 47 @18400 has 263 MA's), (Start: 95 @18523 has 1 MA's), (Start: 96 @18529 has 1 MA's), (97, 18535), (117, 18598), (128, 18640), (153, 18718), (166, 18766), (172, 18790), (176, 18808), (177, 18814),

Gene: Lulumae\_24 Start: 18378, Stop: 18800, Start Num: 47

Candidate Starts for Lulumae\_24:

(30, 18312), (Start: 47 @18378 has 263 MA's), (Start: 95 @18501 has 1 MA's), (Start: 96 @18507 has 1 MA's), (97, 18513), (117, 18576), (128, 18618), (153, 18696), (166, 18744), (172, 18768), (176, 18786), (177, 18792),

Gene: Lulwa\_25 Start: 18665, Stop: 19087, Start Num: 47

Candidate Starts for Lulwa\_25:

(30, 18599), (Start: 47 @18665 has 263 MA's), (Start: 95 @18788 has 1 MA's), (Start: 96 @18794 has 1 MA's), (97, 18800), (117, 18863), (128, 18905), (153, 18983), (166, 19031), (172, 19055), (176, 19073), (177, 19079),

Gene: Lumine\_24 Start: 18374, Stop: 18796, Start Num: 47

Candidate Starts for Lumine\_24:

(30, 18308), (Start: 47 @18374 has 263 MA's), (Start: 95 @18497 has 1 MA's), (Start: 96 @18503 has 1 MA's), (97, 18509), (117, 18572), (128, 18614), (153, 18692), (166, 18740), (172, 18764), (176, 18782), (177, 18788),

Gene: MRabcd\_24 Start: 18379, Stop: 18801, Start Num: 47

Candidate Starts for MRabcd\_24:

(30, 18313), (Start: 47 @18379 has 263 MA's), (Start: 95 @18502 has 1 MA's), (Start: 96 @18508 has 1 MA's), (97, 18514), (117, 18577), (128, 18619), (140, 18670), (153, 18697), (166, 18745), (172, 18769), (176, 18787), (177, 18793),

Gene: Mag7\_24 Start: 18254, Stop: 18676, Start Num: 46

Candidate Starts for Mag7\_24:

(Start: 46 @18254 has 52 MA's), (81, 18326), (Start: 95 @18377 has 1 MA's), (Start: 96 @18383 has 1 MA's), (97, 18389), (117, 18452), (128, 18494), (153, 18572), (166, 18620), (172, 18644), (176, 18662), (177, 18668),

Gene: Magic8\_25 Start: 18692, Stop: 19114, Start Num: 46

Candidate Starts for Magic8\_25:

(Start: 46 @18692 has 52 MA's), (81, 18764), (Start: 95 @18815 has 1 MA's), (Start: 96 @18821 has 1 MA's), (97, 18827), (117, 18890), (128, 18932), (153, 19010), (166, 19058), (172, 19082), (176, 19100), (177, 19106),

Gene: Magpie\_22 Start: 19156, Stop: 19569, Start Num: 54

Candidate Starts for Magpie\_22:

(Start: 54 @19156 has 23 MA's), (Start: 95 @19270 has 1 MA's), (Start: 96 @19276 has 1 MA's), (97, 19282), (105, 19318), (121, 19357), (124, 19369), (128, 19387), (153, 19465), (171, 19534), (172, 19537), (177, 19561),

Gene: Maih\_19 Start: 19234, Stop: 19614, Start Num: 73

Candidate Starts for Maih\_19:

(10, 18784), (23, 19066), (Start: 73 @19234 has 7 MA's), (82, 19249), (94, 19291), (101, 19336), (130, 19426), (136, 19456), (155, 19507), (161, 19522), (167, 19549), (168, 19552),

Gene: MakoManhole\_24 Start: 18622, Stop: 19032, Start Num: 50

Candidate Starts for MakoManhole\_24:

(Start: 50 @18622 has 17 MA's), (103, 18784), (107, 18796), (128, 18862), (132, 18886), (145, 18925), (153, 18940),

Gene: Mana\_24 Start: 18381, Stop: 18803, Start Num: 47

Candidate Starts for Mana\_24:

(30, 18315), (Start: 47 @18381 has 263 MA's), (Start: 95 @18504 has 1 MA's), (Start: 96 @18510 has 1 MA's), (97, 18516), (117, 18579), (128, 18621), (140, 18672), (153, 18699), (166, 18747), (172, 18771), (176, 18789), (177, 18795),

Gene: Manad\_24 Start: 18231, Stop: 18653, Start Num: 47

Candidate Starts for Manad\_24:

(30, 18165), (Start: 47 @18231 has 263 MA's), (Start: 95 @18354 has 1 MA's), (Start: 96 @18360 has 1 MA's), (97, 18366), (117, 18429), (128, 18471), (153, 18549), (166, 18597), (172, 18621), (176, 18639), (177, 18645),

Gene: Mao1\_21 Start: 16699, Stop: 17025, Start Num: 86

Candidate Starts for Mao1\_21:

(Start: 53 @16621 has 10 MA's), (86, 16699), (Start: 96 @16744 has 1 MA's), (97, 16750), (108, 16795), (117, 16816), (128, 16858), (132, 16882), (140, 16909), (147, 16921), (170, 16999),

Gene: Marcie\_37 Start: 21635, Stop: 22030, Start Num: 47

Candidate Starts for Marcie\_37:

(Start: 47 @21635 has 263 MA's), (66, 21677), (122, 21845), (150, 21935), (177, 22022),

Gene: Mareelih\_94 Start: 51401, Stop: 51808, Start Num: 60

Candidate Starts for Mareelih\_94:

(59, 51398), (Start: 60 @51401 has 7 MA's), (71, 51437), (91, 51491), (Start: 95 @51512 has 1 MA's), (124, 51614), (127, 51626), (131, 51668), (132, 51677), (140, 51704), (158, 51746), (166, 51779), (169, 51791), (171, 51800),

Gene: Mariokart\_22 Start: 17119, Stop: 17532, Start Num: 50

Candidate Starts for Mariokart\_22:

(1, 16399), (2, 16444), (3, 16510), (4, 16582), (7, 16648), (25, 17020), (Start: 39 @17098 has 1 MA's), (Start: 50 @17119 has 17 MA's), (86, 17200), (89, 17209), (Start: 96 @17245 has 1 MA's), (97, 17251), (110, 17299), (128, 17359),

Gene: Marley1013\_26 Start: 20148, Stop: 20561, Start Num: 56

Candidate Starts for Marley1013\_26:

(Start: 56 @20148 has 42 MA's), (Start: 96 @20268 has 1 MA's), (97, 20274), (110, 20322), (132, 20406), (171, 20532),

Gene: Maru\_24 Start: 18380, Stop: 18802, Start Num: 47

Candidate Starts for Maru\_24:

(30, 18314), (Start: 47 @18380 has 263 MA's), (Start: 95 @18503 has 1 MA's), (Start: 96 @18509 has 1 MA's), (97, 18515), (117, 18578), (128, 18620), (153, 18698), (166, 18746), (172, 18770), (176, 18788), (177, 18794),

Gene: Mashley\_31 Start: 22162, Stop: 22575, Start Num: 47

Candidate Starts for Mashley\_31:

(31, 22105), (Start: 47 @22162 has 263 MA's), (79, 22234), (102, 22321), (135, 22438), (140, 22453),

Gene: Mask\_22 Start: 16622, Stop: 17026, Start Num: 53

Candidate Starts for Mask\_22:

(Start: 53 @16622 has 10 MA's), (86, 16700), (Start: 96 @16745 has 1 MA's), (97, 16751), (108, 16796), (117, 16817), (128, 16859), (132, 16883), (140, 16910), (147, 16922), (170, 17000),

Gene: Maskar\_24 Start: 18226, Stop: 18648, Start Num: 46

Candidate Starts for Maskar\_24:

(Start: 46 @18226 has 52 MA's), (Start: 95 @18349 has 1 MA's), (Start: 96 @18355 has 1 MA's), (97, 18361), (117, 18424), (128, 18466), (153, 18544), (166, 18592), (172, 18616), (176, 18634), (177, 18640),

Gene: MasterPo\_27 Start: 20834, Stop: 21262, Start Num: 47

Candidate Starts for MasterPo\_27:

(37, 20807), (Start: 47 @20834 has 263 MA's), (57, 20849), (Start: 96 @20966 has 1 MA's), (97, 20972), (102, 20999), (110, 21020), (117, 21038), (153, 21158), (154, 21164), (171, 21227), (177, 21254),

Gene: Matalotodo\_24 Start: 18673, Stop: 19095, Start Num: 47

Candidate Starts for Matalotodo\_24:

(30, 18607), (Start: 47 @18673 has 263 MA's), (Start: 95 @18796 has 1 MA's), (Start: 96 @18802 has 1 MA's), (97, 18808), (117, 18871), (128, 18913), (153, 18991), (166, 19039), (172, 19063), (176, 19081), (177, 19087),

Gene: McKinley\_32 Start: 24183, Stop: 24617, Start Num: 61

Candidate Starts for McKinley\_32:

(40, 24153), (Start: 61 @24183 has 86 MA's), (92, 24267), (109, 24342), (120, 24366), (136, 24444), (169, 24537), (180, 24588),

Gene: Mcshane\_24 Start: 18376, Stop: 18798, Start Num: 47

Candidate Starts for Mcshane\_24:

(30, 18310), (Start: 47 @18376 has 263 MA's), (Start: 95 @18499 has 1 MA's), (Start: 96 @18505 has 1 MA's), (97, 18511), (117, 18574), (128, 18616), (153, 18694), (166, 18742), (172, 18766), (176, 18784), (177, 18790),

Gene: Mecca\_24 Start: 18373, Stop: 18795, Start Num: 47

Candidate Starts for Mecca\_24:

(30, 18307), (Start: 47 @18373 has 263 MA's), (Start: 95 @18496 has 1 MA's), (Start: 96 @18502 has 1 MA's), (97, 18508), (117, 18571), (128, 18613), (153, 18691), (166, 18739), (172, 18763), (176, 18781), (177, 18787),

Gene: Megabear\_19 Start: 18137, Stop: 18547, Start Num: 55

Candidate Starts for Megabear\_19:

(Start: 55 @18137 has 8 MA's), (86, 18212), (Start: 96 @18257 has 1 MA's), (97, 18263), (107, 18305), (117, 18329), (123, 18350), (152, 18452), (166, 18497),

Gene: Megamind20\_25 Start: 18394, Stop: 18816, Start Num: 47

Candidate Starts for Megamind20\_25:

(30, 18328), (Start: 47 @18394 has 263 MA's), (Start: 95 @18517 has 1 MA's), (Start: 96 @18523 has 1 MA's), (97, 18529), (117, 18592), (128, 18634), (153, 18712), (166, 18760), (172, 18784), (176, 18802), (177, 18808),

Gene: Megatron\_25 Start: 18677, Stop: 19099, Start Num: 47

Candidate Starts for Megatron\_25:

(30, 18611), (Start: 47 @18677 has 263 MA's), (Start: 95 @18800 has 1 MA's), (Start: 96 @18806 has 1 MA's), (97, 18812), (117, 18875), (128, 18917), (140, 18968), (153, 18995), (166, 19043), (172, 19067), (176, 19085), (177, 19091),

Gene: MelBins\_29 Start: 21614, Stop: 22045, Start Num: 61

Candidate Starts for MelBins\_29:

(16, 21422), (Start: 43 @21587 has 2 MA's), (Start: 61 @21614 has 86 MA's), (92, 21698), (118, 21794), (136, 21875), (137, 21881), (141, 21893), (165, 21953), (171, 21977), (179, 22016), (180, 22019),

Gene: Melc17\_25 Start: 18668, Stop: 19090, Start Num: 46

Candidate Starts for Melc17\_25:

(Start: 46 @18668 has 52 MA's), (Start: 95 @18791 has 1 MA's), (Start: 96 @18797 has 1 MA's), (97, 18803), (117, 18866), (128, 18908), (153, 18986), (166, 19034), (172, 19058), (176, 19076), (177, 19082),

Gene: MelsMeow\_24 Start: 18254, Stop: 18676, Start Num: 46

Candidate Starts for MelsMeow\_24:

(Start: 46 @18254 has 52 MA's), (81, 18326), (Start: 95 @18377 has 1 MA's), (Start: 96 @18383 has 1 MA's), (97, 18389), (117, 18452), (128, 18494), (153, 18572), (166, 18620), (172, 18644), (176, 18662), (177, 18668),

Gene: Mesh1\_25 Start: 18685, Stop: 19107, Start Num: 47

Candidate Starts for Mesh1\_25:

(30, 18619), (Start: 47 @18685 has 263 MA's), (Start: 95 @18808 has 1 MA's), (Start: 96 @18814 has 1 MA's), (97, 18820), (117, 18883), (128, 18925), (153, 19003), (166, 19051), (172, 19075), (176, 19093), (177, 19099),

Gene: MichaelPhcott\_24 Start: 18254, Stop: 18676, Start Num: 46

Candidate Starts for MichaelPhcott\_24:

(Start: 46 @18254 has 52 MA's), (81, 18326), (Start: 95 @18377 has 1 MA's), (Start: 96 @18383 has 1 MA's), (97, 18389), (117, 18452), (128, 18494), (153, 18572), (166, 18620), (172, 18644), (176, 18662), (177, 18668),

Gene: Mikota\_25 Start: 18661, Stop: 19083, Start Num: 47

Candidate Starts for Mikota\_25:

(30, 18595), (Start: 47 @18661 has 263 MA's), (Start: 95 @18784 has 1 MA's), (Start: 96 @18790 has 1 MA's), (97, 18796), (117, 18859), (128, 18901), (153, 18979), (166, 19027), (172, 19051), (176, 19069), (177, 19075),

Gene: MiniBoss\_25 Start: 18664, Stop: 19086, Start Num: 47

Candidate Starts for MiniBoss\_25:

(30, 18598), (Start: 47 @18664 has 263 MA's), (Start: 95 @18787 has 1 MA's), (Start: 96 @18793 has 1 MA's), (97, 18799), (117, 18862), (128, 18904), (153, 18982), (166, 19030), (172, 19054), (176, 19072), (177, 19078),

Gene: Mischief19\_27 Start: 29157, Stop: 29531, Start Num: 75

Candidate Starts for Mischief19\_27:

(Start: 75 @29157 has 4 MA's), (101, 29256), (125, 29316), (130, 29346), (134, 29370),



Gene: MitKao\_25 Start: 18382, Stop: 18804, Start Num: 47

Candidate Starts for MitKao\_25:

(30, 18316), (Start: 47 @18382 has 263 MA's), (Start: 95 @18505 has 1 MA's), (Start: 96 @18511 has 1 MA's), (97, 18517), (117, 18580), (128, 18622), (153, 18700), (166, 18748), (172, 18772), (176, 18790), (177, 18796),

Gene: Mithril\_23 Start: 19337, Stop: 19750, Start Num: 54

Candidate Starts for Mithril\_23:

(Start: 54 @19337 has 23 MA's), (Start: 95 @19451 has 1 MA's), (Start: 96 @19457 has 1 MA's), (97, 19463), (105, 19499), (121, 19538), (124, 19550), (128, 19568), (153, 19646), (171, 19715), (172, 19718), (177, 19742),

Gene: MmasiCarm\_26 Start: 19358, Stop: 19771, Start Num: 56

Candidate Starts for MmasiCarm\_26:

(Start: 56 @19358 has 42 MA's), (Start: 96 @19478 has 1 MA's), (97, 19484), (110, 19532), (132, 19616), (171, 19742),

Gene: MoontowerMania\_29 Start: 22994, Stop: 23428, Start Num: 61

Candidate Starts for MoontowerMania\_29:

(19, 22829), (40, 22964), (Start: 61 @22994 has 86 MA's), (92, 23078), (109, 23153), (136, 23255), (142, 23276), (169, 23348), (180, 23399),

Gene: Morgushi\_25 Start: 18387, Stop: 18809, Start Num: 47

Candidate Starts for Morgushi\_25:

(30, 18321), (Start: 47 @18387 has 263 MA's), (Start: 95 @18510 has 1 MA's), (Start: 96 @18516 has 1 MA's), (97, 18522), (117, 18585), (128, 18627), (153, 18705), (166, 18753), (172, 18777), (176, 18795), (177, 18801),

Gene: Mortcellus\_25 Start: 20001, Stop: 20414, Start Num: 56

Candidate Starts for Mortcellus\_25:

(Start: 56 @20001 has 42 MA's), (Start: 96 @20121 has 1 MA's), (97, 20127), (110, 20175), (132, 20259), (171, 20385),

Gene: Morty\_25 Start: 18686, Stop: 19108, Start Num: 47

Candidate Starts for Morty\_25:

(30, 18620), (Start: 47 @18686 has 263 MA's), (Start: 95 @18809 has 1 MA's), (Start: 96 @18815 has 1 MA's), (97, 18821), (117, 18884), (128, 18926), (140, 18977), (153, 19004), (166, 19052), (172, 19076), (176, 19094), (177, 19100),

Gene: Morty007\_26 Start: 20148, Stop: 20561, Start Num: 56

Candidate Starts for Morty007\_26:

(Start: 56 @20148 has 42 MA's), (Start: 96 @20268 has 1 MA's), (97, 20274), (110, 20322), (132, 20406), (171, 20532),

Gene: Mosaic\_24 Start: 18388, Stop: 18810, Start Num: 47

Candidate Starts for Mosaic\_24:

(30, 18322), (Start: 47 @18388 has 263 MA's), (Start: 95 @18511 has 1 MA's), (Start: 96 @18517 has 1 MA's), (97, 18523), (117, 18586), (128, 18628), (153, 18706), (166, 18754), (172, 18778), (176, 18796), (177, 18802),

Gene: MossRose\_24 Start: 18601, Stop: 19011, Start Num: 50

Candidate Starts for MossRose\_24:

(Start: 50 @18601 has 17 MA's), (103, 18763), (107, 18775), (128, 18841), (132, 18865), (145, 18904), (153, 18919), (172, 18991),

Gene: MrPhizzler\_24 Start: 18387, Stop: 18809, Start Num: 46

Candidate Starts for MrPhizzler\_24:

(Start: 46 @18387 has 52 MA's), (Start: 95 @18510 has 1 MA's), (Start: 96 @18516 has 1 MA's), (97, 18522), (117, 18585), (128, 18627), (153, 18705), (166, 18753), (172, 18777), (176, 18795), (177, 18801),

Gene: Mudslide\_23 Start: 19584, Stop: 19997, Start Num: 54

Candidate Starts for Mudslide\_23:

(Start: 54 @19584 has 23 MA's), (Start: 95 @19698 has 1 MA's), (Start: 96 @19704 has 1 MA's), (97, 19710), (105, 19746), (121, 19785), (124, 19797), (128, 19815), (153, 19893), (158, 19908), (171, 19962), (172, 19965), (177, 19989),

Gene: Mulan\_24 Start: 18382, Stop: 18804, Start Num: 47

Candidate Starts for Mulan\_24:

(30, 18316), (Start: 47 @18382 has 263 MA's), (Start: 95 @18505 has 1 MA's), (Start: 96 @18511 has 1 MA's), (97, 18517), (117, 18580), (128, 18622), (153, 18700), (166, 18748), (172, 18772), (176, 18790), (177, 18796),

Gene: Murdoc\_25 Start: 18675, Stop: 19097, Start Num: 47

Candidate Starts for Murdoc\_25:

(30, 18609), (Start: 47 @18675 has 263 MA's), (Start: 95 @18798 has 1 MA's), (Start: 96 @18804 has 1 MA's), (97, 18810), (117, 18873), (128, 18915), (153, 18993), (166, 19041), (172, 19065), (176, 19083), (177, 19089),

Gene: Mutante\_24 Start: 18385, Stop: 18807, Start Num: 47

Candidate Starts for Mutante\_24:

(30, 18319), (Start: 47 @18385 has 263 MA's), (Start: 95 @18508 has 1 MA's), (Start: 96 @18514 has 1 MA's), (97, 18520), (117, 18583), (128, 18625), (153, 18703), (166, 18751), (172, 18775), (176, 18793), (177, 18799),

Gene: Mutzi\_28 Start: 18027, Stop: 18470, Start Num: 61

Candidate Starts for Mutzi\_28:

(14, 17811), (Start: 61 @18027 has 86 MA's), (180, 18444),

Gene: Mysterious\_26 Start: 19640, Stop: 20056, Start Num: 52

Candidate Starts for Mysterious\_26:

(Start: 52 @19640 has 15 MA's), (76, 19700), (Start: 96 @19763 has 1 MA's), (97, 19769), (128, 19874), (133, 19904), (153, 19952),

Gene: Nacho\_0025 Start: 18674, Stop: 19096, Start Num: 47

Candidate Starts for Nacho\_0025:

(30, 18608), (Start: 47 @18674 has 263 MA's), (Start: 95 @18797 has 1 MA's), (Start: 96 @18803 has 1 MA's), (97, 18809), (117, 18872), (128, 18914), (153, 18992), (166, 19040), (172, 19064), (176, 19082), (177, 19088),

Gene: Namago\_33 Start: 21729, Stop: 22142, Start Num: 47

Candidate Starts for Namago\_33:

(31, 21672), (Start: 47 @21729 has 263 MA's), (102, 21888), (135, 22005), (140, 22020),

Gene: Nanao\_22 Start: 18303, Stop: 18716, Start Num: 54

Candidate Starts for Nanao\_22:

(Start: 54 @18303 has 23 MA's), (Start: 95 @18417 has 1 MA's), (Start: 96 @18423 has 1 MA's), (97, 18429), (105, 18465), (117, 18492), (121, 18504), (124, 18516), (128, 18534), (153, 18612), (171, 18681), (177, 18708),

Gene: Nangang\_25 Start: 19342, Stop: 19758, Start Num: 52

Candidate Starts for Nangang\_25:

(Start: 52 @19342 has 15 MA's), (117, 19534), (128, 19576), (140, 19627), (178, 19753),

Gene: Natkenzie\_30 Start: 22964, Stop: 23395, Start Num: 61

Candidate Starts for Natkenzie\_30:

(33, 22904), (Start: 43 @22937 has 2 MA's), (Start: 61 @22964 has 86 MA's), (98, 23093), (109, 23123), (136, 23225), (137, 23231), (142, 23246), (165, 23303), (169, 23318), (179, 23366), (180, 23369),

Gene: Neos5\_26 Start: 20155, Stop: 20568, Start Num: 56

Candidate Starts for Neos5\_26:

(Start: 56 @20155 has 42 MA's), (86, 20230), (Start: 96 @20275 has 1 MA's), (97, 20281), (132, 20413), (171, 20539),

Gene: Newman\_25 Start: 18674, Stop: 19096, Start Num: 47

Candidate Starts for Newman\_25:

(30, 18608), (Start: 47 @18674 has 263 MA's), (Start: 95 @18797 has 1 MA's), (Start: 96 @18803 has 1 MA's), (97, 18809), (117, 18872), (128, 18914), (153, 18992), (166, 19040), (172, 19064), (176, 19082), (177, 19088),

Gene: Nicole21\_25 Start: 18666, Stop: 19088, Start Num: 47

Candidate Starts for Nicole21\_25:

(30, 18600), (Start: 47 @18666 has 263 MA's), (Start: 95 @18789 has 1 MA's), (Start: 96 @18795 has 1 MA's), (97, 18801), (117, 18864), (128, 18906), (153, 18984), (166, 19032), (172, 19056), (176, 19074), (177, 19080),

Gene: Nigel\_21 Start: 18187, Stop: 18600, Start Num: 54

Candidate Starts for Nigel\_21:

(Start: 54 @18187 has 23 MA's), (97, 18313), (117, 18376), (121, 18388), (128, 18418), (177, 18592),

Gene: Nike\_33 Start: 22681, Stop: 23094, Start Num: 47

Candidate Starts for Nike\_33:

(31, 22624), (Start: 47 @22681 has 263 MA's), (102, 22840), (135, 22957), (140, 22972),

Gene: Nordenberg\_24 Start: 22353, Stop: 22787, Start Num: 61

Candidate Starts for Nordenberg\_24:

(40, 22323), (Start: 61 @22353 has 86 MA's), (92, 22437), (109, 22512), (120, 22536), (136, 22614), (169, 22707), (180, 22758),

Gene: Nozo\_26 Start: 20125, Stop: 20538, Start Num: 56

Candidate Starts for Nozo\_26:

(Start: 56 @20125 has 42 MA's), (86, 20200), (Start: 96 @20245 has 1 MA's), (97, 20251), (132, 20383), (171, 20509),

Gene: Nubi\_26 Start: 17592, Stop: 18035, Start Num: 61

Candidate Starts for Nubi\_26:

(Start: 61 @17592 has 86 MA's), (136, 17853), (180, 18009),

Gene: Numberten\_25 Start: 18679, Stop: 19101, Start Num: 47

Candidate Starts for Numberten\_25:

(30, 18613), (Start: 47 @18679 has 263 MA's), (Start: 95 @18802 has 1 MA's), (Start: 96 @18808 has 1 MA's), (97, 18814), (117, 18877), (128, 18919), (153, 18997), (166, 19045), (172, 19069), (176, 19087), (177, 19093),

Gene: Nyala\_24 Start: 18377, Stop: 18799, Start Num: 47

Candidate Starts for Nyala\_24:

(30, 18311), (Start: 47 @18377 has 263 MA's), (Start: 95 @18500 has 1 MA's), (Start: 96 @18506 has 1 MA's), (97, 18512), (117, 18575), (128, 18617), (153, 18695), (166, 18743), (172, 18767), (176, 18785), (177, 18791),

Gene: OSmaximus\_25 Start: 18703, Stop: 19125, Start Num: 46

Candidate Starts for OSmaximus\_25:

(Start: 46 @18703 has 52 MA's), (81, 18775), (Start: 95 @18826 has 1 MA's), (Start: 96 @18832 has 1 MA's), (97, 18838), (117, 18901), (128, 18943), (153, 19021), (166, 19069), (172, 19093), (176, 19111), (177, 19117),

Gene: Obutu\_26 Start: 19358, Stop: 19771, Start Num: 56

Candidate Starts for Obutu\_26:

(Start: 56 @19358 has 42 MA's), (86, 19433), (Start: 96 @19478 has 1 MA's), (97, 19484), (132, 19616), (171, 19742),

Gene: Olak\_25 Start: 18378, Stop: 18800, Start Num: 47

Candidate Starts for Olak\_25:

(30, 18312), (Start: 47 @18378 has 263 MA's), (Start: 95 @18501 has 1 MA's), (Start: 96 @18507 has 1 MA's), (97, 18513), (117, 18576), (128, 18618), (153, 18696), (166, 18744), (172, 18768), (176, 18786), (177, 18792),

Gene: Oline\_24 Start: 18240, Stop: 18662, Start Num: 46

Candidate Starts for Oline\_24:

(Start: 46 @18240 has 52 MA's), (Start: 95 @18363 has 1 MA's), (Start: 96 @18369 has 1 MA's), (97, 18375), (117, 18438), (128, 18480), (153, 18558), (166, 18606), (172, 18630), (176, 18648), (177, 18654),

Gene: Olive\_25 Start: 18667, Stop: 19089, Start Num: 47

Candidate Starts for Olive\_25:

(30, 18601), (Start: 47 @18667 has 263 MA's), (Start: 95 @18790 has 1 MA's), (Start: 96 @18796 has 1 MA's), (97, 18802), (117, 18865), (128, 18907), (153, 18985), (166, 19033), (172, 19057), (176, 19075), (177, 19081),

Gene: OliverWalter\_25 Start: 18683, Stop: 19105, Start Num: 47

Candidate Starts for OliverWalter\_25:

(30, 18617), (Start: 47 @18683 has 263 MA's), (Start: 95 @18806 has 1 MA's), (Start: 96 @18812 has 1 MA's), (97, 18818), (117, 18881), (128, 18923), (153, 19001), (166, 19049), (172, 19073), (176, 19091), (177, 19097),

Gene: Omniscient\_25 Start: 18686, Stop: 19108, Start Num: 47

Candidate Starts for Omniscient\_25:

(30, 18620), (Start: 47 @18686 has 263 MA's), (Start: 95 @18809 has 1 MA's), (Start: 96 @18815 has 1 MA's), (97, 18821), (117, 18884), (128, 18926), (153, 19004), (166, 19052), (172, 19076), (176, 19094), (177, 19100),

Gene: OneinaGillian\_32 Start: 20626, Stop: 21021, Start Num: 47

Candidate Starts for OneinaGillian\_32:

(Start: 47 @20626 has 263 MA's), (70, 20677), (102, 20785), (128, 20860), (150, 20926), (177, 21013),

Gene: Oosterbaan\_25 Start: 18678, Stop: 19100, Start Num: 47

Candidate Starts for Oosterbaan\_25:

(30, 18612), (Start: 47 @18678 has 263 MA's), (Start: 95 @18801 has 1 MA's), (Start: 96 @18807 has 1 MA's), (97, 18813), (117, 18876), (128, 18918), (140, 18969), (153, 18996), (166, 19044), (172, 19068), (176, 19086), (177, 19092),

Gene: Opia\_27 Start: 20834, Stop: 21262, Start Num: 47

Candidate Starts for Opia\_27:

(37, 20807), (Start: 47 @20834 has 263 MA's), (57, 20849), (Start: 96 @20966 has 1 MA's), (97, 20972), (102, 20999), (110, 21020), (117, 21038), (153, 21158), (154, 21164), (171, 21227), (177, 21254),

Gene: OrangeOswald\_26 Start: 19363, Stop: 19776, Start Num: 56

Candidate Starts for OrangeOswald\_26:

(Start: 56 @19363 has 42 MA's), (86, 19438), (Start: 96 @19483 has 1 MA's), (97, 19489), (132, 19621), (171, 19747),

Gene: Orfeu\_24 Start: 18379, Stop: 18801, Start Num: 47

Candidate Starts for Orfeu\_24:

(30, 18313), (Start: 47 @18379 has 263 MA's), (Start: 95 @18502 has 1 MA's), (Start: 96 @18508 has 1 MA's), (97, 18514), (117, 18577), (128, 18619), (153, 18697), (166, 18745), (172, 18769), (176, 18787), (177, 18793),

Gene: Orion\_25 Start: 18675, Stop: 19097, Start Num: 47

Candidate Starts for Orion\_25:

(30, 18609), (Start: 47 @18675 has 263 MA's), (Start: 95 @18798 has 1 MA's), (Start: 96 @18804 has 1 MA's), (97, 18810), (117, 18873), (128, 18915), (140, 18966), (153, 18993), (166, 19041), (172, 19065), (176, 19083), (177, 19089),

Gene: Orwigg\_25 Start: 18372, Stop: 18794, Start Num: 47

Candidate Starts for Orwigg\_25:

(30, 18306), (Start: 47 @18372 has 263 MA's), (Start: 95 @18495 has 1 MA's), (Start: 96 @18501 has 1 MA's), (97, 18507), (117, 18570), (128, 18612), (153, 18690), (166, 18738), (172, 18762), (176, 18780), (177, 18786),

Gene: PG1\_25 Start: 18688, Stop: 19110, Start Num: 47

Candidate Starts for PG1\_25:

(30, 18622), (Start: 47 @18688 has 263 MA's), (Start: 95 @18811 has 1 MA's), (Start: 96 @18817 has 1 MA's), (97, 18823), (117, 18886), (128, 18928), (140, 18979), (153, 19006), (166, 19054), (172, 19078), (176, 19096), (177, 19102),

Gene: PR\_19 Start: 18164, Stop: 18574, Start Num: 55

Candidate Starts for PR\_19:

(Start: 55 @18164 has 8 MA's), (86, 18239), (Start: 96 @18284 has 1 MA's), (97, 18290), (107, 18332), (117, 18356), (123, 18377), (152, 18479), (166, 18524),

Gene: Pacifista\_26 Start: 18379, Stop: 18801, Start Num: 47

Candidate Starts for Pacifista\_26:

(30, 18313), (Start: 47 @18379 has 263 MA's), (Start: 95 @18502 has 1 MA's), (Start: 96 @18508 has 1 MA's), (97, 18514), (117, 18577), (128, 18619), (153, 18697), (166, 18745), (172, 18769), (176, 18787), (177, 18793),

Gene: Paries\_32 Start: 23819, Stop: 24253, Start Num: 61

Candidate Starts for Paries\_32:

(40, 23780), (Start: 61 @23819 has 86 MA's), (92, 23903), (109, 23978), (120, 24002), (136, 24080), (142, 24101), (169, 24173), (180, 24224),

Gene: Patbob\_88 Start: 53640, Stop: 54023, Start Num: 60

Candidate Starts for Patbob\_88:

(Start: 60 @53640 has 7 MA's), (71, 53679), (98, 53781), (106, 53805), (115, 53826), (124, 53856), (126, 53865), (140, 53919), (153, 53946), (156, 53958),

Gene: PauloDiaboli\_94 Start: 50046, Stop: 50456, Start Num: 43

Candidate Starts for PauloDiaboli\_94:

(Start: 43 @50046 has 2 MA's), (82, 50133), (84, 50136), (92, 50166), (153, 50376), (159, 50394),

Gene: PenguinLover67\_27 Start: 20904, Stop: 21338, Start Num: 50

Candidate Starts for PenguinLover67\_27:

(Start: 50 @20904 has 17 MA's), (78, 20970), (89, 20994), (Start: 96 @21030 has 1 MA's), (97, 21036), (105, 21072), (117, 21099), (171, 21288),

Gene: Pepe25\_31 Start: 20844, Stop: 21239, Start Num: 47

Candidate Starts for Pepe25\_31:

(Start: 47 @20844 has 263 MA's), (66, 20886), (70, 20895), (102, 21003), (150, 21144), (173, 21213), (177, 21231),

Gene: Phabia\_33 Start: 22063, Stop: 22467, Start Num: 47

Candidate Starts for Phabia\_33:

(31, 22006), (Start: 47 @22063 has 263 MA's), (65, 22099), (123, 22273), (128, 22294), (137, 22339), (140, 22348), (177, 22453), (179, 22462),

Gene: Phaedrus\_24 Start: 19399, Stop: 19692, Start Num: 96

Candidate Starts for Phaedrus\_24:

(Start: 56 @19279 has 42 MA's), (86, 19354), (Start: 96 @19399 has 1 MA's), (97, 19405), (132, 19537), (171, 19663),

Gene: Phamished\_25 Start: 18683, Stop: 19105, Start Num: 47

Candidate Starts for Phamished\_25:

(30, 18617), (Start: 47 @18683 has 263 MA's), (Start: 95 @18806 has 1 MA's), (Start: 96 @18812 has 1 MA's), (97, 18818), (117, 18881), (128, 18923), (153, 19001), (166, 19049), (172, 19073), (176, 19091), (177, 19097),

Gene: Phantasmagoria\_27 Start: 20830, Stop: 21258, Start Num: 47

Candidate Starts for Phantasmagoria\_27:

(37, 20803), (Start: 47 @20830 has 263 MA's), (57, 20845), (Start: 96 @20962 has 1 MA's), (97, 20968), (102, 20995), (110, 21016), (117, 21034), (153, 21154), (154, 21160), (171, 21223), (177, 21250),

Gene: Phareon\_25 Start: 18383, Stop: 18805, Start Num: 47

Candidate Starts for Phareon\_25:

(30, 18317), (Start: 47 @18383 has 263 MA's), (Start: 95 @18506 has 1 MA's), (Start: 96 @18512 has 1 MA's), (97, 18518), (117, 18581), (128, 18623), (153, 18701), (166, 18749), (172, 18773), (176, 18791), (177, 18797),

Gene: PhatCats2014\_25 Start: 18693, Stop: 19115, Start Num: 47

Candidate Starts for PhatCats2014\_25:

(30, 18627), (Start: 47 @18693 has 263 MA's), (Start: 95 @18816 has 1 MA's), (Start: 96 @18822 has 1 MA's), (97, 18828), (117, 18891), (128, 18933), (153, 19011), (166, 19059), (172, 19083), (176, 19101), (177, 19107),

Gene: PhatLouie\_25 Start: 18675, Stop: 19097, Start Num: 46

Candidate Starts for PhatLouie\_25:

(Start: 46 @18675 has 52 MA's), (Start: 95 @18798 has 1 MA's), (Start: 96 @18804 has 1 MA's), (97, 18810), (117, 18873), (128, 18915), (153, 18993), (166, 19041), (172, 19065), (176, 19083), (177, 19089),

Gene: Phauci\_21 Start: 17995, Stop: 18426, Start Num: 61

Candidate Starts for Phauci\_21:

(16, 17803), (Start: 43 @17968 has 2 MA's), (Start: 61 @17995 has 86 MA's), (92, 18079), (118, 18175), (136, 18256), (137, 18262), (141, 18274), (165, 18334), (171, 18358), (179, 18397), (180, 18400),

Gene: Phayeta\_26 Start: 19239, Stop: 19652, Start Num: 56

Candidate Starts for Phayeta\_26:

(Start: 56 @19239 has 42 MA's), (86, 19314), (Start: 96 @19359 has 1 MA's), (97, 19365), (132, 19497), (171, 19623),

Gene: Phelemich\_25 Start: 19636, Stop: 20052, Start Num: 52

Candidate Starts for Phelemich\_25:

(Start: 52 @19636 has 15 MA's), (76, 19696), (Start: 96 @19759 has 1 MA's), (97, 19765), (128, 19870), (133, 19900), (153, 19948), (178, 20047),

Gene: Phendrix\_82 Start: 43488, Stop: 43901, Start Num: 44

Candidate Starts for Phendrix\_82:

(Start: 44 @43488 has 6 MA's), (62, 43521), (93, 43614), (97, 43638), (104, 43671), (113, 43698), (115, 43701), (133, 43773), (140, 43794), (156, 43833), (172, 43893),

Gene: PhenghisKhan\_24 Start: 18254, Stop: 18676, Start Num: 46

Candidate Starts for PhenghisKhan\_24:

(Start: 46 @18254 has 52 MA's), (81, 18326), (Start: 95 @18377 has 1 MA's), (Start: 96 @18383 has 1 MA's), (97, 18389), (117, 18452), (128, 18494), (153, 18572), (166, 18620), (172, 18644), (176, 18662), (177, 18668),

Gene: Pherdinand\_25 Start: 18683, Stop: 19105, Start Num: 47

Candidate Starts for Pherdinand\_25:

(30, 18617), (Start: 47 @18683 has 263 MA's), (Start: 95 @18806 has 1 MA's), (Start: 96 @18812 has 1 MA's), (97, 18818), (117, 18881), (128, 18923), (153, 19001), (166, 19049), (172, 19073), (176, 19091), (177, 19097),

Gene: Phergie\_24 Start: 18248, Stop: 18670, Start Num: 46

Candidate Starts for Phergie\_24:

(Start: 46 @18248 has 52 MA's), (81, 18320), (Start: 95 @18371 has 1 MA's), (Start: 96 @18377 has 1 MA's), (97, 18383), (117, 18446), (128, 18488), (153, 18566), (166, 18614), (172, 18638), (176,

18656), (177, 18662),

Gene: Philly\_25 Start: 19229, Stop: 19642, Start Num: 56

Candidate Starts for Philly\_25:

(Start: 56 @19229 has 42 MA's), (86, 19304), (Start: 96 @19349 has 1 MA's), (97, 19355), (132, 19487), (171, 19613),

Gene: Phinally\_28 Start: 21403, Stop: 21834, Start Num: 61

Candidate Starts for Phinally\_28:

(13, 21175), (16, 21211), (Start: 43 @21376 has 2 MA's), (48, 21379), (Start: 61 @21403 has 86 MA's), (92, 21487), (118, 21583), (136, 21664), (137, 21670), (141, 21682), (165, 21742), (171, 21766), (179, 21805), (180, 21808),

Gene: Phinky\_39 Start: 23231, Stop: 23650, Start Num: 47

Candidate Starts for Phinky\_39:

(36, 23201), (Start: 47 @23231 has 263 MA's), (65, 23267), (67, 23276), (93, 23342), (128, 23465), (140, 23522), (179, 23645),

Gene: Phipps\_25 Start: 18653, Stop: 19075, Start Num: 47

Candidate Starts for Phipps\_25:

(30, 18587), (Start: 47 @18653 has 263 MA's), (Start: 95 @18776 has 1 MA's), (Start: 96 @18782 has 1 MA's), (97, 18788), (117, 18851), (128, 18893), (153, 18971), (166, 19019), (172, 19043), (176, 19061), (177, 19067),

Gene: Phleuron\_24 Start: 18254, Stop: 18676, Start Num: 46

Candidate Starts for Phleuron\_24:

(Start: 46 @18254 has 52 MA's), (81, 18326), (Start: 95 @18377 has 1 MA's), (Start: 96 @18383 has 1 MA's), (97, 18389), (117, 18452), (128, 18494), (153, 18572), (166, 18620), (172, 18644), (176, 18662), (177, 18668),

Gene: Phlop\_26 Start: 17656, Stop: 18099, Start Num: 61

Candidate Starts for Phlop\_26:

(Start: 61 @17656 has 86 MA's), (136, 17917), (180, 18073),

Gene: Phlyer\_26 Start: 20098, Stop: 20511, Start Num: 56

Candidate Starts for Phlyer\_26:

(Start: 56 @20098 has 42 MA's), (Start: 96 @20218 has 1 MA's), (97, 20224), (110, 20272), (132, 20356), (171, 20482),

Gene: PhrankReynolds\_24 Start: 18254, Stop: 18676, Start Num: 46

Candidate Starts for PhrankReynolds\_24:

(Start: 46 @18254 has 52 MA's), (81, 18326), (Start: 95 @18377 has 1 MA's), (Start: 96 @18383 has 1 MA's), (97, 18389), (117, 18452), (128, 18494), (153, 18572), (166, 18620), (172, 18644), (176, 18662), (177, 18668),

Gene: PhrodoBaggins\_24 Start: 18671, Stop: 19093, Start Num: 47

Candidate Starts for PhrodoBaggins\_24:

(30, 18605), (Start: 47 @18671 has 263 MA's), (Start: 95 @18794 has 1 MA's), (Start: 96 @18800 has 1 MA's), (97, 18806), (117, 18869), (128, 18911), (153, 18989), (166, 19037), (172, 19061), (176, 19079), (177, 19085),

Gene: Phunky\_25 Start: 18677, Stop: 19099, Start Num: 47

Candidate Starts for Phunky\_25:



(30, 18611), (Start: 47 @18677 has 263 MA's), (Start: 95 @18800 has 1 MA's), (Start: 96 @18806 has 1 MA's), (97, 18812), (117, 18875), (128, 18917), (153, 18995), (166, 19043), (172, 19067), (176, 19085), (177, 19091),

Gene: Piglet\_0024 Start: 18677, Stop: 19099, Start Num: 47

Candidate Starts for Piglet\_0024:

(30, 18611), (Start: 47 @18677 has 263 MA's), (Start: 95 @18800 has 1 MA's), (Start: 96 @18806 has 1 MA's), (97, 18812), (117, 18875), (128, 18917), (153, 18995), (166, 19043), (172, 19067), (176, 19085), (177, 19091),

Gene: Pine5\_25 Start: 19604, Stop: 20017, Start Num: 49

Candidate Starts for Pine5\_25:

(49, 19604), (51, 19607), (Start: 95 @19727 has 1 MA's), (117, 19805), (174, 20009),

Gene: PinheadLarry\_25 Start: 18394, Stop: 18816, Start Num: 47

Candidate Starts for PinheadLarry\_25:

(30, 18328), (Start: 47 @18394 has 263 MA's), (Start: 95 @18517 has 1 MA's), (Start: 96 @18523 has 1 MA's), (97, 18529), (117, 18592), (128, 18634), (153, 18712), (166, 18760), (172, 18784), (176, 18802), (177, 18808),

Gene: PinkCoffee\_28 Start: 18295, Stop: 18738, Start Num: 61

Candidate Starts for PinkCoffee\_28:

(Start: 61 @18295 has 86 MA's), (136, 18556), (180, 18712),

Gene: Pinkman\_24 Start: 18234, Stop: 18656, Start Num: 46

Candidate Starts for Pinkman\_24:

(Start: 46 @18234 has 52 MA's), (Start: 95 @18357 has 1 MA's), (Start: 96 @18363 has 1 MA's), (97, 18369), (117, 18432), (128, 18474), (153, 18552), (166, 18600), (172, 18624), (176, 18642), (177, 18648),

Gene: Pipefish\_26 Start: 20248, Stop: 20661, Start Num: 56

Candidate Starts for Pipefish\_26:

(Start: 56 @20248 has 42 MA's), (Start: 96 @20368 has 1 MA's), (97, 20374), (110, 20422), (132, 20506), (171, 20632),

Gene: Pipsqueak\_25 Start: 18683, Stop: 19105, Start Num: 47

Candidate Starts for Pipsqueak\_25:

(30, 18617), (Start: 47 @18683 has 263 MA's), (Start: 95 @18806 has 1 MA's), (Start: 96 @18812 has 1 MA's), (97, 18818), (117, 18881), (128, 18923), (140, 18974), (153, 19001), (166, 19049), (172, 19073), (176, 19091), (177, 19097),

Gene: Placalicious\_24 Start: 18376, Stop: 18798, Start Num: 47

Candidate Starts for Placalicious\_24:

(30, 18310), (Start: 47 @18376 has 263 MA's), (Start: 95 @18499 has 1 MA's), (Start: 96 @18505 has 1 MA's), (97, 18511), (117, 18574), (128, 18616), (140, 18667), (153, 18694), (166, 18742), (172, 18766), (176, 18784), (177, 18790),

Gene: Plmatters\_25 Start: 18680, Stop: 19102, Start Num: 47

Candidate Starts for Plmatters\_25:

(30, 18614), (Start: 47 @18680 has 263 MA's), (Start: 95 @18803 has 1 MA's), (Start: 96 @18809 has 1 MA's), (97, 18815), (117, 18878), (128, 18920), (153, 18998), (166, 19046), (172, 19070), (176, 19088), (177, 19094),

Gene: Podrick\_25 Start: 18672, Stop: 19094, Start Num: 47

Candidate Starts for Podrick\_25:

(30, 18606), (Start: 47 @18672 has 263 MA's), (Start: 95 @18795 has 1 MA's), (Start: 96 @18801 has 1 MA's), (97, 18807), (117, 18870), (128, 18912), (153, 18990), (166, 19038), (172, 19062), (176, 19080), (177, 19086),

Gene: Pops\_25 Start: 18680, Stop: 19102, Start Num: 47

Candidate Starts for Pops\_25:

(30, 18614), (Start: 47 @18680 has 263 MA's), (Start: 95 @18803 has 1 MA's), (Start: 96 @18809 has 1 MA's), (97, 18815), (117, 18878), (128, 18920), (153, 18998), (166, 19046), (172, 19070), (176, 19088), (177, 19094),

Gene: Portcullis\_26 Start: 17599, Stop: 18042, Start Num: 61

Candidate Starts for Portcullis\_26:

(Start: 61 @17599 has 86 MA's), (136, 17860), (180, 18016),

Gene: Poster\_22 Start: 18304, Stop: 18717, Start Num: 54

Candidate Starts for Poster\_22:

(Start: 54 @18304 has 23 MA's), (Start: 95 @18418 has 1 MA's), (Start: 96 @18424 has 1 MA's), (97, 18430), (105, 18466), (117, 18493), (121, 18505), (124, 18517), (128, 18535), (153, 18613), (171, 18682), (177, 18709),

Gene: Potter\_24 Start: 18390, Stop: 18812, Start Num: 47

Candidate Starts for Potter\_24:

(30, 18324), (Start: 47 @18390 has 263 MA's), (Start: 95 @18513 has 1 MA's), (Start: 96 @18519 has 1 MA's), (97, 18525), (117, 18588), (128, 18630), (140, 18681), (153, 18708), (166, 18756), (172, 18780), (176, 18798), (177, 18804),

Gene: Prickles\_25 Start: 18669, Stop: 19091, Start Num: 47

Candidate Starts for Prickles\_25:

(30, 18603), (Start: 47 @18669 has 263 MA's), (Start: 95 @18792 has 1 MA's), (Start: 96 @18798 has 1 MA's), (97, 18804), (117, 18867), (128, 18909), (153, 18987), (166, 19035), (172, 19059), (176, 19077), (177, 19083),

Gene: Prince\_24 Start: 19496, Stop: 19909, Start Num: 54

Candidate Starts for Prince\_24:

(Start: 54 @19496 has 23 MA's), (Start: 95 @19610 has 1 MA's), (Start: 96 @19616 has 1 MA's), (97, 19622), (105, 19658), (121, 19697), (124, 19709), (128, 19727), (153, 19805), (158, 19820), (171, 19874), (172, 19877), (177, 19901),

Gene: ProfessorX\_25 Start: 18667, Stop: 19089, Start Num: 47

Candidate Starts for ProfessorX\_25:

(30, 18601), (Start: 47 @18667 has 263 MA's), (Start: 95 @18790 has 1 MA's), (Start: 96 @18796 has 1 MA's), (97, 18802), (117, 18865), (128, 18907), (153, 18985), (166, 19033), (172, 19057), (176, 19075), (177, 19081),

Gene: Puhltonio\_25 Start: 18683, Stop: 19105, Start Num: 47

Candidate Starts for Puhltonio\_25:

(30, 18617), (Start: 47 @18683 has 263 MA's), (Start: 95 @18806 has 1 MA's), (Start: 96 @18812 has 1 MA's), (97, 18818), (117, 18881), (128, 18923), (153, 19001), (166, 19049), (172, 19073), (176, 19091), (177, 19097),

Gene: PullumCavea\_26 Start: 17656, Stop: 18099, Start Num: 61

Candidate Starts for PullumCavea\_26:  
(Start: 61 @17656 has 86 MA's), (136, 17917), (180, 18073),

Gene: Pumpernickel\_91 Start: 51418, Stop: 51831, Start Num: 42  
Candidate Starts for Pumpernickel\_91:  
(Start: 42 @51418 has 1 MA's), (82, 51508), (92, 51541), (Start: 96 @51565 has 1 MA's), (98, 51586),  
(126, 51670), (152, 51748), (158, 51766), (159, 51769),

Gene: Quammi\_31 Start: 21635, Stop: 22048, Start Num: 47  
Candidate Starts for Quammi\_31:  
(31, 21578), (Start: 47 @21635 has 263 MA's), (65, 21671), (102, 21794), (135, 21911), (140, 21926),

Gene: QueenBeane\_25 Start: 18675, Stop: 19097, Start Num: 47  
Candidate Starts for QueenBeane\_25:  
(30, 18609), (Start: 47 @18675 has 263 MA's), (Start: 95 @18798 has 1 MA's), (Start: 96 @18804 has  
1 MA's), (97, 18810), (117, 18873), (128, 18915), (153, 18993), (166, 19041), (172, 19065), (176,  
19083), (177, 19089),

Gene: Quesadilla\_26 Start: 20803, Stop: 21240, Start Num: 50  
Candidate Starts for Quesadilla\_26:  
(Start: 50 @20803 has 17 MA's), (Start: 96 @20929 has 1 MA's), (97, 20935), (105, 20971), (117,  
20998), (153, 21118), (162, 21148), (171, 21187),

Gene: Quisquiliae\_25 Start: 18690, Stop: 19112, Start Num: 47  
Candidate Starts for Quisquiliae\_25:  
(30, 18624), (Start: 47 @18690 has 263 MA's), (Start: 95 @18813 has 1 MA's), (Start: 96 @18819 has  
1 MA's), (97, 18825), (117, 18888), (128, 18930), (153, 19008), (166, 19056), (172, 19080), (176,  
19098), (177, 19104),

Gene: Qyrzula\_25 Start: 20920, Stop: 21348, Start Num: 47  
Candidate Starts for Qyrzula\_25:  
(37, 20893), (Start: 47 @20920 has 263 MA's), (57, 20935), (Start: 96 @21052 has 1 MA's), (97,  
21058), (102, 21085), (110, 21106), (117, 21124), (153, 21244), (154, 21250), (171, 21313), (177,  
21340),

Gene: Racecar\_88 Start: 53421, Stop: 53804, Start Num: 60  
Candidate Starts for Racecar\_88:  
(Start: 60 @53421 has 7 MA's), (71, 53460), (72, 53463), (98, 53562), (106, 53586), (124, 53637),  
(126, 53646), (140, 53700), (153, 53727), (156, 53739),

Gene: RagingRooster\_26 Start: 19364, Stop: 19777, Start Num: 56  
Candidate Starts for RagingRooster\_26:  
(Start: 56 @19364 has 42 MA's), (86, 19439), (Start: 96 @19484 has 1 MA's), (97, 19490), (132,  
19622), (171, 19748),

Gene: RainyPolka\_20 Start: 19600, Stop: 19980, Start Num: 73  
Candidate Starts for RainyPolka\_20:  
(15, 19327), (23, 19408), (Start: 73 @19600 has 7 MA's), (82, 19615), (94, 19657), (101, 19702), (119,  
19744), (136, 19822), (155, 19873), (161, 19888), (167, 19915), (168, 19918),

Gene: RawrgerThat\_23 Start: 19333, Stop: 19746, Start Num: 54  
Candidate Starts for RawrgerThat\_23:

(Start: 54 @19333 has 23 MA's), (Start: 95 @19447 has 1 MA's), (Start: 96 @19453 has 1 MA's), (97, 19459), (105, 19495), (121, 19534), (124, 19546), (128, 19564), (153, 19642), (158, 19657), (171, 19711), (172, 19714), (177, 19738),

Gene: RedMaple\_24 Start: 18686, Stop: 19108, Start Num: 47

Candidate Starts for RedMaple\_24:

(30, 18620), (Start: 47 @18686 has 263 MA's), (Start: 95 @18809 has 1 MA's), (Start: 96 @18815 has 1 MA's), (97, 18821), (117, 18884), (128, 18926), (153, 19004), (166, 19052), (172, 19076), (176, 19094), (177, 19100),

Gene: Reprobate\_25 Start: 19641, Stop: 20057, Start Num: 52

Candidate Starts for Reprobate\_25:

(Start: 52 @19641 has 15 MA's), (76, 19701), (Start: 96 @19764 has 1 MA's), (97, 19770), (128, 19875), (133, 19905), (153, 19953), (178, 20052),

Gene: Rhinoforte\_27 Start: 20951, Stop: 21379, Start Num: 47

Candidate Starts for Rhinoforte\_27:

(37, 20924), (Start: 47 @20951 has 263 MA's), (57, 20966), (Start: 96 @21083 has 1 MA's), (97, 21089), (102, 21116), (110, 21137), (117, 21155), (153, 21275), (154, 21281), (171, 21344), (177, 21371),

Gene: Ribeye\_30 Start: 23007, Stop: 23441, Start Num: 53

Candidate Starts for Ribeye\_30:

(Start: 53 @23007 has 10 MA's), (83, 23061), (92, 23091), (109, 23166), (136, 23268), (142, 23289), (169, 23361), (180, 23412),

Gene: Rich\_24 Start: 19142, Stop: 19558, Start Num: 52

Candidate Starts for Rich\_24:

(Start: 52 @19142 has 15 MA's), (Start: 95 @19259 has 1 MA's), (97, 19271), (117, 19334), (171, 19523), (178, 19553),

Gene: Ricotta\_25 Start: 18398, Stop: 18820, Start Num: 47

Candidate Starts for Ricotta\_25:

(30, 18332), (Start: 47 @18398 has 263 MA's), (Start: 95 @18521 has 1 MA's), (Start: 96 @18527 has 1 MA's), (97, 18533), (117, 18596), (128, 18638), (153, 18716), (166, 18764), (172, 18788), (176, 18806), (177, 18812),

Gene: Riggan\_25 Start: 18658, Stop: 19080, Start Num: 47

Candidate Starts for Riggan\_25:

(30, 18592), (Start: 47 @18658 has 263 MA's), (Start: 95 @18781 has 1 MA's), (Start: 96 @18787 has 1 MA's), (97, 18793), (117, 18856), (128, 18898), (153, 18976), (166, 19024), (172, 19048), (176, 19066), (177, 19072),

Gene: Rimu\_26 Start: 18479, Stop: 18829, Start Num: 81

Candidate Starts for Rimu\_26:

(Start: 46 @18407 has 52 MA's), (81, 18479), (Start: 95 @18530 has 1 MA's), (Start: 96 @18536 has 1 MA's), (97, 18542), (117, 18605), (128, 18647), (153, 18725), (166, 18773), (172, 18797), (176, 18815), (177, 18821),

Gene: Rita1961\_26 Start: 19359, Stop: 19772, Start Num: 56

Candidate Starts for Rita1961\_26:

(Start: 56 @19359 has 42 MA's), (86, 19434), (Start: 96 @19479 has 1 MA's), (97, 19485), (132, 19617), (171, 19743),

Gene: RiverRaider\_31 Start: 21439, Stop: 21873, Start Num: 61

Candidate Starts for RiverRaider\_31:

(Start: 61 @21439 has 86 MA's), (92, 21523), (136, 21700), (142, 21721), (165, 21778), (169, 21793), (180, 21844),

Gene: RoadKill\_25 Start: 19107, Stop: 19538, Start Num: 61

Candidate Starts for RoadKill\_25:

(18, 18933), (24, 18984), (Start: 61 @19107 has 86 MA's), (92, 19191), (109, 19266), (141, 19386), (149, 19401), (169, 19461), (178, 19500), (179, 19509), (180, 19512),

Gene: RobinRose\_34 Start: 21130, Stop: 21525, Start Num: 47

Candidate Starts for RobinRose\_34:

(Start: 47 @21130 has 263 MA's), (66, 21172), (70, 21181), (102, 21289), (150, 21430), (177, 21517),

Gene: Robyn\_24 Start: 18249, Stop: 18671, Start Num: 47

Candidate Starts for Robyn\_24:

(30, 18183), (Start: 47 @18249 has 263 MA's), (Start: 95 @18372 has 1 MA's), (Start: 96 @18378 has 1 MA's), (97, 18384), (117, 18447), (128, 18489), (153, 18567), (166, 18615), (172, 18639), (176, 18657), (177, 18663),

Gene: Rofo\_30 Start: 23214, Stop: 23648, Start Num: 61

Candidate Starts for Rofo\_30:

(40, 23184), (Start: 61 @23214 has 86 MA's), (92, 23298), (109, 23373), (120, 23397), (136, 23475), (169, 23568), (180, 23619),

Gene: RogerDodger\_29 Start: 18449, Stop: 18892, Start Num: 61

Candidate Starts for RogerDodger\_29:

(Start: 61 @18449 has 86 MA's), (136, 18710), (180, 18866),

Gene: Roliet\_25 Start: 18674, Stop: 19096, Start Num: 47

Candidate Starts for Roliet\_25:

(30, 18608), (Start: 47 @18674 has 263 MA's), (Start: 95 @18797 has 1 MA's), (Start: 96 @18803 has 1 MA's), (97, 18809), (117, 18872), (128, 18914), (153, 18992), (166, 19040), (172, 19064), (176, 19082), (177, 19088),

Gene: RomaT\_26 Start: 20149, Stop: 20562, Start Num: 56

Candidate Starts for RomaT\_26:

(Start: 56 @20149 has 42 MA's), (Start: 96 @20269 has 1 MA's), (97, 20275), (132, 20407), (171, 20533),

Gene: Romm\_34 Start: 21130, Stop: 21525, Start Num: 47

Candidate Starts for Romm\_34:

(Start: 47 @21130 has 263 MA's), (66, 21172), (70, 21181), (102, 21289), (150, 21430), (177, 21517),

Gene: Roscoe\_26 Start: 18916, Stop: 19338, Start Num: 47

Candidate Starts for Roscoe\_26:

(30, 18850), (Start: 47 @18916 has 263 MA's), (Start: 95 @19039 has 1 MA's), (Start: 96 @19045 has 1 MA's), (97, 19051), (117, 19114), (128, 19156), (153, 19234), (166, 19282), (172, 19306), (176, 19324), (177, 19330),

Gene: Rosebush\_27 Start: 20951, Stop: 21379, Start Num: 47

Candidate Starts for Rosebush\_27:

(37, 20924), (Start: 47 @20951 has 263 MA's), (57, 20966), (Start: 96 @21083 has 1 MA's), (97, 21089), (102, 21116), (110, 21137), (117, 21155), (153, 21275), (154, 21281), (171, 21344), (177, 21371),

Gene: Rowlf\_30 Start: 21810, Stop: 22223, Start Num: 47

Candidate Starts for Rowlf\_30:

(31, 21753), (Start: 47 @21810 has 263 MA's), (102, 21969), (135, 22086), (140, 22101),

Gene: Roy17\_25 Start: 18378, Stop: 18800, Start Num: 47

Candidate Starts for Roy17\_25:

(30, 18312), (Start: 47 @18378 has 263 MA's), (Start: 95 @18501 has 1 MA's), (Start: 96 @18507 has 1 MA's), (97, 18513), (117, 18576), (128, 18618), (153, 18696), (166, 18744), (172, 18768), (176, 18786), (177, 18792),

Gene: RubyRalph\_35 Start: 21703, Stop: 22119, Start Num: 47

Candidate Starts for RubyRalph\_35:

(22, 21580), (36, 21670), (Start: 47 @21703 has 263 MA's), (93, 21814), (124, 21919), (142, 22000), (146, 22003), (179, 22114),

Gene: Rudy\_31 Start: 21668, Stop: 22081, Start Num: 47

Candidate Starts for Rudy\_31:

(31, 21611), (37, 21641), (Start: 47 @21668 has 263 MA's), (65, 21704), (102, 21827), (135, 21944), (140, 21959),

Gene: SDcharge11\_25 Start: 18656, Stop: 19078, Start Num: 47

Candidate Starts for SDcharge11\_25:

(30, 18590), (Start: 47 @18656 has 263 MA's), (Start: 95 @18779 has 1 MA's), (Start: 96 @18785 has 1 MA's), (97, 18791), (117, 18854), (128, 18896), (153, 18974), (166, 19022), (172, 19046), (176, 19064), (177, 19070),

Gene: SJReid\_93 Start: 54733, Stop: 55122, Start Num: 61

Candidate Starts for SJReid\_93:

(Start: 61 @54733 has 86 MA's), (80, 54790), (106, 54895), (107, 54898), (126, 54955), (140, 55009), (153, 55036), (156, 55048), (169, 55096),

Gene: Sabella\_27 Start: 20837, Stop: 21265, Start Num: 47

Candidate Starts for Sabella\_27:

(37, 20810), (Start: 47 @20837 has 263 MA's), (57, 20852), (Start: 96 @20969 has 1 MA's), (97, 20975), (102, 21002), (110, 21023), (117, 21041), (153, 21161), (154, 21167), (171, 21230), (177, 21257),

Gene: SadLad\_37 Start: 22646, Stop: 23062, Start Num: 47

Candidate Starts for SadLad\_37:

(5, 22172), (6, 22178), (8, 22205), (12, 22295), (22, 22523), (36, 22613), (Start: 47 @22646 has 263 MA's), (93, 22757), (142, 22943), (146, 22946), (179, 23057),

Gene: Saguaro\_26 Start: 20711, Stop: 21127, Start Num: 52

Candidate Starts for Saguaro\_26:

(Start: 52 @20711 has 15 MA's), (Start: 96 @20834 has 1 MA's), (153, 21023), (158, 21038), (162, 21053),

Gene: Salete\_19 Start: 19235, Stop: 19615, Start Num: 73

Candidate Starts for Salete\_19:

(10, 18785), (23, 19067), (Start: 73 @19235 has 7 MA's), (82, 19250), (94, 19292), (101, 19337), (130, 19427), (136, 19457), (155, 19508), (161, 19523), (167, 19550), (168, 19553),

Gene: SallyK\_34 Start: 22743, Stop: 23147, Start Num: 47

Candidate Starts for SallyK\_34:

(Start: 47 @22743 has 263 MA's), (65, 22779), (123, 22953), (128, 22974), (137, 23019), (140, 23028), (177, 23133), (179, 23142),

Gene: Salvador\_26 Start: 17570, Stop: 18013, Start Num: 61

Candidate Starts for Salvador\_26:

(Start: 61 @17570 has 86 MA's), (136, 17831), (180, 17987),

Gene: Samaymay\_25 Start: 18675, Stop: 19097, Start Num: 47

Candidate Starts for Samaymay\_25:

(30, 18609), (Start: 47 @18675 has 263 MA's), (Start: 95 @18798 has 1 MA's), (Start: 96 @18804 has 1 MA's), (97, 18810), (117, 18873), (128, 18915), (153, 18993), (166, 19041), (172, 19065), (176, 19083), (177, 19089),

Gene: Sampson\_30 Start: 22909, Stop: 23340, Start Num: 61

Candidate Starts for Sampson\_30:

(33, 22849), (Start: 43 @22882 has 2 MA's), (Start: 61 @22909 has 86 MA's), (98, 23038), (109, 23068), (136, 23170), (137, 23176), (142, 23191), (165, 23248), (169, 23263), (179, 23311), (180, 23314),

Gene: Sanjuju\_28 Start: 23395, Stop: 23829, Start Num: 61

Candidate Starts for Sanjuju\_28:

(40, 23365), (Start: 61 @23395 has 86 MA's), (92, 23479), (109, 23554), (120, 23578), (136, 23656), (142, 23677), (169, 23749), (180, 23800),

Gene: Saronaya\_29 Start: 21853, Stop: 22287, Start Num: 61

Candidate Starts for Saronaya\_29:

(Start: 55 @21844 has 8 MA's), (Start: 61 @21853 has 86 MA's), (92, 21937), (109, 22012), (136, 22114), (142, 22135), (165, 22192), (169, 22207), (180, 22258),

Gene: SassyCat97\_24 Start: 18384, Stop: 18806, Start Num: 47

Candidate Starts for SassyCat97\_24:

(30, 18318), (Start: 47 @18384 has 263 MA's), (Start: 95 @18507 has 1 MA's), (Start: 96 @18513 has 1 MA's), (97, 18519), (117, 18582), (128, 18624), (153, 18702), (166, 18750), (172, 18774), (176, 18792), (177, 18798),

Gene: Savbucketdawg\_26 Start: 17351, Stop: 17794, Start Num: 61

Candidate Starts for Savbucketdawg\_26:

(Start: 61 @17351 has 86 MA's), (136, 17612), (180, 17768),

Gene: Schadenfreude\_24 Start: 18232, Stop: 18654, Start Num: 47

Candidate Starts for Schadenfreude\_24:

(30, 18166), (Start: 47 @18232 has 263 MA's), (Start: 95 @18355 has 1 MA's), (Start: 96 @18361 has 1 MA's), (97, 18367), (117, 18430), (128, 18472), (153, 18550), (166, 18598), (172, 18622), (176, 18640), (177, 18646),

Gene: SchottB\_28 Start: 22865, Stop: 23299, Start Num: 61

Candidate Starts for SchottB\_28:

(Start: 55 @22856 has 8 MA's), (Start: 61 @22865 has 86 MA's), (92, 22949), (109, 23024), (136, 23126), (142, 23147), (165, 23204), (169, 23219), (180, 23270),

Gene: Schueller\_25 Start: 18375, Stop: 18797, Start Num: 46

Candidate Starts for Schueller\_25:

(Start: 46 @18375 has 52 MA's), (Start: 95 @18498 has 1 MA's), (Start: 96 @18504 has 1 MA's), (97, 18510), (117, 18573), (128, 18615), (153, 18693), (166, 18741), (172, 18765), (176, 18783), (177, 18789),

Gene: Scioto\_30 Start: 22964, Stop: 23395, Start Num: 61

Candidate Starts for Scioto\_30:

(33, 22904), (Start: 43 @22937 has 2 MA's), (Start: 61 @22964 has 86 MA's), (98, 23093), (109, 23123), (136, 23225), (137, 23231), (142, 23246), (165, 23303), (169, 23318), (179, 23366), (180, 23369),

Gene: Scoot17C\_25 Start: 18677, Stop: 19099, Start Num: 47

Candidate Starts for Scoot17C\_25:

(30, 18611), (Start: 47 @18677 has 263 MA's), (Start: 95 @18800 has 1 MA's), (Start: 96 @18806 has 1 MA's), (97, 18812), (117, 18875), (128, 18917), (140, 18968), (153, 18995), (166, 19043), (172, 19067), (176, 19085), (177, 19091),

Gene: Scrick\_25 Start: 18402, Stop: 18824, Start Num: 47

Candidate Starts for Scrick\_25:

(30, 18336), (Start: 47 @18402 has 263 MA's), (Start: 95 @18525 has 1 MA's), (Start: 96 @18531 has 1 MA's), (97, 18537), (117, 18600), (128, 18642), (153, 18720), (166, 18768), (172, 18792), (176, 18810), (177, 18816),

Gene: Sedona\_30 Start: 24320, Stop: 24754, Start Num: 61

Candidate Starts for Sedona\_30:

(Start: 61 @24320 has 86 MA's), (92, 24404), (109, 24479), (120, 24503), (136, 24581), (142, 24602), (165, 24659), (169, 24674), (180, 24725),

Gene: Sejanus\_22 Start: 17555, Stop: 17959, Start Num: 53

Candidate Starts for Sejanus\_22:

(Start: 53 @17555 has 10 MA's), (86, 17633), (Start: 96 @17678 has 1 MA's), (97, 17684), (108, 17729), (117, 17750), (128, 17792), (132, 17816), (140, 17843), (147, 17855), (170, 17933),

Gene: Selr12\_25 Start: 18399, Stop: 18821, Start Num: 47

Candidate Starts for Selr12\_25:

(30, 18333), (Start: 47 @18399 has 263 MA's), (Start: 95 @18522 has 1 MA's), (Start: 96 @18528 has 1 MA's), (97, 18534), (117, 18597), (128, 18639), (153, 18717), (166, 18765), (172, 18789), (176, 18807), (177, 18813),

Gene: Serendipitous\_24 Start: 19199, Stop: 19615, Start Num: 52

Candidate Starts for Serendipitous\_24:

(Start: 52 @19199 has 15 MA's), (98, 19343), (105, 19364), (124, 19415), (140, 19484), (171, 19580), (178, 19610),

Gene: Serendipity\_25 Start: 18697, Stop: 19119, Start Num: 47

Candidate Starts for Serendipity\_25:

(30, 18631), (Start: 47 @18697 has 263 MA's), (Start: 95 @18820 has 1 MA's), (Start: 96 @18826 has 1 MA's), (97, 18832), (117, 18895), (128, 18937), (153, 19015), (166, 19063), (172, 19087), (176, 19105), (177, 19111),



Gene: Serpentine\_0025 Start: 18677, Stop: 19099, Start Num: 47

Candidate Starts for Serpentine\_0025:

(30, 18611), (Start: 47 @18677 has 263 MA's), (Start: 95 @18800 has 1 MA's), (Start: 96 @18806 has 1 MA's), (97, 18812), (117, 18875), (128, 18917), (153, 18995), (166, 19043), (172, 19067), (176, 19085), (177, 19091),

Gene: Shatter\_22 Start: 17225, Stop: 17635, Start Num: 50

Candidate Starts for Shatter\_22:

(Start: 50 @17225 has 17 MA's), (86, 17306), (Start: 95 @17345 has 1 MA's), (97, 17357), (107, 17399), (110, 17405), (117, 17423), (139, 17513),

Gene: Sheila\_25 Start: 18669, Stop: 19091, Start Num: 47

Candidate Starts for Sheila\_25:

(30, 18603), (Start: 47 @18669 has 263 MA's), (Start: 95 @18792 has 1 MA's), (Start: 96 @18798 has 1 MA's), (97, 18804), (117, 18867), (128, 18909), (153, 18987), (166, 19035), (172, 19059), (176, 19077), (177, 19083),

Gene: ShiVal\_25 Start: 18669, Stop: 19091, Start Num: 47

Candidate Starts for ShiVal\_25:

(30, 18603), (Start: 47 @18669 has 263 MA's), (Start: 95 @18792 has 1 MA's), (Start: 96 @18798 has 1 MA's), (97, 18804), (117, 18867), (128, 18909), (153, 18987), (166, 19035), (172, 19059), (176, 19077), (177, 19083),

Gene: Shinji\_26 Start: 17540, Stop: 17983, Start Num: 61

Candidate Starts for Shinji\_26:

(Start: 61 @17540 has 86 MA's), (136, 17801), (180, 17957),

Gene: Shivanishola\_31 Start: 23294, Stop: 23728, Start Num: 61

Candidate Starts for Shivanishola\_31:

(40, 23264), (Start: 61 @23294 has 86 MA's), (92, 23378), (109, 23453), (120, 23477), (136, 23555), (142, 23576), (169, 23648), (180, 23699),

Gene: Sigman\_25 Start: 18668, Stop: 19090, Start Num: 47

Candidate Starts for Sigman\_25:

(30, 18602), (Start: 47 @18668 has 263 MA's), (Start: 95 @18791 has 1 MA's), (Start: 96 @18797 has 1 MA's), (97, 18803), (117, 18866), (128, 18908), (153, 18986), (166, 19034), (172, 19058), (176, 19076), (177, 19082),

Gene: Sillytadpoles\_34 Start: 21633, Stop: 22037, Start Num: 47

Candidate Starts for Sillytadpoles\_34:

(31, 21576), (Start: 47 @21633 has 263 MA's), (65, 21669), (123, 21843), (128, 21864), (137, 21909), (140, 21918), (177, 22023), (179, 22032),

Gene: Simielle\_24 Start: 18367, Stop: 18789, Start Num: 47

Candidate Starts for Simielle\_24:

(30, 18301), (Start: 47 @18367 has 263 MA's), (Start: 95 @18490 has 1 MA's), (Start: 96 @18496 has 1 MA's), (97, 18502), (117, 18565), (128, 18607), (153, 18685), (166, 18733), (172, 18757), (176, 18775), (177, 18781),

Gene: SirJeffery\_25 Start: 19385, Stop: 19801, Start Num: 52

Candidate Starts for SirJeffery\_25:

(Start: 52 @19385 has 15 MA's), (76, 19445), (97, 19514), (128, 19619), (133, 19649), (178, 19796),

Gene: Sisko\_22 Start: 17508, Stop: 17921, Start Num: 50  
Candidate Starts for Sisko\_22:  
(Start: 50 @17508 has 17 MA's), (78, 17577), (97, 17643), (110, 17691), (139, 17799), (171, 17898),

Gene: Sitar\_30 Start: 24387, Stop: 24821, Start Num: 61  
Candidate Starts for Sitar\_30:  
(40, 24357), (Start: 61 @24387 has 86 MA's), (92, 24471), (109, 24546), (136, 24648), (142, 24669),  
(169, 24741), (180, 24792),

Gene: Sixama\_94 Start: 51509, Stop: 51916, Start Num: 60  
Candidate Starts for Sixama\_94:  
(59, 51506), (Start: 60 @51509 has 7 MA's), (71, 51545), (92, 51602), (131, 51776), (132, 51785),  
(143, 51821), (151, 51833), (158, 51854), (166, 51887), (169, 51899), (171, 51908),

Gene: Skippy\_25 Start: 18662, Stop: 19084, Start Num: 47  
Candidate Starts for Skippy\_25:  
(30, 18596), (Start: 47 @18662 has 263 MA's), (Start: 95 @18785 has 1 MA's), (Start: 96 @18791 has  
1 MA's), (97, 18797), (117, 18860), (128, 18902), (153, 18980), (166, 19028), (172, 19052), (176,  
19070), (177, 19076),

Gene: Slatt\_25 Start: 18691, Stop: 19113, Start Num: 47  
Candidate Starts for Slatt\_25:  
(30, 18625), (Start: 47 @18691 has 263 MA's), (Start: 95 @18814 has 1 MA's), (Start: 96 @18820 has  
1 MA's), (97, 18826), (117, 18889), (128, 18931), (153, 19009), (166, 19057), (172, 19081), (176,  
19099), (177, 19105),

Gene: SlippinJimmy\_26 Start: 20128, Stop: 20541, Start Num: 56  
Candidate Starts for SlippinJimmy\_26:  
(Start: 56 @20128 has 42 MA's), (Start: 96 @20248 has 1 MA's), (97, 20254), (110, 20302), (132,  
20386), (171, 20512),

Gene: SmokingBunny\_26 Start: 17570, Stop: 18013, Start Num: 61  
Candidate Starts for SmokingBunny\_26:  
(Start: 61 @17570 has 86 MA's), (136, 17831), (180, 17987),

Gene: Soile\_25 Start: 18389, Stop: 18811, Start Num: 46  
Candidate Starts for Soile\_25:  
(Start: 46 @18389 has 52 MA's), (Start: 96 @18518 has 1 MA's), (97, 18524), (117, 18587), (128,  
18629), (153, 18707), (166, 18755), (172, 18779), (176, 18797), (177, 18803),

Gene: Solosis\_24 Start: 18394, Stop: 18816, Start Num: 47  
Candidate Starts for Solosis\_24:  
(30, 18328), (Start: 47 @18394 has 263 MA's), (Start: 95 @18517 has 1 MA's), (Start: 96 @18523 has  
1 MA's), (97, 18529), (117, 18592), (128, 18634), (153, 18712), (166, 18760), (172, 18784), (176,  
18802), (177, 18808),

Gene: Soos\_49 Start: 28742, Stop: 29167, Start Num: 44  
Candidate Starts for Soos\_49:  
(Start: 44 @28742 has 6 MA's), (114, 28940), (132, 29012), (152, 29066), (157, 29081),

Gene: Sophia\_24 Start: 18387, Stop: 18809, Start Num: 47  
Candidate Starts for Sophia\_24:

(30, 18321), (Start: 47 @18387 has 263 MA's), (Start: 95 @18510 has 1 MA's), (Start: 96 @18516 has 1 MA's), (97, 18522), (117, 18585), (128, 18627), (153, 18705), (166, 18753), (172, 18777), (176, 18795), (177, 18801),

Gene: Soto\_25 Start: 18671, Stop: 19093, Start Num: 47

Candidate Starts for Soto\_25:

(30, 18605), (Start: 47 @18671 has 263 MA's), (Start: 95 @18794 has 1 MA's), (Start: 96 @18800 has 1 MA's), (97, 18806), (117, 18869), (128, 18911), (153, 18989), (166, 19037), (172, 19061), (176, 19079), (177, 19085),

Gene: Sour\_26 Start: 21204, Stop: 21638, Start Num: 39

Candidate Starts for Sour\_26:

(Start: 39 @21204 has 1 MA's), (Start: 50 @21225 has 17 MA's), (78, 21294), (107, 21402), (110, 21408), (128, 21468), (129, 21474), (139, 21516),

Gene: Spartan300\_25 Start: 18672, Stop: 19094, Start Num: 47

Candidate Starts for Spartan300\_25:

(30, 18606), (Start: 47 @18672 has 263 MA's), (Start: 95 @18795 has 1 MA's), (Start: 96 @18801 has 1 MA's), (97, 18807), (117, 18870), (128, 18912), (153, 18990), (166, 19038), (172, 19062), (176, 19080), (177, 19086),

Gene: Squash\_35 Start: 22692, Stop: 23105, Start Num: 47

Candidate Starts for Squash\_35:

(31, 22635), (Start: 47 @22692 has 263 MA's), (102, 22851), (135, 22968), (140, 22983),

Gene: Squid\_25 Start: 18384, Stop: 18806, Start Num: 47

Candidate Starts for Squid\_25:

(30, 18318), (Start: 47 @18384 has 263 MA's), (Start: 95 @18507 has 1 MA's), (Start: 96 @18513 has 1 MA's), (97, 18519), (117, 18582), (128, 18624), (153, 18702), (166, 18750), (172, 18774), (176, 18792), (177, 18798),

Gene: Squiggle\_25 Start: 18381, Stop: 18803, Start Num: 47

Candidate Starts for Squiggle\_25:

(30, 18315), (Start: 47 @18381 has 263 MA's), (Start: 95 @18504 has 1 MA's), (Start: 96 @18510 has 1 MA's), (97, 18516), (117, 18579), (128, 18621), (153, 18699), (166, 18747), (172, 18771), (176, 18789), (177, 18795),

Gene: Sting\_53 Start: 29181, Stop: 29606, Start Num: 44

Candidate Starts for Sting\_53:

(Start: 44 @29181 has 6 MA's), (114, 29379), (132, 29451), (152, 29505), (157, 29520),

Gene: Stinger\_21 Start: 17880, Stop: 18293, Start Num: 54

Candidate Starts for Stinger\_21:

(Start: 54 @17880 has 23 MA's), (Start: 96 @18000 has 1 MA's), (97, 18006), (105, 18042), (117, 18069), (121, 18081), (124, 18093), (128, 18111), (153, 18189), (171, 18258), (172, 18261), (177, 18285),

Gene: StinkyVeggy\_27 Start: 19514, Stop: 19930, Start Num: 52

Candidate Starts for StinkyVeggy\_27:

(Start: 52 @19514 has 15 MA's), (117, 19706), (140, 19799), (178, 19925),

Gene: StorminNorm\_29 Start: 21732, Stop: 22166, Start Num: 61

Candidate Starts for StorminNorm\_29:

(Start: 55 @21723 has 8 MA's), (Start: 61 @21732 has 86 MA's), (92, 21816), (109, 21891), (136, 21993), (142, 22014), (165, 22071), (169, 22086), (180, 22137),

Gene: StrawberryJamm\_35 Start: 21872, Stop: 22285, Start Num: 47

Candidate Starts for StrawberryJamm\_35:

(31, 21815), (Start: 47 @21872 has 263 MA's), (102, 22031), (135, 22148), (140, 22163),

Gene: Struggle\_24 Start: 18228, Stop: 18650, Start Num: 46

Candidate Starts for Struggle\_24:

(Start: 46 @18228 has 52 MA's), (Start: 95 @18351 has 1 MA's), (Start: 96 @18357 has 1 MA's), (97, 18363), (117, 18426), (128, 18468), (153, 18546), (166, 18594), (172, 18618), (176, 18636), (177, 18642),

Gene: Stultus\_28 Start: 22302, Stop: 22736, Start Num: 61

Candidate Starts for Stultus\_28:

(40, 22272), (Start: 61 @22302 has 86 MA's), (92, 22386), (109, 22461), (120, 22485), (136, 22563), (142, 22584), (169, 22656), (180, 22707),

Gene: Suffolk\_25 Start: 18674, Stop: 19096, Start Num: 47

Candidate Starts for Suffolk\_25:

(30, 18608), (Start: 47 @18674 has 263 MA's), (Start: 95 @18797 has 1 MA's), (Start: 96 @18803 has 1 MA's), (97, 18809), (117, 18872), (128, 18914), (153, 18992), (166, 19040), (172, 19064), (176, 19082), (177, 19088),

Gene: Suigeneris\_25 Start: 19394, Stop: 19810, Start Num: 52

Candidate Starts for Suigeneris\_25:

(Start: 52 @19394 has 15 MA's), (76, 19454), (97, 19523), (128, 19628), (133, 19658), (178, 19805),

Gene: Surely\_25 Start: 18686, Stop: 19108, Start Num: 47

Candidate Starts for Surely\_25:

(30, 18620), (Start: 47 @18686 has 263 MA's), (Start: 95 @18809 has 1 MA's), (Start: 96 @18815 has 1 MA's), (97, 18821), (117, 18884), (128, 18926), (153, 19004), (166, 19052), (172, 19076), (176, 19094), (177, 19100),

Gene: Swiphy\_26 Start: 18675, Stop: 19097, Start Num: 46

Candidate Starts for Swiphy\_26:

(Start: 46 @18675 has 52 MA's), (Start: 95 @18798 has 1 MA's), (Start: 96 @18804 has 1 MA's), (97, 18810), (117, 18873), (128, 18915), (153, 18993), (166, 19041), (172, 19065), (176, 19083), (177, 19089),

Gene: Swish\_25 Start: 18669, Stop: 19091, Start Num: 47

Candidate Starts for Swish\_25:

(30, 18603), (Start: 47 @18669 has 263 MA's), (Start: 95 @18792 has 1 MA's), (Start: 96 @18798 has 1 MA's), (97, 18804), (117, 18867), (128, 18909), (153, 18987), (166, 19035), (172, 19059), (176, 19077), (177, 19083),

Gene: SynergyX\_26 Start: 19364, Stop: 19777, Start Num: 56

Candidate Starts for SynergyX\_26:

(Start: 56 @19364 has 42 MA's), (86, 19439), (Start: 96 @19484 has 1 MA's), (97, 19490), (132, 19622), (171, 19748),

Gene: TA17A\_27 Start: 20831, Stop: 21259, Start Num: 47

Candidate Starts for TA17A\_27:

(37, 20804), (Start: 47 @20831 has 263 MA's), (57, 20846), (Start: 96 @20963 has 1 MA's), (97, 20969), (102, 20996), (110, 21017), (117, 21035), (153, 21155), (154, 21161), (171, 21224), (177, 21251),

Gene: TP1604\_19 Start: 19235, Stop: 19615, Start Num: 73

Candidate Starts for TP1604\_19:

(10, 18785), (23, 19067), (Start: 73 @19235 has 7 MA's), (82, 19250), (94, 19292), (101, 19337), (130, 19427), (136, 19457), (155, 19508), (161, 19523), (167, 19550), (168, 19553),

Gene: TPA2\_31 Start: 19553, Stop: 19993, Start Num: 41

Candidate Starts for TPA2\_31:

(41, 19553), (Start: 96 @19697 has 1 MA's), (97, 19703), (117, 19769), (153, 19892), (171, 19961), (175, 19979),

Gene: TallGrassMM\_25 Start: 18401, Stop: 18823, Start Num: 47

Candidate Starts for TallGrassMM\_25:

(30, 18335), (Start: 47 @18401 has 263 MA's), (Start: 95 @18524 has 1 MA's), (Start: 96 @18530 has 1 MA's), (97, 18536), (117, 18599), (128, 18641), (140, 18692), (153, 18719), (166, 18767), (172, 18791), (176, 18809), (177, 18815),

Gene: Tangent\_30 Start: 22736, Stop: 23170, Start Num: 61

Candidate Starts for Tangent\_30:

(40, 22706), (Start: 61 @22736 has 86 MA's), (92, 22820), (109, 22895), (120, 22919), (136, 22997), (169, 23090), (180, 23141),

Gene: Tangerine\_29 Start: 21738, Stop: 22172, Start Num: 61

Candidate Starts for Tangerine\_29:

(Start: 55 @21729 has 8 MA's), (Start: 61 @21738 has 86 MA's), (92, 21822), (109, 21897), (136, 21999), (142, 22020), (165, 22077), (169, 22092), (180, 22143),

Gene: Taptic\_19 Start: 18137, Stop: 18547, Start Num: 55

Candidate Starts for Taptic\_19:

(Start: 55 @18137 has 8 MA's), (86, 18212), (Start: 96 @18257 has 1 MA's), (97, 18263), (107, 18305), (117, 18329), (123, 18350), (152, 18452), (166, 18497),

Gene: Tardus\_31 Start: 22245, Stop: 22676, Start Num: 61

Candidate Starts for Tardus\_31:

(Start: 43 @22218 has 2 MA's), (Start: 61 @22245 has 86 MA's), (92, 22329), (98, 22374), (109, 22404), (136, 22506), (137, 22512), (142, 22527), (165, 22584), (169, 22599), (179, 22647), (180, 22650),

Gene: Teehee\_34 Start: 22869, Stop: 23273, Start Num: 47

Candidate Starts for Teehee\_34:

(31, 22812), (Start: 47 @22869 has 263 MA's), (65, 22905), (123, 23079), (128, 23100), (137, 23145), (140, 23154), (177, 23259), (179, 23268),

Gene: Telesworld\_24 Start: 18380, Stop: 18802, Start Num: 47

Candidate Starts for Telesworld\_24:

(30, 18314), (Start: 47 @18380 has 263 MA's), (Start: 95 @18503 has 1 MA's), (Start: 96 @18509 has 1 MA's), (97, 18515), (117, 18578), (128, 18620), (153, 18698), (166, 18746), (172, 18770), (176, 18788), (177, 18794),

Gene: Tempo\_32 Start: 21006, Stop: 21401, Start Num: 47

Candidate Starts for Tempo\_32:

(Start: 47 @21006 has 263 MA's), (66, 21048), (70, 21057), (102, 21165), (138, 21288), (150, 21306), (177, 21393),

Gene: Thing3\_29 Start: 23229, Stop: 23663, Start Num: 61

Candidate Starts for Thing3\_29:

(40, 23199), (Start: 61 @23229 has 86 MA's), (92, 23313), (109, 23388), (120, 23412), (136, 23490), (142, 23511), (169, 23583), (180, 23634),

Gene: Thonko\_24 Start: 17161, Stop: 17574, Start Num: 54

Candidate Starts for Thonko\_24:

(9, 16762), (11, 16798), (21, 17026), (Start: 54 @17161 has 23 MA's), (Start: 96 @17281 has 1 MA's), (97, 17287), (100, 17311), (102, 17314), (128, 17392), (158, 17485),

Gene: Thora\_25 Start: 18685, Stop: 19107, Start Num: 47

Candidate Starts for Thora\_25:

(30, 18619), (Start: 47 @18685 has 263 MA's), (Start: 95 @18808 has 1 MA's), (Start: 96 @18814 has 1 MA's), (97, 18820), (117, 18883), (128, 18925), (153, 19003), (166, 19051), (172, 19075), (176, 19093), (177, 19099),

Gene: ThreeOh3D2\_25 Start: 18684, Stop: 19106, Start Num: 47

Candidate Starts for ThreeOh3D2\_25:

(30, 18618), (Start: 47 @18684 has 263 MA's), (Start: 95 @18807 has 1 MA's), (Start: 96 @18813 has 1 MA's), (97, 18819), (117, 18882), (128, 18924), (153, 19002), (166, 19050), (172, 19074), (176, 19092), (177, 19098),

Gene: Tiamoceli\_28 Start: 20458, Stop: 20889, Start Num: 61

Candidate Starts for Tiamoceli\_28:

(20, 20290), (Start: 61 @20458 has 86 MA's), (92, 20542), (109, 20617), (141, 20737), (149, 20752), (169, 20812), (171, 20821), (179, 20860), (180, 20863),

Gene: TillyBobJoe\_26 Start: 17354, Stop: 17797, Start Num: 61

Candidate Starts for TillyBobJoe\_26:

(Start: 61 @17354 has 86 MA's), (136, 17615), (180, 17771),

Gene: Timmi\_24 Start: 18395, Stop: 18817, Start Num: 47

Candidate Starts for Timmi\_24:

(30, 18329), (Start: 47 @18395 has 263 MA's), (Start: 95 @18518 has 1 MA's), (Start: 96 @18524 has 1 MA's), (97, 18530), (117, 18593), (128, 18635), (153, 18713), (166, 18761), (172, 18785), (176, 18803), (177, 18809),

Gene: Tinciduntolum\_28 Start: 20953, Stop: 21381, Start Num: 47

Candidate Starts for Tinciduntolum\_28:

(37, 20926), (Start: 47 @20953 has 263 MA's), (57, 20968), (Start: 96 @21085 has 1 MA's), (97, 21091), (102, 21118), (110, 21139), (117, 21157), (153, 21277), (154, 21283), (171, 21346), (177, 21373),

Gene: Tissue\_33 Start: 22386, Stop: 22790, Start Num: 47

Candidate Starts for Tissue\_33:

(Start: 47 @22386 has 263 MA's), (Start: 56 @22398 has 42 MA's), (123, 22596), (128, 22617), (137, 22662), (140, 22671), (177, 22776), (179, 22785),

Gene: Togo\_26 Start: 17570, Stop: 18013, Start Num: 61

Candidate Starts for Togo\_26:

(Start: 61 @17570 has 86 MA's), (136, 17831), (180, 17987),

Gene: TomBombadil\_25 Start: 18680, Stop: 19102, Start Num: 47

Candidate Starts for TomBombadil\_25:

(30, 18614), (Start: 47 @18680 has 263 MA's), (Start: 95 @18803 has 1 MA's), (Start: 96 @18809 has 1 MA's), (97, 18815), (117, 18878), (128, 18920), (153, 18998), (166, 19046), (172, 19070), (176, 19088), (177, 19094),

Gene: Tomlarah\_25 Start: 18670, Stop: 19092, Start Num: 47

Candidate Starts for Tomlarah\_25:

(30, 18604), (Start: 47 @18670 has 263 MA's), (Start: 95 @18793 has 1 MA's), (Start: 96 @18799 has 1 MA's), (97, 18805), (117, 18868), (128, 18910), (153, 18988), (166, 19036), (172, 19060), (176, 19078), (177, 19084),

Gene: Toni\_24 Start: 18379, Stop: 18801, Start Num: 47

Candidate Starts for Toni\_24:

(30, 18313), (Start: 47 @18379 has 263 MA's), (Start: 95 @18502 has 1 MA's), (Start: 96 @18508 has 1 MA's), (97, 18514), (117, 18577), (128, 18619), (153, 18697), (166, 18745), (172, 18769), (176, 18787), (177, 18793),

Gene: Tonitrus\_41 Start: 27403, Stop: 27783, Start Num: 72

Candidate Starts for Tonitrus\_41:

(Start: 50 @27346 has 17 MA's), (72, 27403), (87, 27433), (97, 27484), (110, 27529), (111, 27532), (117, 27547), (121, 27559), (139, 27637), (152, 27667), (153, 27670), (160, 27691),

Gene: Tooj\_25 Start: 18681, Stop: 19103, Start Num: 47

Candidate Starts for Tooj\_25:

(30, 18615), (Start: 47 @18681 has 263 MA's), (Start: 95 @18804 has 1 MA's), (Start: 96 @18810 has 1 MA's), (97, 18816), (117, 18879), (128, 18921), (153, 18999), (166, 19047), (172, 19071), (176, 19089), (177, 19095),

Gene: Tres\_27 Start: 20834, Stop: 21262, Start Num: 47

Candidate Starts for Tres\_27:

(37, 20807), (Start: 47 @20834 has 263 MA's), (57, 20849), (Start: 96 @20966 has 1 MA's), (97, 20972), (102, 20999), (110, 21020), (117, 21038), (153, 21158), (154, 21164), (171, 21227), (177, 21254),

Gene: True\_24 Start: 18383, Stop: 18805, Start Num: 47

Candidate Starts for True\_24:

(30, 18317), (Start: 47 @18383 has 263 MA's), (Start: 95 @18506 has 1 MA's), (Start: 96 @18512 has 1 MA's), (97, 18518), (117, 18581), (128, 18623), (153, 18701), (166, 18749), (172, 18773), (176, 18791), (177, 18797),

Gene: Trypo\_25 Start: 18672, Stop: 19094, Start Num: 46

Candidate Starts for Trypo\_25:

(Start: 46 @18672 has 52 MA's), (Start: 95 @18795 has 1 MA's), (Start: 96 @18801 has 1 MA's), (97, 18807), (117, 18870), (128, 18912), (153, 18990), (166, 19038), (172, 19062), (176, 19080), (177, 19086),

Gene: TurkishDelight\_25 Start: 21435, Stop: 21812, Start Num: 75

Candidate Starts for TurkishDelight\_25:

(23, 21273), (38, 21360), (63, 21411), (Start: 75 @21435 has 4 MA's), (77, 21441), (82, 21447), (85, 21453), (101, 21534), (117, 21570), (121, 21582), (124, 21594), (133, 21648), (164, 21735), (167, 21747), (175, 21783),

Gene: Twister6\_28 Start: 17997, Stop: 18440, Start Num: 61  
Candidate Starts for Twister6\_28:  
(Start: 61 @17997 has 86 MA's), (136, 18258), (180, 18414),

Gene: Twonlo\_25 Start: 19076, Stop: 19507, Start Num: 61  
Candidate Starts for Twonlo\_25:  
(Start: 61 @19076 has 86 MA's), (92, 19160), (109, 19235), (141, 19355), (149, 19370), (169, 19430), (171, 19439), (179, 19478), (180, 19481),

Gene: Tycho\_29 Start: 21827, Stop: 22261, Start Num: 61  
Candidate Starts for Tycho\_29:  
(Start: 55 @21818 has 8 MA's), (Start: 61 @21827 has 86 MA's), (92, 21911), (109, 21986), (136, 22088), (142, 22109), (165, 22166), (169, 22181), (180, 22232),

Gene: Tydolla\_26 Start: 20101, Stop: 20514, Start Num: 56  
Candidate Starts for Tydolla\_26:  
(Start: 56 @20101 has 42 MA's), (Start: 96 @20221 has 1 MA's), (97, 20227), (110, 20275), (132, 20359), (171, 20485),

Gene: TyrionL\_24 Start: 18236, Stop: 18658, Start Num: 46  
Candidate Starts for TyrionL\_24:  
(Start: 46 @18236 has 52 MA's), (Start: 95 @18359 has 1 MA's), (Start: 96 @18365 has 1 MA's), (97, 18371), (117, 18434), (128, 18476), (153, 18554), (166, 18602), (172, 18626), (176, 18644), (177, 18650),

Gene: UAch1\_25 Start: 18692, Stop: 19114, Start Num: 47  
Candidate Starts for UAch1\_25:  
(30, 18626), (Start: 47 @18692 has 263 MA's), (Start: 95 @18815 has 1 MA's), (Start: 96 @18821 has 1 MA's), (97, 18827), (117, 18890), (128, 18932), (140, 18983), (153, 19010), (166, 19058), (172, 19082), (176, 19100), (177, 19106),

Gene: UncleHowie\_25 Start: 18382, Stop: 18804, Start Num: 47  
Candidate Starts for UncleHowie\_25:  
(30, 18316), (Start: 47 @18382 has 263 MA's), (Start: 95 @18505 has 1 MA's), (Start: 96 @18511 has 1 MA's), (97, 18517), (117, 18580), (128, 18622), (153, 18700), (166, 18748), (172, 18772), (176, 18790), (177, 18796),

Gene: Usavi\_25 Start: 18683, Stop: 19105, Start Num: 47  
Candidate Starts for Usavi\_25:  
(30, 18617), (Start: 47 @18683 has 263 MA's), (Start: 95 @18806 has 1 MA's), (Start: 96 @18812 has 1 MA's), (97, 18818), (117, 18881), (128, 18923), (140, 18974), (153, 19001), (166, 19049), (172, 19073), (176, 19091), (177, 19097),

Gene: Vaishali24\_24 Start: 18341, Stop: 18763, Start Num: 46  
Candidate Starts for Vaishali24\_24:  
(Start: 46 @18341 has 52 MA's), (Start: 95 @18464 has 1 MA's), (Start: 96 @18470 has 1 MA's), (97, 18476), (117, 18539), (128, 18581), (153, 18659), (166, 18707), (172, 18731), (176, 18749), (177, 18755),



Gene: Valary\_29 Start: 18503, Stop: 18946, Start Num: 61  
Candidate Starts for Valary\_29:  
(Start: 61 @18503 has 86 MA's), (136, 18764), (180, 18920),

Gene: Valjean\_25 Start: 18675, Stop: 19097, Start Num: 47  
Candidate Starts for Valjean\_25:  
(30, 18609), (Start: 47 @18675 has 263 MA's), (Start: 95 @18798 has 1 MA's), (Start: 96 @18804 has 1 MA's), (97, 18810), (117, 18873), (128, 18915), (153, 18993), (166, 19041), (172, 19065), (176, 19083), (177, 19089),

Gene: VanDeWege\_29 Start: 18378, Stop: 18821, Start Num: 61  
Candidate Starts for VanDeWege\_29:  
(Start: 61 @18378 has 86 MA's), (136, 18639), (180, 18795),

Gene: Vaticameos\_25 Start: 18373, Stop: 18795, Start Num: 47  
Candidate Starts for Vaticameos\_25:  
(30, 18307), (Start: 47 @18373 has 263 MA's), (Start: 95 @18496 has 1 MA's), (Start: 96 @18502 has 1 MA's), (97, 18508), (117, 18571), (128, 18613), (153, 18691), (166, 18739), (172, 18763), (176, 18781), (177, 18787),

Gene: Veritas\_24 Start: 18242, Stop: 18664, Start Num: 46  
Candidate Starts for Veritas\_24:  
(Start: 46 @18242 has 52 MA's), (81, 18314), (Start: 95 @18365 has 1 MA's), (Start: 96 @18371 has 1 MA's), (97, 18377), (117, 18440), (128, 18482), (153, 18560), (166, 18608), (172, 18632), (176, 18650), (177, 18656),

Gene: Verity\_29 Start: 23097, Stop: 23528, Start Num: 61  
Candidate Starts for Verity\_29:  
(Start: 43 @23070 has 2 MA's), (Start: 61 @23097 has 86 MA's), (92, 23181), (97, 23211), (98, 23226), (109, 23256), (118, 23277), (136, 23358), (137, 23364), (149, 23391), (165, 23436), (169, 23451), (179, 23499), (180, 23502),

Gene: ViaConlectus\_30 Start: 21588, Stop: 22019, Start Num: 61  
Candidate Starts for ViaConlectus\_30:  
(33, 21528), (Start: 43 @21561 has 2 MA's), (Start: 61 @21588 has 86 MA's), (98, 21717), (109, 21747), (136, 21849), (137, 21855), (142, 21870), (165, 21927), (169, 21942), (179, 21990), (180, 21993),

Gene: Viceroy\_32 Start: 21635, Stop: 22048, Start Num: 47  
Candidate Starts for Viceroy\_32:  
(31, 21578), (Start: 47 @21635 has 263 MA's), (65, 21671), (102, 21794), (135, 21911), (140, 21926),

Gene: Vincenzo\_24 Start: 20089, Stop: 20502, Start Num: 54  
Candidate Starts for Vincenzo\_24:  
(35, 20038), (Start: 54 @20089 has 23 MA's), (Start: 96 @20209 has 1 MA's), (97, 20215), (121, 20290), (128, 20320), (152, 20395), (158, 20413), (177, 20494),

Gene: VioletZ\_23 Start: 19392, Stop: 19805, Start Num: 54  
Candidate Starts for VioletZ\_23:  
(Start: 54 @19392 has 23 MA's), (Start: 95 @19506 has 1 MA's), (Start: 96 @19512 has 1 MA's), (97, 19518), (105, 19554), (121, 19593), (124, 19605), (128, 19623), (171, 19770), (177, 19797),

Gene: Virapocalypse\_25 Start: 18666, Stop: 19088, Start Num: 47

Candidate Starts for Virapocalypse\_25:

(30, 18600), (Start: 47 @18666 has 263 MA's), (Start: 95 @18789 has 1 MA's), (Start: 96 @18795 has 1 MA's), (97, 18801), (117, 18864), (128, 18906), (153, 18984), (166, 19032), (172, 19056), (176, 19074), (177, 19080),

Gene: Virgeve\_24 Start: 18408, Stop: 18830, Start Num: 46

Candidate Starts for Virgeve\_24:

(Start: 46 @18408 has 52 MA's), (81, 18480), (Start: 95 @18531 has 1 MA's), (Start: 96 @18537 has 1 MA's), (97, 18543), (117, 18606), (128, 18648), (153, 18726), (166, 18774), (172, 18798), (176, 18816), (177, 18822),

Gene: Vista\_25 Start: 18680, Stop: 19102, Start Num: 47

Candidate Starts for Vista\_25:

(30, 18614), (Start: 47 @18680 has 263 MA's), (Start: 95 @18803 has 1 MA's), (Start: 96 @18809 has 1 MA's), (97, 18815), (117, 18878), (128, 18920), (140, 18971), (153, 18998), (166, 19046), (172, 19070), (176, 19088), (177, 19094),

Gene: Vivaldi\_25 Start: 18710, Stop: 19132, Start Num: 47

Candidate Starts for Vivaldi\_25:

(30, 18644), (Start: 47 @18710 has 263 MA's), (Start: 95 @18833 has 1 MA's), (Start: 96 @18839 has 1 MA's), (97, 18845), (117, 18908), (128, 18950), (153, 19028), (166, 19076), (172, 19100), (176, 19118), (177, 19124),

Gene: Vivi2\_32 Start: 23909, Stop: 24343, Start Num: 61

Candidate Starts for Vivi2\_32:

(40, 23879), (Start: 61 @23909 has 86 MA's), (92, 23993), (109, 24068), (120, 24092), (136, 24170), (142, 24191), (169, 24263), (180, 24314),

Gene: Vortex\_25 Start: 18390, Stop: 18812, Start Num: 47

Candidate Starts for Vortex\_25:

(30, 18324), (Start: 47 @18390 has 263 MA's), (Start: 95 @18513 has 1 MA's), (Start: 96 @18519 has 1 MA's), (97, 18525), (117, 18588), (128, 18630), (153, 18708), (166, 18756), (172, 18780), (176, 18798), (177, 18804),

Gene: Waleliano\_23 Start: 19331, Stop: 19744, Start Num: 54

Candidate Starts for Waleliano\_23:

(Start: 54 @19331 has 23 MA's), (Start: 95 @19445 has 1 MA's), (Start: 96 @19451 has 1 MA's), (97, 19457), (105, 19493), (121, 19532), (124, 19544), (128, 19562), (153, 19640), (171, 19709), (172, 19712), (177, 19736),

Gene: Wallhey\_24 Start: 18240, Stop: 18662, Start Num: 46

Candidate Starts for Wallhey\_24:

(Start: 46 @18240 has 52 MA's), (Start: 95 @18363 has 1 MA's), (Start: 96 @18369 has 1 MA's), (97, 18375), (117, 18438), (128, 18480), (153, 18558), (166, 18606), (172, 18630), (176, 18648), (177, 18654),

Gene: Waterdiva\_25 Start: 18675, Stop: 19097, Start Num: 47

Candidate Starts for Waterdiva\_25:

(30, 18609), (Start: 47 @18675 has 263 MA's), (Start: 95 @18798 has 1 MA's), (Start: 96 @18804 has 1 MA's), (97, 18810), (117, 18873), (128, 18915), (153, 18993), (166, 19041), (172, 19065), (176, 19083), (177, 19089),

Gene: Wayne3\_34 Start: 22632, Stop: 23036, Start Num: 47

Candidate Starts for Wayne3\_34:

(31, 22575), (Start: 47 @22632 has 263 MA's), (65, 22668), (123, 22842), (128, 22863), (137, 22908), (140, 22917), (177, 23022), (179, 23031),

Gene: Weher20\_25 Start: 18668, Stop: 19090, Start Num: 46

Candidate Starts for Weher20\_25:

(Start: 46 @18668 has 52 MA's), (Start: 95 @18791 has 1 MA's), (Start: 96 @18797 has 1 MA's), (97, 18803), (117, 18866), (128, 18908), (153, 18986), (166, 19034), (172, 19058), (176, 19076), (177, 19082),

Gene: West99\_27 Start: 20954, Stop: 21382, Start Num: 47

Candidate Starts for West99\_27:

(37, 20927), (Start: 47 @20954 has 263 MA's), (57, 20969), (Start: 96 @21086 has 1 MA's), (97, 21092), (102, 21119), (110, 21140), (117, 21158), (153, 21278), (154, 21284), (171, 21347), (177, 21374),

Gene: Wheelie\_32 Start: 21950, Stop: 22354, Start Num: 47

Candidate Starts for Wheelie\_32:

(31, 21893), (Start: 47 @21950 has 263 MA's), (65, 21986), (123, 22160), (128, 22181), (137, 22226), (140, 22235), (177, 22340), (179, 22349),

Gene: Wilca\_32 Start: 20827, Stop: 21222, Start Num: 47

Candidate Starts for Wilca\_32:

(Start: 47 @20827 has 263 MA's), (66, 20869), (70, 20878), (102, 20986), (150, 21127), (173, 21196), (177, 21214),

Gene: Windsor\_24 Start: 18360, Stop: 18782, Start Num: 46

Candidate Starts for Windsor\_24:

(Start: 46 @18360 has 52 MA's), (81, 18432), (Start: 95 @18483 has 1 MA's), (Start: 96 @18489 has 1 MA's), (97, 18495), (117, 18558), (128, 18600), (153, 18678), (166, 18726), (172, 18750), (176, 18768), (177, 18774),

Gene: Wizard\_26 Start: 17704, Stop: 18147, Start Num: 61

Candidate Starts for Wizard\_26:

(Start: 61 @17704 has 86 MA's), (136, 17965), (180, 18121),

Gene: Wooper\_24 Start: 18613, Stop: 19023, Start Num: 50

Candidate Starts for Wooper\_24:

(Start: 50 @18613 has 17 MA's), (103, 18775), (107, 18787), (153, 18931),

Gene: Xavier\_24 Start: 18393, Stop: 18815, Start Num: 47

Candidate Starts for Xavier\_24:

(30, 18327), (Start: 47 @18393 has 263 MA's), (Start: 95 @18516 has 1 MA's), (Start: 96 @18522 has 1 MA's), (97, 18528), (117, 18591), (128, 18633), (153, 18711), (166, 18759), (172, 18783), (176, 18801), (177, 18807),

Gene: Xkcd426\_25 Start: 26648, Stop: 27025, Start Num: 75

Candidate Starts for Xkcd426\_25:

(58, 26606), (Start: 75 @26648 has 4 MA's), (82, 26660), (101, 26747), (125, 26807), (136, 26867), (155, 26918), (167, 26960), (175, 26996),

Gene: YDN12\_20 Start: 19174, Stop: 19551, Start Num: 75

Candidate Starts for YDN12\_20:

(23, 19003), (Start: 75 @19174 has 4 MA's), (82, 19186), (90, 19207), (94, 19228), (101, 19273), (130, 19363), (136, 19393), (155, 19444), (161, 19459), (167, 19486), (168, 19489),

Gene: Yago84\_22 Start: 17516, Stop: 17929, Start Num: 50

Candidate Starts for Yago84\_22:

(Start: 50 @17516 has 17 MA's), (78, 17585), (97, 17651), (110, 17699), (139, 17807), (171, 17906),

Gene: Yahalom\_26 Start: 19376, Stop: 19789, Start Num: 56

Candidate Starts for Yahalom\_26:

(Start: 56 @19376 has 42 MA's), (Start: 96 @19496 has 1 MA's), (97, 19502), (110, 19550), (132, 19634), (171, 19760),

Gene: Yinz\_26 Start: 19402, Stop: 19815, Start Num: 56

Candidate Starts for Yinz\_26:

(Start: 56 @19402 has 42 MA's), (86, 19477), (Start: 96 @19522 has 1 MA's), (97, 19528), (132, 19660), (171, 19786),

Gene: YorkOnyx\_30 Start: 22083, Stop: 22517, Start Num: 53

Candidate Starts for YorkOnyx\_30:

(Start: 53 @22083 has 10 MA's), (83, 22137), (92, 22167), (117, 22257), (118, 22263), (136, 22344), (142, 22365), (169, 22437), (180, 22488),

Gene: Yoshand\_25 Start: 18682, Stop: 19104, Start Num: 47

Candidate Starts for Yoshand\_25:

(30, 18616), (Start: 47 @18682 has 263 MA's), (Start: 95 @18805 has 1 MA's), (Start: 96 @18811 has 1 MA's), (97, 18817), (117, 18880), (128, 18922), (153, 19000), (166, 19048), (172, 19072), (176, 19090), (177, 19096),

Gene: YouGoGlencoco\_25 Start: 18671, Stop: 19093, Start Num: 47

Candidate Starts for YouGoGlencoco\_25:

(30, 18605), (Start: 47 @18671 has 263 MA's), (Start: 95 @18794 has 1 MA's), (Start: 96 @18800 has 1 MA's), (97, 18806), (117, 18869), (128, 18911), (153, 18989), (166, 19037), (172, 19061), (176, 19079), (177, 19085),

Gene: YungMoney\_28 Start: 19070, Stop: 19513, Start Num: 61

Candidate Starts for YungMoney\_28:

(Start: 61 @19070 has 86 MA's), (180, 19487),

Gene: Zagie\_33 Start: 22073, Stop: 22486, Start Num: 47

Candidate Starts for Zagie\_33:

(31, 22016), (Start: 47 @22073 has 263 MA's), (102, 22232), (135, 22349), (140, 22364),

Gene: Zaider\_26 Start: 18907, Stop: 19329, Start Num: 47

Candidate Starts for Zaider\_26:

(30, 18841), (Start: 47 @18907 has 263 MA's), (Start: 95 @19030 has 1 MA's), (Start: 96 @19036 has 1 MA's), (97, 19042), (117, 19105), (128, 19147), (153, 19225), (166, 19273), (172, 19297), (176, 19315), (177, 19321),

Gene: Zelda\_25 Start: 18676, Stop: 19098, Start Num: 47

Candidate Starts for Zelda\_25:

(30, 18610), (Start: 47 @18676 has 263 MA's), (Start: 95 @18799 has 1 MA's), (Start: 96 @18805 has 1 MA's), (97, 18811), (117, 18874), (128, 18916), (153, 18994), (166, 19042), (172, 19066), (176, 19084), (177, 19090),

Gene: Zemanar\_24 Start: 19331, Stop: 19744, Start Num: 54

Candidate Starts for Zemanar\_24:

(Start: 54 @19331 has 23 MA's), (Start: 95 @19445 has 1 MA's), (Start: 96 @19451 has 1 MA's), (97, 19457), (105, 19493), (121, 19532), (124, 19544), (128, 19562), (153, 19640), (171, 19709), (172, 19712), (177, 19736),

Gene: Zenteno07\_29 Start: 19112, Stop: 19528, Start Num: 52

Candidate Starts for Zenteno07\_29:

(Start: 52 @19112 has 15 MA's), (Start: 96 @19235 has 1 MA's), (100, 19265), (102, 19268), (153, 19424), (158, 19439), (177, 19520),

Gene: Zhafia\_36 Start: 22428, Stop: 22832, Start Num: 47

Candidate Starts for Zhafia\_36:

(31, 22371), (Start: 47 @22428 has 263 MA's), (65, 22464), (123, 22638), (128, 22659), (137, 22704), (140, 22713), (177, 22818), (179, 22827),

Gene: Zipp\_29 Start: 22994, Stop: 23425, Start Num: 61

Candidate Starts for Zipp\_29:

(Start: 43 @22967 has 2 MA's), (Start: 61 @22994 has 86 MA's), (97, 23108), (98, 23123), (109, 23153), (118, 23174), (136, 23255), (137, 23261), (149, 23288), (165, 23333), (169, 23348), (179, 23396), (180, 23399),

Gene: Zitch\_31 Start: 20868, Stop: 21299, Start Num: 61

Candidate Starts for Zitch\_31:

(Start: 43 @20841 has 2 MA's), (Start: 61 @20868 has 86 MA's), (92, 20952), (98, 20997), (109, 21027), (118, 21048), (136, 21129), (137, 21135), (142, 21150), (165, 21207), (169, 21222), (179, 21270), (180, 21273),

Gene: Zonia\_25 Start: 18690, Stop: 19112, Start Num: 46

Candidate Starts for Zonia\_25:

(Start: 46 @18690 has 52 MA's), (Start: 95 @18813 has 1 MA's), (Start: 96 @18819 has 1 MA's), (97, 18825), (117, 18888), (128, 18930), (153, 19008), (166, 19056), (172, 19080), (176, 19098), (177, 19104),

Gene: Zooman\_79 Start: 48365, Stop: 48775, Start Num: 44

Candidate Starts for Zooman\_79:

(Start: 44 @48365 has 6 MA's), (58, 48386), (71, 48425), (84, 48452), (88, 48461), (91, 48479), (106, 48551), (152, 48692), (159, 48713),

Gene: phiAsp2\_21 Start: 13673, Stop: 14086, Start Num: 54

Candidate Starts for phiAsp2\_21:

(Start: 54 @13673 has 23 MA's), (74, 13724), (89, 13754), (97, 13796), (106, 13832), (116, 13856), (117, 13859), (121, 13871), (148, 13964), (158, 13994),