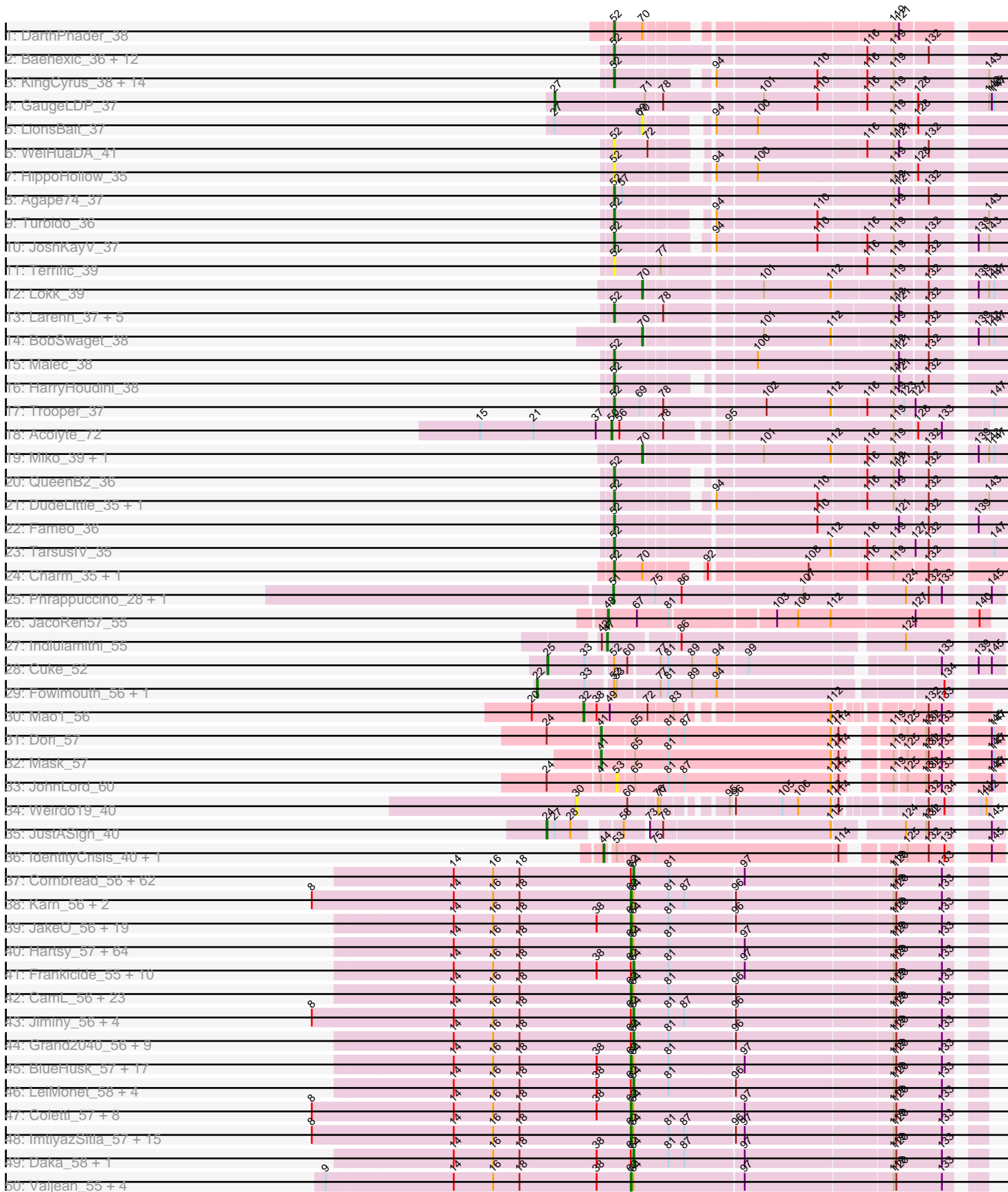
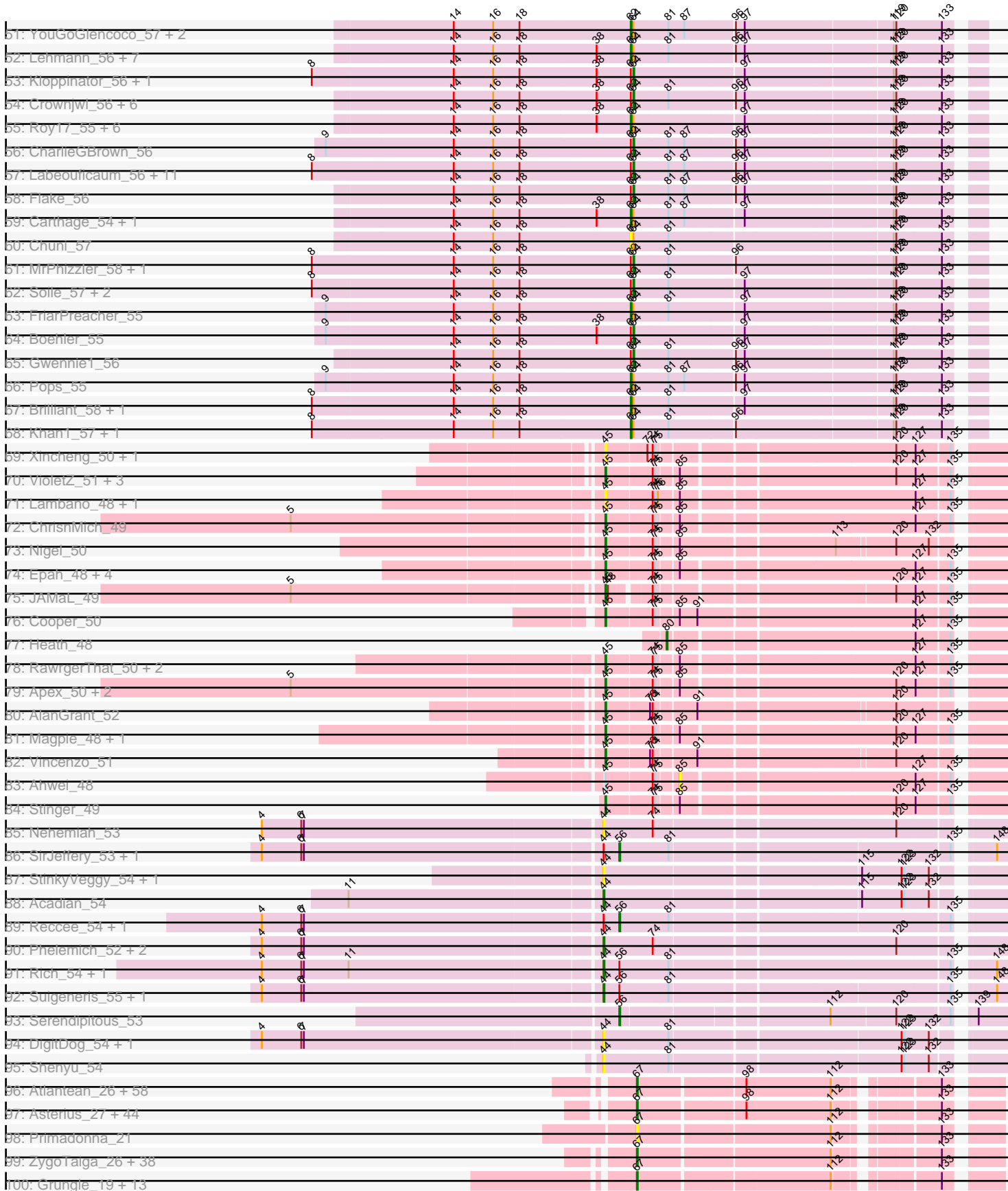


Pham 300908



Pham 300908







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 300908 Report

This analysis was run 06/08/26 on database version 649.

Pham number 300908 has 835 members, 101 are drafts.

Phages represented in each track:

- Track 1 : DarthPhader\_38
- Track 2 : Baehexic\_36, Sknot\_36, MiculUcigas\_36, Centaur\_37, Gratitude\_36, WideWale\_37, Drake55\_38, Piro94\_36, Updawg\_37, Equemioh13\_37, Buggy\_38, Flare16\_36, NaSiaTalie\_36
- Track 3 : KingCyrus\_38, ChipMunk\_38, SnapTap\_36, Crucio\_36, FiringLine\_36, QueenBeesly\_36, EvilGenius\_38, Georgie2\_37, Anselm\_37, Power\_35, SemperFi\_37, AbbyPaige\_37, Whabigail7\_36, SweetiePie\_36, Dalmatian\_37
- Track 4 : GaugeLDP\_37
- Track 5 : LionsBait\_37
- Track 6 : WeiHuaDA\_41
- Track 7 : HippoHollow\_35
- Track 8 : Agape74\_37
- Track 9 : Turbido\_36
- Track 10 : JoshKayV\_37
- Track 11 : Terrific\_39
- Track 12 : Lokk\_39
- Track 13 : Larenn\_37, Dignity\_37, Jerm\_37, Leviathan\_37, LilTurb\_36, Smeagan\_38
- Track 14 : BobSwaget\_38
- Track 15 : Malec\_38
- Track 16 : HarryHoudini\_38
- Track 17 : Trooper\_37
- Track 18 : Acolyte\_72
- Track 19 : Miko\_39, Rachaly\_39
- Track 20 : QueenB2\_36
- Track 21 : DudeLittle\_35, Retro23\_37
- Track 22 : Fameo\_36
- Track 23 : TarsusIV\_35
- Track 24 : Charm\_35, DreamTeam1\_35
- Track 25 : Phrappuccino\_28, Settecandela\_28
- Track 26 : JacoRen57\_55
- Track 27 : Indlulamithi\_55
- Track 28 : Cuke\_52
- Track 29 : Fowlmouth\_56, MrMiyagi\_55
- Track 30 : Mao1\_56
- Track 31 : Dori\_57
- Track 32 : Mask\_57

- Track 33 : JohnLord\_60
- Track 34 : Weirdo19\_40
- Track 35 : JustASigh\_40
- Track 36 : IdentityCrisis\_40, WST1\_41
- Track 37 : Cornbread\_56, IsaacEli\_57, SallyH\_57, ShadowBud\_57, Aonishiki\_57, Dati\_56, Eugenia\_56, Mutante\_56, Placalicious\_56, Badfish\_57, Orwigg\_56, Mesmerelda\_55, Melc17\_56, Andre\_58, Burr\_56, ABU\_57, Magic8\_57, TooFast2Furius\_56, Mulan\_56, Weher20\_56, True\_55, Jesabah\_57, DoesntMatter\_54, Mcshane\_55, Swish\_57, Fang\_57, Nicole21\_57, FugateOSU\_56, Beaglebox\_56, Slatt\_57, Waterdiva\_56, Freya\_54, Skippy\_57, Selr12\_56, Quisquilliae\_57, Ricotta\_55, ProfessorX\_55, Iridessa\_57, Olak\_55, AngelCake\_57, PinheadLarry\_57, Oosterbaan\_56, FluffyNinja\_57, JDog\_55, PhrodoBaggins\_57, Adriana\_57, Pacifista\_55, Orion\_57, Scoot17C\_57, Cher\_56, Cobra\_57, Usavi\_56, Squiggle\_57, Murdoc\_55, HenryJackson\_56, PG1\_57, Orfeu\_54, Nyala\_55, Dice\_55, Chah\_58, Gwilliam\_57, Sigman\_57, Tomlarah\_57
- Track 38 : Karn\_56, Struggle\_56, Doddsville\_56
- Track 39 : JakeO\_56, Apizium\_55, RedMaple\_57, Nova1\_57, Fozzie\_55, Cornobble\_55, TallGrassMM\_56, Surely\_56, Newman\_55, Cannibal\_56, Squid\_56, Taraxa\_57, TomBombadil\_56, Inverness\_55, Telesworld\_54, Aleia\_57, SassyCat97\_55, Veritas\_57, Solosis\_55, OSmaximus\_57
- Track 40 : Hartsy\_57, DoIOn\_60, Piglet\_0056, Altwerkus\_54, Lumine\_57, Fringe\_60, ThreeOh3D2\_57, Kahve\_56, HighStump\_58, HogWash\_56, Legolas\_58, Haimas\_55, Pherdinand\_57, Etaye\_56, Toni\_55, Pipsqueak\_55, Hertubise\_56, Kikipoo\_57, Morty\_57, Serpentine\_0056, Nacho\_0057, Vista\_55, Inchworm\_58, Bishoperium\_56, BlackStallion\_57, Windsor\_56, Phipps\_56, Jillium\_56, Gareth\_56, UncleHowie\_55, BoogieWoogie\_57, Gophee\_57, PallasAthena\_58, FleetyMac\_57, Vaticameos\_53, JacAttac\_57, LeeLot\_56, Happabalu\_56, Longacauda\_57, Mecca\_56, CampRoach\_58, Lego3393\_55, Kimbrough\_57, Craff\_59, Anderson\_57, Matalotodo\_55, Bluephacebaby\_56, Zelda\_56, SirBeauregard\_57, Buckeye\_55, Thora\_56, LasagnaCat\_58, Scrick\_57, Katniss\_57, Chaelin\_57, Megamind20\_57, Plata\_56, PhatCats2014\_57, Harvey\_55, Megatron\_57, NiaNia\_59, Yoshand\_57, SilverBell\_55, DonSanchon\_54, KingTut\_48
- Track 41 : Frankicide\_55, KlimbOn\_55, Mikota\_54, HSavage\_55, MiniBoss\_54, AbsoluteMadLad\_55, RedRaider89\_56, Dingo\_54, Sheila\_54, Colbert\_54, Phamished\_57
- Track 42 : CamL\_56, Mosaic\_55, MRabcd\_55, Sophia\_55, Cosmolli16\_57, Lulwa\_54, Chorkpop\_56, Childish\_56, Riggan\_57, Lasso\_56, Potter\_55, Mana\_55, QueenBeane\_56, Daffy\_56, Puhltonio\_56, FremontTroll\_57, Kwadwo\_55, Samaymay\_56, Haleema\_55, LostAndPhound\_56, Vortex\_56, Banjo\_55, Xavier\_55, Giraffe\_57
- Track 43 : Jiminy\_56, Jiraiya\_56, Duggie\_56, Schueller\_56, Thunderbird\_55
- Track 44 : Grand2040\_56, Timmi\_55, MitKao\_56, Maru\_56, Mesh1\_57, Iridoclysis\_57, Morgushi\_56, Serendipity\_56, Podrick\_54, Held\_56
- Track 45 : BlueHusk\_57, Suffolk\_54, Soto\_54, Gyarad\_0054, Riverton\_55, CheetO\_55, Chipette\_57, Horchata\_55, SDcharge11\_55, GreenChile\_57, KLucky39\_54, OneBrain\_57, Hekos\_53, Basato\_56, OliverWalter\_55, Roliet\_54, Chunky\_54, KingVeVeVe\_54
- Track 46 : LeiMonet\_58, DuchessDung\_57, Hetaeria\_55, UAch1\_55, ElvisPhasley\_57
- Track 47 : Coletti\_57, BlacksBerry\_55, Virgeve\_55, Keitherie\_57, Chute\_56, PhatLouie\_57, Hamish\_55, Charles1\_57, Numberten\_55
- Track 48 : ImtiyazSitla\_57, Trypo\_58, Maskar\_57, Ashraf\_57, Emiris\_58, JangoPhett\_56, PhrankReynolds\_55, Oline\_56, Mag7\_56, Kailash\_56, Wallhey\_56,

Pinkman\_55, MelsMeow\_56, Durga\_58, GeneCoco\_56, BatteryCK\_56

- Track 49 : Daka\_58, DirtJuice\_57
- Track 50 : Valjean\_55, Zaider\_56, Olive\_55, EmpTee\_55, Spartan300\_55
- Track 51 : YouGoGlencoco\_57, LemonSlice\_57, Larson\_58
- Track 52 : Lehmann\_56, Roscoe\_56, Aelin\_55, Manad\_55, Robyn\_55, Tooj\_54, Vaishali24\_54, Triad\_56
- Track 53 : Kloppinator\_56, Swiphy\_57
- Track 54 : Crownjwl\_56, Antonia\_55, Vivaldi\_57, Schadenfreude\_55, Lopsy\_53, AltPhacts\_55, Eremos\_55
- Track 55 : Roy17\_55, Dione\_54, Phareon\_55, LuckyMarjie\_54, Lulumae\_54, Phunky\_55, Nathan\_57
- Track 56 : CharlieGBrown\_56
- Track 57 : Labeouficaum\_56, Derpp\_55, Virapocalypse\_57, Hocus\_56, MichaelPhcott\_56, PhenghisKhan\_56, Zonia\_57, Caspiboi\_56, TyrionL\_56, Kwksand96\_56, Phergie\_57, Phleuron\_56
- Track 58 : Flake\_56
- Track 59 : Carthage\_54, Prickles\_57
- Track 60 : Chuni\_57
- Track 61 : MrPhizzler\_58, DaddyDaniels\_58
- Track 62 : Soile\_57, DelRivs\_55, Simielle\_55
- Track 63 : FriarPreacher\_55
- Track 64 : Boehler\_55
- Track 65 : Gwennie1\_56
- Track 66 : Pops\_55
- Track 67 : Brilliant\_58, Omniscient\_57
- Track 68 : Khan1\_57, Plmatters\_55
- Track 69 : Xincheng\_50, JaguarMi\_51
- Track 70 : VioletZ\_51, Hydro\_49, Austelle\_50, Mudslide\_49
- Track 71 : Lambano\_48, Hally898\_48
- Track 72 : ChrisnMich\_49
- Track 73 : Nigel\_50
- Track 74 : Epah\_48, Nanao\_48, GinPorsche\_49, Antihero\_48, Poster\_48
- Track 75 : JAMaL\_49
- Track 76 : Cooper\_50
- Track 77 : Heath\_48
- Track 78 : RawrgerThat\_50, LittleDigger\_48, Renkei\_48
- Track 79 : Apex\_50, Prince\_49, Lolalove\_50
- Track 80 : AlanGrant\_52
- Track 81 : Magpie\_48, Fanaw\_48
- Track 82 : Vincenzo\_51
- Track 83 : Ahwei\_48
- Track 84 : Stinger\_49
- Track 85 : Nehemiah\_53
- Track 86 : SirJeffery\_53, EastView9101\_53
- Track 87 : StinkyVeggy\_54, KarasumaRum\_54
- Track 88 : Acadian\_54
- Track 89 : Reccee\_54, Rita130\_53
- Track 90 : Phelemich\_52, Mysterious\_52, Reprobate\_53
- Track 91 : Rich\_54, Bae\_55
- Track 92 : Suigeneris\_55, Donny\_55
- Track 93 : Serendipitous\_53
- Track 94 : DigitDog\_54, Nangang\_54
- Track 95 : Shenyu\_54

- Track 96 : Atlantean\_26, LookingGlass\_29, Jemmno\_26, Phlegm\_28, SmallFry\_26, Phusco\_26, InigoMontoya\_27, ValleyTerrace\_26, ShiaLabeouf\_26, Mikro\_24, SilverDipper\_27, Specks\_31, Rahel\_26, Essence\_25, Momo\_25, DTDevon\_27, Guwapp\_26, ArcherS7\_25, Labradorite\_25, Janiyra\_26, Gamgam\_26, Capablanca\_28, Pivoine\_26, Dessert\_24, CindyLou\_26, Littleton\_26, Chomp\_26, BeanWater\_22, Ghost\_26, IkeLoa\_22, Adlitam\_26, Amataga\_26, Patter\_26, Pier\_28, InterFolia\_33, Latch\_26, Fongie\_26, Kamryn\_26, Jezreel\_25, YoungMoneyMata\_26, Matsumoto\_25, Shnickers\_26, Jaygup\_26, Tortoise16\_25, StephanieG\_26, GlutenPhree\_27, LifeSavor\_27, Bangla1971\_25, Ading\_26, Tyke\_28, LolaVinca\_29, DirtMonster\_25, Dandelion\_30, Quasimodo\_26, Spec\_24, Domi\_21, Audrick\_28, Ablatia\_25, Naija\_26
- Track 97 : Asterius\_27, PurduePete\_25, Cleatunium\_22, Burrough\_26, Gabriel\_26, BigCity\_30, EggyFarm\_30, Blubba\_20, Nappy\_27, Naval22\_28, BackyardAgain\_23, Wally\_25, Colt\_19, I3\_28, Bigswole\_32, PharkleMinkus\_31, Morizzled23\_25, Concombre\_25, Caravan\_24, Pio\_29, SoilZilla\_23, LordLeafolot\_32, Zeenon\_28, JustHall\_25, Bxz1\_27, Tainan\_31, DrPhinkDaddy\_26, Bipolarisk\_25, Megamind\_26, Grasshills\_30, Rocha\_24, JayJay\_29, Napoleon13\_25, SrishMeg2525\_25, Spud\_28, Bonray\_26, NuevoMundo\_29, Demodog\_24, Breeniome\_26, JigglyPuff\_26, Melpomini\_25, Cane17\_19, Mangeria\_29, Catera\_24, FrayBell\_32
- Track 98 : Primadonna\_21
- Track 99 : ZygoTaiga\_26, Norm\_26, Izajani\_27, MoMoMixon\_27, YemiJoy2021\_27, Drazdys\_26, SVoro\_25, Darko\_25, Salacia\_28, Bowman\_25, Willis\_26, BananaFence\_27, Pleione\_28, Ava3\_27, Loanshark\_26, NedWong\_27, Shrimp\_26, Iota\_23, Daffodil\_28, Nidhogg\_27, Bread\_27, Erdmann\_27, EasyJones\_25, OrediggerDelux\_25, Rizal\_24, ParkTD\_25, Teardrop\_25, EmToTheThree\_29, Yucca\_26, Ronan\_21, Delilah\_26, StubbySaigey\_25, TinyTim\_26, FudgeTart\_27, Cali\_26, Roots515\_26, Gizmo\_28, Maby2021\_27, MikeLiesIn\_26
- Track 100 : Grungle\_19, BobaPhatt\_23, Halldule\_22, Lethe\_25, Fixie\_23, Bezza\_18, Belieber\_22, Shaqnato\_22, LRRHood\_23, ScottMcG\_26, Lukilu\_19, McGee\_25, Maturis\_26, Blackdragon\_21
- Track 101 : Astraea\_27, Pinkcreek\_18
- Track 102 : Koguma\_22, ChickenPhender\_25, Cactojaque\_23, BadAgartude\_27, QBert\_24, LinStu\_26, Kboogie\_26, Blackbrain\_24, ET08\_21, Rabinovich\_25, Sauce\_27, JPickles\_24, Sprinklers\_26, Babyland\_25, DeejaClivia\_22, JulietS\_21, Turret\_24, Phox\_25, Basquiat\_25, ChaylaJr\_25, Fludd\_25, Yassified\_23, Chargie21\_25, CharlieB\_26, Dietrick\_21, Trinitium\_25, Sebata\_26, EmmaElysia\_24, ErnieJ\_27
- Track 103 : Moiqah\_20, Shelob\_28, Jessibeth14\_25, Alice\_21, McWolfish\_25, Delylah\_27, Khaleesi\_25, Stubby\_24, Moby\_20, Flabslab\_27, Lee7\_25
- Track 104 : Lunareta\_25, Montpel\_25
- Track 105 : Derek\_27, Shifa\_23, RoMag\_21, Pupusa\_33, HyRo\_25, NoodleTree\_25
- Track 106 : FoxtrotP1\_26
- Track 107 : Issimir\_26
- Track 108 : Ewok\_26
- Track 109 : Zalkecks\_28
- Track 110 : Substance289\_23, Ngannou\_24
- Track 111 : Duckfeet\_23
- Track 112 : Jedediah\_26
- Track 113 : Prager\_56, Giuseppe\_57, Adjutor\_55, PLOT\_56, SirHarley\_57, Chill\_58, Erk16\_55, PBI1\_53, WaldoWhy\_58, KandZ\_55, Butterscotch\_55, Delton\_57, Penelope2018\_56, Visconti\_57, Troll4\_56, BigMama\_54, SuperheroCarly\_56, Gumball\_55, Helpful\_59, Thoth\_56, Mopey\_57, Nova\_55
- Track 114 : Phreeze\_70, Beckerton\_70, Oaker\_71, Thumb\_72, BobtimousPrime\_74

- Track 115 : Damien\_71
- Track 116 : Cborch11\_73, Konstantine\_75, Megatron06\_72
- Track 117 : Puissant\_68
- Track 118 : Stuck\_56, Bluvara\_47
- Track 119 : Sbash\_50
- Track 120 : MarkPheW\_75
- Track 121 : BoostSeason\_40
- Track 122 : TM4\_93, Mufasa\_40
- Track 123 : DismalStressor\_39, Marcoliusprime\_39, DismalFunk\_39
- Track 124 : Doughnut\_40
- Track 125 : Findley\_39, Strobilo\_39
- Track 126 : Milly\_39
- Track 127 : ZoeJ\_39
- Track 128 : Pixie\_74, TBond007\_71
- Track 129 : ShedlockHolmes\_77
- Track 130 : Keshu\_77
- Track 131 : Pharb\_73
- Track 132 : MacnCheese\_77
- Track 133 : Hurricane\_75
- Track 134 : Lea83\_75
- Track 135 : November\_71
- Track 136 : Applecrisp\_71, Ellie\_70
- Track 137 : Sunflower1121\_79
- Track 138 : Marshawn\_72
- Track 139 : SirPhilip\_73
- Track 140 : Shadow1\_78
- Track 141 : Tigress9\_78, Krueger\_78
- Track 142 : Ximenita\_79, Syra333\_77
- Track 143 : Amohndition\_72, Hammy\_72, DarthP\_72
- Track 144 : TClif\_75
- Track 145 : Ekdilam\_69
- Track 146 : Aminay\_80
- Track 147 : Phloss\_40, Tortoise12\_41, Pipsqueaks\_42, Smurph\_42, Carcharodon\_42, Melville\_45, Jamie19\_40, Parmesanjohn\_42, SpongeBob\_40, Gex\_42, Fulbright\_41, Magsby\_42, Scitech\_39, Xerxes\_42, Tapioca\_44, Panchino\_39, Andies\_40, Duplicity\_42, Snekmaggon\_40, Schnauzer\_43, Tessdabest\_43, Phrann\_44, Chewbacca\_44
- Track 148 : Shweta\_40
- Track 149 : Silvafighter\_43
- Track 150 : Winget\_76, Blessica\_76, Ryadel\_79, MadKillah\_77, Bora\_73, SchoolBus\_75, KingPhillip3\_74, JangDynasty\_75, YoyoKar\_73, Vorrps\_76, Shida\_75, TelAviv\_72, Idergollasper\_75, Zebo\_75, FoulBall\_76, Schuy\_77, Imara\_74, Krili\_75, Murai\_76, Vagabond\_76, Mori\_76, NiebruSaylor\_75, Wogge42\_75, Catdawg\_75, Alkhayr\_76, Familton\_76
- Track 151 : Zakhe101\_75, YungJamal\_80, Smooch\_78, Wildflower\_76
- Track 152 : Firecracker\_77, Corndog\_78, Dylan\_76, Ashwin\_77
- Track 153 : Ein37\_43, Webster2\_43, BloominB\_43
- Track 154 : Hadrien\_43, Kinbote\_43, Ubuntu\_43, Dewey\_41, Hail\_41, Luke\_43, Luna22\_41, Amymech\_43, LilHazelNut\_43, OBUpride\_43, Giles\_41, Forge\_41, Evanesce\_42, HH92\_42
- Track 155 : Daegal\_45, Gancho\_42
- Track 156 : DeepSoil15\_43, Wishmaker\_41
- Track 157 : Gravallia\_42

- Track 158 : NovoPizza\_44
- Track 159 : Amochick\_43
- Track 160 : Yelo\_55
- Track 161 : Papyrus\_56
- Track 162 : MontyDev\_56, Nilo\_57, Riparian\_57, Zenon\_56, Send513\_56
- Track 163 : Weiss13\_55
- Track 164 : Candle\_55
- Track 165 : Rope\_56
- Track 166 : Ibrahim\_40, ZenTime222\_39, Nairb\_39, RonRayGun\_40
- Track 167 : Nette\_41, Mendokysej\_38
- Track 168 : Bernal13\_40
- Track 169 : D12\_43, Megabear\_44, Taptic\_44, Cepens\_44, Argie\_45, PR\_44
- Track 170 : Jeon\_44, GodPhather\_45
- Track 171 : Hilltopfarm\_107, AuntGwenStacy\_104, Faiyaz\_105, Typha\_103

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

The start number called the most often in the published annotations is 67, it was called in 189 of the 734 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_25, Ading\_26, Adlitam\_26, Alice\_21, Amataga\_26, ArcherS7\_25, Asterius\_27, Astraea\_27, Atlantean\_26, Audrick\_28, Ava3\_27, Babyland\_25, BackyardAgain\_23, BadAgartude\_27, BananaFence\_27, Bangla1971\_25, Basquiat\_25, BeanWater\_22, Beckerton\_70, Belieber\_22, Bezza\_18, BigCity\_30, Bigswole\_32, Bipolarisk\_25, Blackbrain\_24, Blackdragon\_21, Blubba\_20, BobaPhatt\_23, BobtimousPrime\_74, Bonray\_26, Bowman\_25, Bread\_27, Breeniome\_26, Burrough\_26, Bxz1\_27, Cactojaque\_23, Cali\_26, Cane17\_19, Capablanca\_28, Caravan\_24, Catera\_24, Cborch11\_73, Chargie21\_25, CharlieB\_26, ChaylaJr\_25, ChickenPhender\_25, Chomp\_26, CindyLou\_26, Cleatunium\_22, Colt\_19, Concombre\_25, DTDevon\_27, Daffodil\_28, Damien\_71, Dandelion\_30, Darko\_25, DeejaClivia\_22, Delillah\_26, Delylah\_27, Demodog\_24, Derek\_27, Dessert\_24, Dietrick\_21, DirtMonster\_25, Domi\_21, DrPhinkDaddy\_26, Drazdys\_26, Duckfeet\_23, ET08\_21, EasyJones\_25, EggyFarm\_30, EmToTheThree\_29, EmmaElysia\_24, Erdmann\_27, ErnieJ\_27, Essence\_25, Ewok\_26, Fixie\_23, Flabslab\_27, Fludd\_25, Fongie\_26, FoxtrotP1\_26, FrayBell\_32, FudgeTart\_27, Gabriel\_26, Gamgam\_26, Ghost\_26, Gizmo\_28, GlutenPhree\_27, Grasshills\_30, Grungle\_19, Guwapp\_26, Halldule\_22, HyRo\_25, I3\_28, IkeLoa\_22, InigoMontoya\_27, InterFolia\_33, Iota\_23, Issimir\_26, Izajani\_27, JPickles\_24, Janiyra\_26, JayJay\_29, Jaygup\_26, Jedediah\_26, Jemmno\_26, Jessibeth14\_25, Jezreel\_25, JigglyPuff\_26, JulietS\_21, JustHall\_25, Kamryn\_26, Kboogie\_26, Khaleesi\_25, Koguma\_22, Konstantine\_75, LRRHood\_23, Labradorite\_25, Latch\_26, Lee7\_25, Lethe\_25, LifeSavor\_27, LinStu\_26, Littleton\_26, Loanshark\_26, LolaVinca\_29, LookingGlass\_29, LordLeafolot\_32, Lukilu\_19, Lunareta\_25, Maby2021\_27, Mangeria\_29, Matsumoto\_25, Maturis\_26, McGee\_25, McWolfish\_25, Megamind\_26, Megatron06\_72, Melpomini\_25, MikeLiesIn\_26, Mikro\_24, MoMoMixon\_27, Moby\_20, Moiqah\_20, Momo\_25, Montpel\_25, Morizzled23\_25, Naija\_26, Napoleon13\_25, Nappy\_27, Naval22\_28, NedWong\_27, Ngannou\_24, Nidhogg\_27, NoodleTree\_25, Norm\_26, NuevoMundo\_29, Oaker\_71, OrediggerDelux\_25, ParkTD\_25, Patter\_26, PharkleMinkus\_31, Phlegm\_28,

Phox\_25, Phreeze\_70, Phusco\_26, Pier\_28, Pinkcreek\_18, Pio\_29, Pivoine\_26, Pleione\_28, Primadonna\_21, Puissant\_68, Pupusa\_33, PurduePete\_25, QBert\_24, Quasimodo\_26, Rabinovich\_25, Rahel\_26, Rizal\_24, RoMag\_21, Rocha\_24, Ronan\_21, Roots515\_26, SVoro\_25, Salacia\_28, Sauce\_27, ScottMcG\_26, Sebata\_26, Shaqnato\_22, Shelob\_28, Shialabeouf\_26, Shifa\_23, Shnickers\_26, Shrimp\_26, SilverDipper\_27, SmallFry\_26, SoilZilla\_23, Spec\_24, Specks\_31, Sprinklers\_26, Spud\_28, SrishMeg2525\_25, StephanieG\_26, StubbySaigey\_25, Stubby\_24, Substance289\_23, Tainan\_31, Teardrop\_25, Thumb\_72, TinyTim\_26, Tortoise16\_25, Trinitium\_25, Turret\_24, Tyke\_28, ValleyTerrace\_26, Wally\_25, Willis\_26, Yassified\_23, YemiJoy2021\_27, YoungMoneyMata\_26, Yucca\_26, Zalkecks\_28, Zeenon\_28, ZygoTaiga\_26,

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

- JacoRen57\_55,

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

- ABU\_57, AbbyPaige\_37, AbsoluteMadLad\_55, Acadian\_54, Acolyte\_72, Adjutor\_55, Adriana\_57, Aelin\_55, Agape74\_37, Ahwei\_48, AlanGrant\_52, Aleia\_57, Alkhayr\_76, AltPhacts\_55, Altwerkus\_54, Aminay\_80, Amochick\_43, Amohnton\_72, Amymech\_43, Anderson\_57, Andies\_40, Andre\_58, AngelCake\_57, Anselm\_37, Antihero\_48, Antonia\_55, Aonishiki\_57, Apex\_50, Apizium\_55, Applecrisp\_71, Argie\_45, Ashraf\_57, Ashwin\_77, AuntGwenStacy\_104, Austelle\_50, Badfish\_57, Bae\_55, Baehexic\_36, Banjo\_55, Basato\_56, BatteryCK\_56, Beaglebox\_56, Bernal13\_40, BigMama\_54, Bishoperium\_56, BlackStallion\_57, BlackBerry\_55, Blessica\_76, BloominB\_43, BlueHusk\_57, Bluephacebaby\_56, Bluvara\_47, BobSwaget\_38, Bohler\_55, BoogieWoogie\_57, BoostSeason\_40, Bora\_73, Brilliant\_58, Buckeye\_55, Buggy\_38, Burr\_56, Butterscotch\_55, CamL\_56, CampRoach\_58, Candle\_55, Cannibal\_56, Carcharodon\_42, Carthage\_54, Caspiboi\_56, Catdawg\_75, Centaur\_37, Cepens\_44, Chaelin\_57, Chah\_58, Charles1\_57, CharlieGBrown\_56, Charm\_35, CheetO\_55, Cher\_56, Chewbacca\_44, Childish\_56, Chill\_58, ChipMunk\_38, Chipette\_57, Chorkpop\_56, ChrisnMich\_49, Chuni\_57, Chunky\_54, Chute\_56, Cobra\_57, Colbert\_54, Coletti\_57, Cooper\_50, Cornbread\_56, Corndog\_78, Cornobble\_55, Cosmolli16\_57, Craff\_59, Crownjwl\_56, Crucio\_36, Cuke\_52, D12\_43, DaddyDaniels\_58, Daegal\_45, Daffy\_56, Daka\_58, Dalmatian\_37, DarthP\_72, DarthPhader\_38, Dati\_56, DeepSoil15\_43, DelRivs\_55, Delton\_57, Derpp\_55, Dewey\_41, Dice\_55, DigitDog\_54, Dignity\_37, Dingo\_54, Dione\_54, DirtJuice\_57, DismalFunk\_39, DismalStressor\_39, Doddsville\_56, DoesntMatter\_54, DolOn\_60, DonSancho\_54, Donny\_55, Dori\_57, Doughnut\_40, Drake55\_38, DreamTeam1\_35, DuchessDung\_57, DudeLittle\_35, Duggie\_56, Duplicity\_42, Durga\_58, Dylan\_76, EastView9101\_53, Ein37\_43, Ekdilam\_69, Ellie\_70, ElvisPhasley\_57, Emiris\_58, EmpTee\_55, Epah\_48, Equemioh13\_37, Eremos\_55, Erk16\_55, Etaye\_56, Eugenia\_56, Evanesce\_42, EvilGenius\_38, Faiyaz\_105, Fameo\_36, Familton\_76, Fanaw\_48, Fang\_57, Findley\_39, Firecracker\_77, FiringLine\_36, Flake\_56, Flare16\_36, FleetyMac\_57, FluffyNinja\_57, Forge\_41, FoulBall\_76, Fowlmouth\_56, Fozzie\_55, Frankicide\_55, FremontTroll\_57, Freya\_54, FriarPreacher\_55, Fringe\_60, FugateOSU\_56, Fulbright\_41, Gancho\_42, Gareth\_56, GaugeLDP\_37, GeneCoco\_56, Georgie2\_37, Gex\_42, Giles\_41, GinPorsche\_49, Giraffe\_57, Giuseppe\_57, GodPhather\_45, Gophee\_57, Grand2040\_56, Gratitude\_36, Gravaillia\_42, GreenChile\_57, Gumball\_55, Gwennie1\_56, Gwilliam\_57, Gyarad\_0054, HH92\_42, HSavage\_55, Hadrien\_43, Hail\_41, Haimas\_55, Haleema\_55, Hally898\_48, Hamish\_55, Hammy\_72, Happabalu\_56, HarryHoudini\_38, Hartsy\_57, Harvey\_55, Heath\_48, Hekos\_53, Held\_56, Helpful\_59, HenryJackson\_56, Hertubise\_56, Hetaeria\_55, HighStump\_58,

Hilltopfarm\_107, HippoHollow\_35, Hocus\_56, HogWash\_56, Horchata\_55, Hurricane\_75, Hydro\_49, Ibrahim\_40, IdentityCrisis\_40, Idergollasper\_75, Imara\_74, ImtiyazSitla\_57, Inchworm\_58, Indlulamithi\_55, Inverness\_55, Iridessa\_57, Iridoclysis\_57, IsaacEli\_57, JAMaL\_49, JDog\_55, JacAttac\_57, JaguarMi\_51, JakeO\_56, Jamie19\_40, JangDynasty\_75, JangoPhett\_56, Jeon\_44, Jerm\_37, Jesabah\_57, Jillium\_56, Jiminy\_56, Jiraiya\_56, JohnLord\_60, JoshKayV\_37, JustASigh\_40, KLucky39\_54, Kahve\_56, Kailash\_56, KandZ\_55, KarasumaRum\_54, Karn\_56, Katniss\_57, Keitherie\_57, Keshu\_77, Khan1\_57, Kikipoo\_57, Kimbrough\_57, Kinbote\_43, KingCyrus\_38, KingPhillip3\_74, KingTut\_48, KingVeVeVe\_54, KlimbOn\_55, Kloppinator\_56, Krili\_75, Krueger\_78, Kwadwo\_55, Kwksand96\_56, Labeouficaum\_56, Lambano\_48, Larenn\_37, Larson\_58, LasagnaCat\_58, Lasso\_56, Lea83\_75, LeeLot\_56, Lego3393\_55, Legolas\_58, Lehmann\_56, LeiMonet\_58, LemonSlice\_57, Leviathan\_37, LilHazelNut\_43, LilTurb\_36, LionsBait\_37, LittleDigger\_48, Lokk\_39, Lolalove\_50, Longacauda\_57, Lopsy\_53, LostAndPhound\_56, LuckyMarjie\_54, Luke\_43, Lulumae\_54, Lulwa\_54, Lumine\_57, Luna22\_41, MRabcd\_55, MacnCheese\_77, MadKillah\_77, Mag7\_56, Magic8\_57, Magpie\_48, Magsby\_42, Malec\_38, Mana\_55, Manad\_55, Mao1\_56, Marcoliusprime\_39, MarkPhew\_75, Marshawn\_72, Maru\_56, Mask\_57, Maskar\_57, Matalotodo\_55, Mcshane\_55, Mecca\_56, Megabear\_44, Megamind20\_57, Megatron\_57, Melc17\_56, MelsMeow\_56, Melville\_45, Mendokysei\_38, Mesh1\_57, Mesmerelda\_55, MichaelPhcott\_56, MiculUcigas\_36, Miko\_39, Mikota\_54, Milly\_39, MiniBoss\_54, MitKao\_56, MontyDev\_56, Mopey\_57, Morgushi\_56, Mori\_76, Morty\_57, Mosaic\_55, MrMiyagi\_55, MrPhizzler\_58, Mudslide\_49, Mufasa\_40, Mulan\_56, Murai\_76, Murdoc\_55, Mutante\_56, Mysterious\_52, NaSiaTalie\_36, Nacho\_0057, Nairb\_39, Nanao\_48, Nangang\_54, Nathan\_57, Nehemiah\_53, Nette\_41, Newman\_55, NiaNia\_59, Nicole21\_57, NiebruSaylor\_75, Nigel\_50, Nilo\_57, Nova1\_57, Nova\_55, November\_71, NovoPizza\_44, Numberten\_55, Nyala\_55, OBUpride\_43, OSmaximus\_57, Olak\_55, Oline\_56, Olive\_55, OliverWalter\_55, Omniscient\_57, OneBrain\_57, Oosterbaan\_56, Orfeu\_54, Orion\_57, Orwigg\_56, PBI1\_53, PG1\_57, PLOT\_56, PR\_44, Pacifista\_55, PallasAthena\_58, Panchino\_39, Papyrus\_56, Parmesanjohn\_42, Penelope2018\_56, Phamished\_57, Pharb\_73, Phareon\_55, PhatCats2014\_57, PhatLouie\_57, Phelemich\_52, Phenghiskhan\_56, Pherdinand\_57, Phergie\_57, Phipps\_56, Phleuron\_56, Phloss\_40, PhrankReynolds\_55, Phrann\_44, Phrappuccino\_28, PhrodoBaggins\_57, Phunky\_55, Piglet\_0056, PinheadLarry\_57, Pinkman\_55, Pipsqueak\_55, Pipsqueaks\_42, Piro94\_36, Pixie\_74, Placalicious\_56, Plata\_56, Plmatters\_55, Podrick\_54, Pops\_55, Poster\_48, Potter\_55, Power\_35, Prager\_56, Prickles\_57, Prince\_49, ProfessorX\_55, Puhltonio\_56, QueenB2\_36, QueenBeane\_56, QueenBeesly\_36, Quisquiliae\_57, Rachaly\_39, RawrgerThat\_50, Reccee\_54, RedMaple\_57, RedRaider89\_56, Renkei\_48, Reprobate\_53, Retro23\_37, Rich\_54, Ricotta\_55, Riggan\_57, Riparian\_57, Rita130\_53, Riverton\_55, Robyn\_55, Roliet\_54, RonRayGun\_40, Rope\_56, Roscoe\_56, Roy17\_55, Ryadel\_79, SDcharge11\_55, SallyH\_57, Samaymay\_56, SassyCat97\_55, Sbash\_50, Schadenfreude\_55, Schnauzer\_43, SchoolBus\_75, Schueller\_56, Schuy\_77, Scitech\_39, Scoot17C\_57, Scrick\_57, Selr12\_56, SemperFi\_37, Send513\_56, Serendipitous\_53, Serendipity\_56, Serpentine\_0056, Settecandela\_28, Shadow1\_78, ShadowBud\_57, ShedlockHolmes\_77, Sheila\_54, Shenyu\_54, Shida\_75, Shweta\_40, Sigman\_57, Silvafighter\_43, SilverBell\_55, Simielle\_55, SirBeauregard\_57, SirHarley\_57, SirJeffery\_53, SirPhilip\_73, Skippy\_57, Sknot\_36, Slatt\_57, Smeagan\_38, Smooch\_78, Smurph\_42, SnapTap\_36, Snekmaggon\_40, Soile\_57, Solosis\_55, Sophia\_55, Soto\_54, Spartan300\_55, SpongeBob\_40, Squid\_56, Squiggle\_57, Stinger\_49, StinkyVeggy\_54, Strobilo\_39, Struggle\_56, Stuck\_56, Suffolk\_54, Suigeneris\_55, Sunflower1121\_79, SuperheroCarly\_56, Surely\_56, SweetiePie\_36,

Swiphy\_57, Swish\_57, Syra333\_77, TBond007\_71, TClif\_75, TM4\_93, TallGrassMM\_56, Tapioca\_44, Taptic\_44, Taraxa\_57, TarsusIV\_35, TelAviv\_72, Telesworld\_54, Terrific\_39, Tessdabest\_43, Thora\_56, Thoth\_56, ThreeOh3D2\_57, Thunderbird\_55, Tigress9\_78, Timmi\_55, TomBombadil\_56, Tomlarah\_57, Toni\_55, TooFast2Furius\_56, Tooj\_54, Tortoise12\_41, Triad\_56, Troll4\_56, Trooper\_37, True\_55, Trypo\_58, Turbido\_36, Typha\_103, TyrionL\_56, UAch1\_55, Ubuntu\_43, UncleHowie\_55, Updawg\_37, Usavi\_56, Vagabond\_76, Vaishali24\_54, Valjean\_55, Vaticameos\_53, Veritas\_57, Vincenzo\_51, VioletZ\_51, Virapocalypse\_57, Virgeve\_55, Visconti\_57, Vista\_55, Vivaldi\_57, Vorrps\_76, Vortex\_56, WST1\_41, WaldoWhy\_58, Wallhey\_56, Waterdiva\_56, Webster2\_43, Weher20\_56, WeiHuaDA\_41, Weirdo19\_40, Weiss13\_55, Whabigail7\_36, WideWale\_37, Wildflower\_76, Windsor\_56, Winget\_76, Wishmaker\_41, Wogge42\_75, Xavier\_55, Xerxes\_42, Ximenita\_79, Xincheng\_50, Yelo\_55, Yoshand\_57, YouGoGlencoco\_57, YoyoKar\_73, YungJamal\_80, Zaider\_56, Zakhe101\_75, Zebo\_75, Zelda\_56, ZenTime222\_39, Zenon\_56, ZoeJ\_39, Zonia\_57,

### Summary by start number:

#### Start 17:

- Found in 23 of 835 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 4 of 734
- Called 17.4% of time when present
- Phage (with cluster) where this start called: Daegal\_45 (Q), DeepSoil15\_43 (Q), Gancho\_42 (Q), Wishmaker\_41 (Q),

#### Start 19:

- Found in 1 of 835 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 734
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sbash\_50 (I2),

#### Start 20:

- Found in 8 of 835 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 6 of 734
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Candle\_55 (R), MontyDev\_56 (R), Nilo\_57 (R), Riparian\_57 (R), Send513\_56 (R), Zenon\_56 (R),

#### Start 22:

- Found in 2 of 835 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 734
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fowlmouth\_56 (AC), MrMiyagi\_55 (AC),

#### Start 23:

- Found in 1 of 835 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 734
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MacnCheese\_77 (K3),

#### Start 24:

- Found in 5 of 835 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 734

- Called 20.0% of time when present
- Phage (with cluster) where this start called: JustASigh\_40 (AH),

#### Start 25:

- Found in 1 of 835 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 734
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cuke\_52 (AC),

#### Start 27:

- Found in 3 of 835 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 734
- Called 33.3% of time when present
- Phage (with cluster) where this start called: GaugeLDP\_37 (A2),

#### Start 28:

- Found in 10 of 835 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 2 of 734
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Papyrus\_56 (R), Yelo\_55 (R),

#### Start 29:

- Found in 8 of 835 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 4 of 734
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Ashwin\_77 (O), Corndog\_78 (O), Dylan\_76 (O), Firecracker\_77 (O),

#### Start 30:

- Found in 1 of 835 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Weirido19\_40 (AH),

#### Start 32:

- Found in 24 of 835 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 17 of 734
- Called 70.8% of time when present
- Phage (with cluster) where this start called: Amochick\_43 (Q), Amymech\_43 (Q), Dewey\_41 (Q), Evanesce\_42 (Q), Forge\_41 (Q), Giles\_41 (Q), Gravaillia\_42 (Q), HH92\_42 (Q), Hadrien\_43 (Q), Hail\_41 (Q), Kinbote\_43 (Q), LilHazelNut\_43 (Q), Luke\_43 (Q), Luna22\_41 (Q), Mao1\_56 (AD), OBUpride\_43 (Q), Ubuntu\_43 (Q),

#### Start 34:

- Found in 6 of 835 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 6 of 734
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hurricane\_75 (K3), Keshu\_77 (K3), Lea83\_75 (K3), Pixie\_74 (K3), ShedlockHolmes\_77 (K3), TBond007\_71 (K3),

#### Start 36:

- Found in 11 of 835 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 11 of 734

- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoostSeason\_40 (K2), DismalFunk\_39 (K2), DismalStressor\_39 (K2), Doughnut\_40 (K2), Findley\_39 (K2), Marcoliusprime\_39 (K2), Milly\_39 (K2), Mufasa\_40 (K2), Strobilo\_39 (K2), TM4\_93 (K2), ZoeJ\_39 (K2),

#### Start 39:

- Found in 7 of 835 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 5 of 734
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Ibrahim\_40 (T), Mendokysei\_38 (T), Nairb\_39 (T), Nette\_41 (T), RonRayGun\_40 (T), ZenTime222\_39 (T),

#### Start 40:

- Found in 19 of 835 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 18 of 734
- Called 94.7% of time when present
- Phage (with cluster) where this start called: Amohnition\_72 (K6), Applecrisp\_71 (K6), DarthP\_72 (K6), Ekdilam\_69 (K6), Ellie\_70 (K6), Hammy\_72 (K6), Krueger\_78 (K6), MarkPhew\_75 (K1), Marshawn\_72 (K6), November\_71 (K6), Pharb\_73 (K3), Shadow1\_78 (K6), SirPhilip\_73 (K6), Sunflower1121\_79 (K6), Syra333\_77 (K6), TClif\_75 (K6), Tigress9\_78 (K6), Ximenita\_79 (K6),

#### Start 41:

- Found in 14 of 835 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 11 of 734
- Called 92.9% of time when present
- Phage (with cluster) where this start called: Argie\_45 (W), Bluvara\_47 (I3), Cepens\_44 (W), D12\_43 (W), Dori\_57 (AD), GodPhather\_45 (W), Jeon\_44 (W), Mask\_57 (AD), Megabear\_44 (W), NovoPizza\_44 (Q), PR\_44 (W), Stuck\_56 (I2), Taptic\_44 (W),

#### Start 43:

- Found in 10 of 835 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 734
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Weiss13\_55 (R),

#### Start 44:

- Found in 45 of 835 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 32 of 734
- Called 91.1% of time when present
- Phage (with cluster) where this start called: Acadian\_54 (B5), Andies\_40 (N), Bae\_55 (B5), Carcharodon\_42 (N), Chewbacca\_44 (N), DigitDog\_54 (B5), Donny\_55 (B5), Duplicity\_42 (N), Fulbright\_41 (N), Gex\_42 (N), IdentityCrisis\_40 (AJ), Jamie19\_40 (N), KarasumaRum\_54 (B5), Magsby\_42 (N), Melville\_45 (N), Mysterious\_52 (B5), Nangang\_54 (B5), Nehemiah\_53 (B5), Panchino\_39 (N), Parmesanjohn\_42 (N), Phelemich\_52 (B5), Phloss\_40 (N), Phrann\_44 (N), Pipsqueaks\_42 (N), Reprobate\_53 (B5), Rich\_54 (B5), Schnauzer\_43 (N), Scitech\_39 (N), Shenyu\_54 (B5), Shweta\_40 (N), Silvafighter\_43 (N), Smurph\_42 (N), Snekmaggon\_40 (N), SpongeBob\_40 (N), StinkyVeggy\_54 (B5), Suigeneris\_55 (B5), Tapioca\_44 (N), Tessdabest\_43 (N), Tortoise12\_41 (N), WST1\_41 (AJ), Xerxes\_42 (N),

Start 45:

- Found in 39 of 835 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 19 of 734
- Called 71.8% of time when present
- Phage (with cluster) where this start called: AlanGrant\_52 (B4), Antihero\_48 (B4), Apex\_50 (B4), Austelle\_50 (B4), ChrisnMich\_49 (B4), Cooper\_50 (B4), Epah\_48 (B4), Fanaw\_48 (B4), GinPorsche\_49 (B4), Hally898\_48 (B4), Hydro\_49 (B4), JAMaL\_49 (B4), JaguarMi\_51 (B4), Lambano\_48 (B4), LittleDigger\_48 (B4), Lolalove\_50 (B4), Magpie\_48 (B4), Mudslide\_49 (B4), Nanao\_48 (B4), Nigel\_50 (B4), Poster\_48 (B4), Prince\_49 (B4), RawrgerThat\_50 (B4), Renkei\_48 (B4), Stinger\_49 (B4), Vincenzo\_51 (B4), VioletZ\_51 (B4), Xincheng\_50 (B4),

Start 47:

- Found in 1 of 835 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 734
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi\_55 (AC),

Start 48:

- Found in 2 of 835 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 734
- Called 50.0% of time when present
- Phage (with cluster) where this start called: JacoRen57\_55 (AB),

Start 50:

- Found in 25 of 835 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 4 of 734
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Acolyte\_72 (A2), Aminay\_80 (K7), BloominB\_43 (Q), Ein37\_43 (Q), Webster2\_43 (Q),

Start 51:

- Found in 12 of 835 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 3 of 734
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Phrappuccino\_28 (AA), Rope\_56 (R), Settecandela\_28 (AA),

Start 52:

- Found in 64 of 835 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 47 of 734
- Called 79.7% of time when present
- Phage (with cluster) where this start called: AbbyPaige\_37 (A2), Agape74\_37 (A2), Anselm\_37 (A2), Baehexic\_36 (A2), Buggy\_38 (A2), Centaur\_37 (A2), Charm\_35 (A9), ChipMunk\_38 (A2), Crucio\_36 (A2), Dalmatian\_37 (A2), DarthPhader\_38 (A12), Dignity\_37 (A2), Drake55\_38 (A2), DreamTeam1\_35 (A9), DudeLittle\_35 (A2), Equemioh13\_37 (A2), EvilGenius\_38 (A2), Fameo\_36 (A2), FiringLine\_36 (A2), Flare16\_36 (A2), Georgie2\_37 (A2), Gratitude\_36 (A2), HarryHoudini\_38 (A2), HippoHollow\_35 (A2), Jerm\_37 (A2), JoshKayV\_37 (A2), KingCyrus\_38 (A2), Larenn\_37 (A2), Leviathan\_37 (A2), LilTurb\_36 (A2), Malec\_38 (A2), MiculUcigas\_36 (A2), NaSiaTalie\_36 (A2), Piro94\_36 (A2), Power\_35 (A2), QueenB2\_36 (A2), QueenBeesly\_36 (A2), Retro23\_37 (A2), SemperFi\_37 (A2), Sknot\_36 (A2),

Smeagan\_38 (A2), SnapTap\_36 (A2), SweetiePie\_36 (A2), TarsusIV\_35 (A2), Terrific\_39 (A2), Trooper\_37 (A2), Turbido\_36 (A2), Updawg\_37 (A2), WeiHuaDA\_41 (A2), Whabigail7\_36 (A2), WideWale\_37 (A2),

Start 53:

- Found in 12 of 835 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 734
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Bernal13\_40 (T), JohnLord\_60 (AD),

Start 54:

- Found in 4 of 835 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 3 of 734
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AuntGwenStacy\_104 (Y), Faiyaz\_105 (Y), Hilltopfarm\_107 (Y), Typha\_103 (Y),

Start 55:

- Found in 34 of 835 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 26 of 734
- Called 88.2% of time when present
- Phage (with cluster) where this start called: Alkhayr\_76 (O), Blessica\_76 (O), Bora\_73 (O), Catdawg\_75 (O), Familton\_76 (O), FoulBall\_76 (O), Idergollasper\_75 (O), Imara\_74 (O), JangDynasty\_75 (O), KingPhillip3\_74 (O), Krili\_75 (O), MadKillah\_77 (O), Mori\_76 (O), Murai\_76 (O), NiebruSaylor\_75 (O), Ryadel\_79 (O), SchoolBus\_75 (O), Schuy\_77 (O), Shida\_75 (O), Smooch\_78 (O), TelAviv\_72 (O), Vagabond\_76 (O), Vorrps\_76 (O), Wildflower\_76 (O), Winget\_76 (O), Wogge42\_75 (O), YoyoKar\_73 (O), YungJamal\_80 (O), Zakhe101\_75 (O), Zebo\_75 (O),

Start 56:

- Found in 24 of 835 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 3 of 734
- Called 20.8% of time when present
- Phage (with cluster) where this start called: EastView9101\_53 (B5), Reccee\_54 (B5), Rita130\_53 (B5), Serendipitous\_53 (B5), SirJeffery\_53 (B5),

Start 57:

- Found in 23 of 835 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 22 of 734
- Called 95.7% of time when present
- Phage (with cluster) where this start called: Adjutor\_55 (D1), BigMama\_54 (D1), Butterscotch\_55 (D1), Chill\_58 (D1), Delton\_57 (D1), Erk16\_55 (D1), Giuseppe\_57 (D1), Gumball\_55 (D1), Helpful\_59 (D1), KandZ\_55 (D1), Mopey\_57 (D1), Nova\_55 (D1), PBI1\_53 (D1), PLOT\_56 (D1), Penelope2018\_56 (D1), Prager\_56 (D1), SirHarley\_57 (D1), SuperheroCarly\_56 (D1), Thoth\_56 (D1), Troll4\_56 (D1), Visconti\_57 (D1), WaldoWhy\_58 (D1),

Start 62:

- Found in 313 of 835 ( 37.5% ) of genes in pham
- Manual Annotations of this start: 161 of 734
- Called 59.7% of time when present
- Phage (with cluster) where this start called: Aelin\_55 (B1), Aleia\_57 (B1), Altwerkus\_54 (B1), Anderson\_57 (B1), Apizium\_55 (B1), Ashraf\_57 (B1), Banjo\_55

(B1), Basato\_56 (B1), BatteryCK\_56 (B1), Bishoperium\_56 (B1), BlackStallion\_57 (B1), BlacksBerry\_55 (B1), BlueHusk\_57 (B1), Bluephacebaby\_56 (B1), BoogieWoogie\_57 (B1), Brilliant\_58 (B1), Buckeye\_55 (B1), CamL\_56 (B1), CampRoach\_58 (B1), Cannibal\_56 (B1), Carthage\_54 (B1), Chaelin\_57 (B1), Charles1\_57 (B1), CheetO\_55 (B1), Childish\_56 (B1), Chipette\_57 (B1), Chorkpop\_56 (B1), Chuni\_57 (B1), Chunky\_54 (B1), Chute\_56 (B1), Coletti\_57 (B1), Cornobble\_55 (B1), Cosmolli16\_57 (B1), Craff\_59 (B1), Daffy\_56 (B1), Dione\_54 (B1), Doddsville\_56 (B1), DolOn\_60 (B1), DonSanchon\_54 (B1), Durga\_58 (B1), Emiris\_58 (B1), EmpTee\_55 (B1), Etaye\_56 (B1), FleetyMac\_57 (B1), Fozzie\_55 (B1), FremontTroll\_57 (B1), FriarPreacher\_55 (B1), Fringe\_60 (B1), Gareth\_56 (B1), GeneCoco\_56 (B1), Giraffe\_57 (B1), Gophee\_57 (B1), GreenChile\_57 (B1), Gyarad\_0054 (B1), Haimas\_55 (B1), Haleema\_55 (B1), Hamish\_55 (B1), Happabalu\_56 (B1), Hartsy\_57 (B1), Harvey\_55 (B1), Hekos\_53 (B1), Hertubise\_56 (B1), HighStump\_58 (B1), HogWash\_56 (B1), Horchata\_55 (B1), ImtiyazSitla\_57 (B1), Inchworm\_58 (B1), Inverness\_55 (B1), JacAttac\_57 (B1), JakeO\_56 (B1), JangoPhett\_56 (B1), Jillium\_56 (B1), KLucky39\_54 (B1), Kahve\_56 (B1), Kailash\_56 (B1), Karn\_56 (B1), Katniss\_57 (B1), Keitherie\_57 (B1), Khan1\_57 (B1), Kikipoo\_57 (B1), Kimbrough\_57 (B1), KingTut\_48 (B1), KingVeVeVe\_54 (B1), Kwadwo\_55 (B1), Larson\_58 (B1), LasagnaCat\_58 (B1), Lasso\_56 (B1), LeeLot\_56 (B1), Lego3393\_55 (B1), Legolas\_58 (B1), Lehmann\_56 (B1), LemonSlice\_57 (B1), Longacauda\_57 (B1), LostAndPhound\_56 (B1), LuckyMarjie\_54 (B1), Lulumae\_54 (B1), Lulwa\_54 (B1), Lumine\_57 (B1), MRabcd\_55 (B1), Mag7\_56 (B1), Mana\_55 (B1), Manad\_55 (B1), Maskar\_57 (B1), Matalotodo\_55 (B1), Mecca\_56 (B1), Megamind20\_57 (B1), Megatron\_57 (B1), MelsMeow\_56 (B1), Morty\_57 (B1), Mosaic\_55 (B1), Nacho\_0057 (B1), Nathan\_57 (B1), Newman\_55 (B1), NiaNia\_59 (B1), Nova1\_57 (B1), Numberten\_55 (B1), OSmaximus\_57 (B1), Oline\_56 (B1), Olive\_55 (B1), OliverWalter\_55 (B1), Omniscient\_57 (B1), OneBrain\_57 (B1), PallasAthena\_58 (B1), Phareon\_55 (B1), PhatCats2014\_57 (B1), PhatLouie\_57 (B1), Pherdinand\_57 (B1), Phipps\_56 (B1), PhrankReynolds\_55 (B1), Phunky\_55 (B1), Piglet\_0056 (B1), Pinkman\_55 (B1), Pipsqueak\_55 (B1), Plata\_56 (B1), Plmatters\_55 (B1), Pops\_55 (B1), Potter\_55 (B1), Prickles\_57 (B1), Puhltonio\_56 (B1), QueenBeane\_56 (B1), RedMaple\_57 (B1), Riggan\_57 (B1), Riverton\_55 (B1), Robyn\_55 (B1), Roliet\_54 (B1), Roscoe\_56 (B1), Roy17\_55 (B1), SDcharge11\_55 (B1), Samaymay\_56 (B1), SassyCat97\_55 (B1), Scrick\_57 (B1), Serpentine\_0056 (B1), SilverBell\_55 (B1), SirBeauregard\_57 (B1), Solosis\_55 (B1), Sophia\_55 (B1), Soto\_54 (B1), Spartan300\_55 (B1), Squid\_56 (B1), Struggle\_56 (B1), Suffolk\_54 (B1), Surely\_56 (B1), TallGrassMM\_56 (B1), Taraxa\_57 (B1), Telesworld\_54 (B1), Thora\_56 (B1), ThreeOh3D2\_57 (B1), TomBombadil\_56 (B1), Toni\_55 (B1), Tooj\_54 (B1), Triad\_56 (B1), Trypo\_58 (B1), UncleHowie\_55 (B1), Vaishali24\_54 (B1), Valjean\_55 (B1), Vaticameos\_53 (B1), Veritas\_57 (B1), Virgeve\_55 (B1), Vista\_55 (B1), Vortex\_56 (B1), Wallhey\_56 (B1), Windsor\_56 (B1), Xavier\_55 (B1), Yoshand\_57 (B1), YouGoGlencoco\_57 (B1), Zaider\_56 (B1), Zelda\_56 (B1),

Start 64:

- Found in 313 of 835 ( 37.5% ) of genes in pham
- Manual Annotations of this start: 125 of 734
- Called 40.3% of time when present
- Phage (with cluster) where this start called: ABU\_57 (B1), AbsoluteMadLad\_55 (B1), Adriana\_57 (B1), AltPhacts\_55 (B1), Andre\_58 (B1), AngelCake\_57 (B1), Antonia\_55 (B1), Aonishiki\_57 (B1), Badfish\_57 (B1), Beaglebox\_56 (B1), Boehler\_55 (B1), Burr\_56 (B1), Caspiboi\_56 (B1), Chah\_58 (B1), CharlieGBrown\_56 (B1), Cher\_56 (B1), Cobra\_57 (B1), Colbert\_54 (B1), Cornbread\_56 (B1), Crownjwl\_56 (B1), DaddyDaniels\_58 (B1), Daka\_58 (B1), Dati\_56 (B1), DelRivs\_55 (B1), Derpp\_55

(B1), Dice\_55 (B1), Dingo\_54 (B1), DirtJuice\_57 (B1), DoesntMatter\_54 (B1), DuchessDung\_57 (B1), Duggie\_56 (B1), ElvisPhasley\_57 (B1), Eremos\_55 (B1), Eugenia\_56 (B1), Fang\_57 (B1), Flake\_56 (B1), FluffyNinja\_57 (B1), Frankicide\_55 (B1), Freya\_54 (B1), FugateOSU\_56 (B1), Grand2040\_56 (B1), Gwennie1\_56 (B1), Gwilliam\_57 (B1), HSavage\_55 (B1), Held\_56 (B1), HenryJackson\_56 (B1), Hetaeria\_55 (B1), Hocus\_56 (B1), Iridessa\_57 (B1), Iridoclysis\_57 (B1), IsaacEli\_57 (B1), JDog\_55 (B1), Jesabah\_57 (B1), Jiminy\_56 (B1), Jiraiya\_56 (B1), KlimbOn\_55 (B1), Kloppinator\_56 (B1), Kwksand96\_56 (B1), Labeouficaum\_56 (B1), LeiMonet\_58 (B1), Lopsy\_53 (B1), Magic8\_57 (B1), Maru\_56 (B1), Mcshane\_55 (B1), Melc17\_56 (B1), Mesh1\_57 (B1), Mesmerelda\_55 (B1), MichaelPhcott\_56 (B1), Mikota\_54 (B1), MiniBoss\_54 (B1), MitKao\_56 (B1), Morgushi\_56 (B1), MrPhizzler\_58 (B1), Mulan\_56 (B1), Murdoc\_55 (B1), Mutante\_56 (B1), Nicole21\_57 (B1), Nyala\_55 (B1), Olak\_55 (B1), Oosterbaan\_56 (B1), Orfeu\_54 (B1), Orion\_57 (B1), Orwigg\_56 (B1), PG1\_57 (B1), Pacifista\_55 (B1), Phamished\_57 (B1), PhenghisKhan\_56 (B1), Phergie\_57 (B1), Phleuron\_56 (B1), PhrodoBaggins\_57 (B1), PinheadLarry\_57 (B1), Placalicious\_56 (B1), Podrick\_54 (B1), ProfessorX\_55 (B1), Quisquiliae\_57 (B1), RedRaider89\_56 (B1), Ricotta\_55 (B1), SallyH\_57 (B1), Schadenfreude\_55 (B1), Schueller\_56 (B1), Scoot17C\_57 (B1), Selr12\_56 (B1), Serendipity\_56 (B1), ShadowBud\_57 (B1), Sheila\_54 (B1), Sigman\_57 (B1), Simielle\_55 (B1), Skippy\_57 (B1), Slatt\_57 (B1), Soile\_57 (B1), Squiggle\_57 (B1), Swiphy\_57 (B1), Swish\_57 (B1), Thunderbird\_55 (B1), Timmi\_55 (B1), Tomlarah\_57 (B1), TooFast2Furius\_56 (B1), True\_55 (B1), TyrionL\_56 (B1), UAch1\_55 (B1), Usavi\_56 (B1), Virapocalypse\_57 (B1), Vivaldi\_57 (B1), Waterdiva\_56 (B1), Weher20\_56 (B1), Zonia\_57 (B1),

Start 67:

- Found in 227 of 835 ( 27.2% ) of genes in pham
- Manual Annotations of this start: 189 of 734
- Called 99.6% of time when present
- Phage (with cluster) where this start called: Ablatia\_25 (C1), Ading\_26 (C1), Adlitam\_26 (C1), Alice\_21 (C1), Amataga\_26 (C1), ArcherS7\_25 (C1), Asterius\_27 (C1), Astraea\_27 (C1), Atlantean\_26 (C1), Audrick\_28 (C1), Ava3\_27 (C1), Babyland\_25 (C1), BackyardAgain\_23 (C1), BadAgartude\_27 (C1), BananaFence\_27 (C1), Bangla1971\_25 (C1), Basquiat\_25 (C1), BeanWater\_22 (C1), Beckerton\_70 (H1), Belieber\_22 (C1), Bezza\_18 (C1), BigCity\_30 (C1), Bigswole\_32 (C1), Bipolarisk\_25 (C1), Blackbrain\_24 (C1), Blackdragon\_21 (C1), Blubba\_20 (C1), BobaPhatt\_23 (C1), BobtimousPrime\_74 (H1), Bonray\_26 (C1), Bowman\_25 (C1), Bread\_27 (C1), Breeniome\_26 (C1), Burrough\_26 (C1), Bxz1\_27 (C1), Cactojaque\_23 (C1), Cali\_26 (C1), Cane17\_19 (C1), Capablanca\_28 (C1), Caravan\_24 (C1), Catera\_24 (C1), Cborch11\_73 (H1), Chargie21\_25 (C1), CharlieB\_26 (C1), ChaylaJr\_25 (C1), ChickenPhender\_25 (C1), Chomp\_26 (C1), CindyLou\_26 (C1), Cleatunium\_22 (C1), Colt\_19 (C1), Concombre\_25 (C1), DTDevon\_27 (C1), Daffodil\_28 (C1), Damien\_71 (H1), Dandelion\_30 (C1), Darko\_25 (C1), DeejaClivia\_22 (C1), Delilah\_26 (C1), Delylah\_27 (C1), Demodog\_24 (C1), Derek\_27 (C1), Dessert\_24 (C1), Dietrick\_21 (C1), DirtMonster\_25 (C1), Domi\_21 (C1), DrPhinkDaddy\_26 (C1), Drazdys\_26 (C1), Duckfeet\_23 (C1), ET08\_21 (C1), EasyJones\_25 (C1), EggyFarm\_30 (C1), EmToTheThree\_29 (C1), EmmaElysia\_24 (C1), Erdmann\_27 (C1), ErnieJ\_27 (C1), Essence\_25 (C1), Ewok\_26 (C1), Fixie\_23 (C1), Flabslab\_27 (C1), Fludd\_25 (C1), Fongie\_26 (C1), FoxtrotP1\_26 (C1), FrayBell\_32 (C1), FudgeTart\_27 (C1), Gabriel\_26 (C1), Gamgam\_26 (C1), Ghost\_26 (C1), Gizmo\_28 (C1), GlutenPhree\_27 (C1), Grasshills\_30 (C1), Grungle\_19 (C1), Guwapp\_26 (C1), Halldule\_22 (C1), HyRo\_25 (C1), I3\_28 (C1), IkeLoa\_22 (C1), InigoMontoya\_27 (C1), InterFolia\_33 (C1), Iota\_23 (C1), Issimir\_26 (C1), Izajani\_27

(C1), JPickles\_24 (C1), Janiyra\_26 (C1), JayJay\_29 (C1), Jaygup\_26 (C1), Jedediah\_26 (C1), Jemmno\_26 (C1), Jessibeth14\_25 (C1), Jezreel\_25 (C1), JigglyPuff\_26 (C1), JulietS\_21 (C1), JustHall\_25 (C1), Kamryn\_26 (C1), Kboogie\_26 (C1), Khaleesi\_25 (C1), Koguma\_22 (C1), Konstantine\_75 (H1), LRRHood\_23 (C1), Labradorite\_25 (C1), Latch\_26 (C1), Lee7\_25 (C1), Lethe\_25 (C1), LifeSavor\_27 (C1), LinStu\_26 (C1), Littleton\_26 (C1), Loanshark\_26 (C1), LolaVinca\_29 (C1), LookingGlass\_29 (C1), LordLeafolot\_32 (C1), Lukilu\_19 (C1), Lunareta\_25 (C1), Maby2021\_27 (C1), Mangeria\_29 (C1), Matsumoto\_25 (C1), Maturis\_26 (C1), McGee\_25 (C1), McWolfish\_25 (C1), Megamind\_26 (C1), Megatron06\_72 (H1), Melpomini\_25 (C1), MikeLiesIn\_26 (C1), Mikro\_24 (C1), MoMoMixon\_27 (C1), Moby\_20 (C1), Moiqah\_20 (C1), Momo\_25 (C1), Montpel\_25 (C1), Morizzled23\_25 (C1), Naija\_26 (C1), Napoleon13\_25 (C1), Nappy\_27 (C1), Naval22\_28 (C1), NedWong\_27 (C1), Ngannou\_24 (C1), Nidhogg\_27 (C1), NoodleTree\_25 (C1), Norm\_26 (C1), NuevoMundo\_29 (C1), Oaker\_71 (H1), OrediggerDelux\_25 (C1), ParkTD\_25 (C1), Patter\_26 (C1), PharkleMinkus\_31 (C1), Phlegm\_28 (C1), Phox\_25 (C1), Phreeze\_70 (H1), Phusco\_26 (C1), Pier\_28 (C1), Pinkcreek\_18 (C1), Pio\_29 (C1), Pivoine\_26 (C1), Pleione\_28 (C1), Primadonna\_21 (C1), Puissant\_68 (H1), Pupusa\_33 (C1), PurduePete\_25 (C1), QBert\_24 (C1), Quasimodo\_26 (C1), Rabinovich\_25 (C1), Rahel\_26 (C1), Rizal\_24 (C1), RoMag\_21 (C1), Rocha\_24 (C1), Ronan\_21 (C1), Roots515\_26 (C1), SVoro\_25 (C1), Salacia\_28 (C1), Sauce\_27 (C1), ScottMcG\_26 (C1), Sebata\_26 (C1), Shaqnato\_22 (C1), Shelob\_28 (C1), ShiaLabeouf\_26 (C1), Shifa\_23 (C1), Shnickers\_26 (C1), Shrimp\_26 (C1), SilverDipper\_27 (C1), SmallFry\_26 (C1), SoilZilla\_23 (C1), Spec\_24 (C1), Specks\_31 (C1), Sprinklers\_26 (C1), Spud\_28 (C1), SrishMeg2525\_25 (C1), StephanieG\_26 (C1), StubbySaigey\_25 (C1), Stubby\_24 (C1), Substance289\_23 (C1), Tainan\_31 (C1), Teardrop\_25 (C1), Thumb\_72 (H1), TinyTim\_26 (C1), Tortoise16\_25 (C1), Trinitium\_25 (C1), Turret\_24 (C1), Tyke\_28 (C1), ValleyTerrace\_26 (C1), Wally\_25 (C1), Willis\_26 (C1), Yassified\_23 (C1), YemiJoy2021\_27 (C1), YoungMoneyMata\_26 (C1), Yucca\_26 (C1), Zalkecks\_28 (C1), Zeenon\_28 (C1), ZygoTaiga\_26 (C1),

#### Start 70:

- Found in 8 of 835 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 4 of 734
- Called 62.5% of time when present
- Phage (with cluster) where this start called: BobSwaget\_38 (A2), LionsBait\_37 (A2), Lolk\_39 (A2), Miko\_39 (A2), Rachaly\_39 (A2),

#### Start 80:

- Found in 1 of 835 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 734
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Heath\_48 (B4),

#### Start 85:

- Found in 24 of 835 ( 2.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.2% of time when present
- Phage (with cluster) where this start called: Ahwei\_48 (B4),

#### Summary by clusters:

There are 29 clusters represented in this pham: K3, K2, K1, K7, K6, A12, I3, I2, A2, A9, C1, AA, AC, AB, AD, AH, AJ, O, N, Q, R, T, W, Y, H1, B4, B5, B1, D1,

Info for manual annotations of cluster A12:

- Start number 52 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A2:

- Start number 27 was manually annotated 1 time for cluster A2.
- Start number 50 was manually annotated 1 time for cluster A2.
- Start number 52 was manually annotated 44 times for cluster A2.
- Start number 70 was manually annotated 4 times for cluster A2.

Info for manual annotations of cluster A9:

- Start number 52 was manually annotated 2 times for cluster A9.

Info for manual annotations of cluster AA:

- Start number 51 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AB:

- Start number 48 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster AC:

- Start number 22 was manually annotated 2 times for cluster AC.
- Start number 25 was manually annotated 1 time for cluster AC.
- Start number 47 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster AD:

- Start number 32 was manually annotated 1 time for cluster AD.
- Start number 41 was manually annotated 2 times for cluster AD.

Info for manual annotations of cluster AH:

- Start number 24 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster AJ:

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

Info for manual annotations of cluster B1:

- Start number 62 was manually annotated 161 times for cluster B1.
- Start number 64 was manually annotated 125 times for cluster B1.

Info for manual annotations of cluster B4:

- Start number 45 was manually annotated 19 times for cluster B4.
- Start number 80 was manually annotated 1 time for cluster B4.

Info for manual annotations of cluster B5:

- Start number 44 was manually annotated 8 times for cluster B5.
- Start number 56 was manually annotated 3 times for cluster B5.

Info for manual annotations of cluster C1:

- Start number 67 was manually annotated 179 times for cluster C1.

Info for manual annotations of cluster D1:

- Start number 57 was manually annotated 22 times for cluster D1.

Info for manual annotations of cluster H1:

- Start number 67 was manually annotated 10 times for cluster H1.

Info for manual annotations of cluster I2:

- Start number 19 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster K1:

- Start number 40 was manually annotated 1 time for cluster K1.

Info for manual annotations of cluster K2:

- Start number 36 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 23 was manually annotated 1 time for cluster K3.
- Start number 34 was manually annotated 6 times for cluster K3.
- Start number 40 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K6:

- Start number 40 was manually annotated 16 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 50 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster N:

- Start number 44 was manually annotated 23 times for cluster N.

Info for manual annotations of cluster O:

- Start number 29 was manually annotated 4 times for cluster O.
- Start number 55 was manually annotated 26 times for cluster O.

Info for manual annotations of cluster Q:

- Start number 17 was manually annotated 4 times for cluster Q.
- Start number 32 was manually annotated 16 times for cluster Q.
- Start number 41 was manually annotated 1 time for cluster Q.
- Start number 50 was manually annotated 2 times for cluster Q.

Info for manual annotations of cluster R:

- Start number 20 was manually annotated 6 times for cluster R.
- Start number 28 was manually annotated 2 times for cluster R.
- Start number 43 was manually annotated 1 time for cluster R.
- Start number 51 was manually annotated 1 time for cluster R.

Info for manual annotations of cluster T:

- Start number 39 was manually annotated 5 times for cluster T.
- Start number 53 was manually annotated 1 time for cluster T.

Info for manual annotations of cluster W:

- Start number 41 was manually annotated 8 times for cluster W.

Info for manual annotations of cluster Y:

- Start number 54 was manually annotated 3 times for cluster Y.

### **Gene Information:**

Gene: ABU\_57 Start: 48858, Stop: 48490, Start Num: 64

Candidate Starts for ABU\_57:

(14, 49062), (16, 49017), (18, 48987), (Start: 62 @48861 has 161 MA's), (Start: 64 @48858 has 125 MA's), (81, 48819), (97, 48738), (119, 48576), (120, 48573), (133, 48522),

Gene: AbbyPaige\_37 Start: 27571, Stop: 27951, Start Num: 52

Candidate Starts for AbbyPaige\_37:

(Start: 52 @27571 has 47 MA's), (94, 27652), (110, 27760), (116, 27811), (119, 27841), (143, 27928),

Gene: Ablatia\_25 Start: 7873, Stop: 8229, Start Num: 67

Candidate Starts for Ablatia\_25:

(Start: 67 @7873 has 189 MA's), (98, 7987), (112, 8080), (133, 8176),

Gene: AbsoluteMadLad\_55 Start: 48570, Stop: 48202, Start Num: 64

Candidate Starts for AbsoluteMadLad\_55:

(14, 48774), (16, 48729), (18, 48699), (38, 48612), (Start: 62 @48573 has 161 MA's), (Start: 64 @48570 has 125 MA's), (81, 48531), (97, 48450), (119, 48288), (120, 48285), (133, 48234),

Gene: Acadian\_54 Start: 48515, Stop: 48102, Start Num: 44

Candidate Starts for Acadian\_54:

(11, 48794), (Start: 44 @48515 has 32 MA's), (115, 48242), (122, 48197), (123, 48194), (132, 48167),

Gene: Acolyte\_72 Start: 45510, Stop: 45139, Start Num: 50

Candidate Starts for Acolyte\_72:

(15, 45657), (21, 45597), (37, 45528), (Start: 50 @45510 has 4 MA's), (Start: 56 @45501 has 3 MA's), (78, 45459), (95, 45399), (119, 45222), (128, 45198), (133, 45171),

Gene: Ading\_26 Start: 8133, Stop: 8489, Start Num: 67

Candidate Starts for Ading\_26:

(Start: 67 @8133 has 189 MA's), (98, 8247), (112, 8340), (133, 8436),

Gene: Adjutor\_55 Start: 42662, Stop: 43042, Start Num: 57

Candidate Starts for Adjutor\_55:

(Start: 57 @42662 has 22 MA's), (76, 42695), (77, 42698), (78, 42701), (93, 42755), (94, 42758), (111, 42878), (133, 42989), (134, 42992),

Gene: Adlitam\_26 Start: 8150, Stop: 8506, Start Num: 67

Candidate Starts for Adlitam\_26:

(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Adriana\_57 Start: 48855, Stop: 48487, Start Num: 64

Candidate Starts for Adriana\_57:

(14, 49059), (16, 49014), (18, 48984), (Start: 62 @48858 has 161 MA's), (Start: 64 @48855 has 125 MA's), (81, 48816), (97, 48735), (119, 48573), (120, 48570), (133, 48519),

Gene: Aelin\_55 Start: 48137, Stop: 47766, Start Num: 62

Candidate Starts for Aelin\_55:

(14, 48338), (16, 48293), (18, 48263), (38, 48176), (Start: 62 @48137 has 161 MA's), (Start: 64 @48134 has 125 MA's), (81, 48095), (96, 48023), (97, 48014), (119, 47852), (120, 47849), (133, 47798),

Gene: Agape74\_37 Start: 27547, Stop: 27945, Start Num: 52  
Candidate Starts for Agape74\_37:  
(Start: 52 @27547 has 47 MA's), (Start: 57 @27556 has 22 MA's), (119, 27838), (121, 27844), (132, 27874),

Gene: Ahwei\_48 Start: 47074, Stop: 46748, Start Num: 85  
Candidate Starts for Ahwei\_48:  
(Start: 45 @47146 has 19 MA's), (74, 47098), (75, 47095), (85, 47074), (127, 46828), (135, 46792),

Gene: AlanGrant\_52 Start: 48916, Stop: 48518, Start Num: 45  
Candidate Starts for AlanGrant\_52:  
(Start: 45 @48916 has 19 MA's), (73, 48871), (74, 48868), (91, 48826), (120, 48619),

Gene: Aleia\_57 Start: 48463, Stop: 48092, Start Num: 62  
Candidate Starts for Aleia\_57:  
(14, 48664), (16, 48619), (18, 48589), (38, 48502), (Start: 62 @48463 has 161 MA's), (Start: 64 @48460 has 125 MA's), (81, 48421), (96, 48349), (119, 48178), (120, 48175), (133, 48124),

Gene: Alice\_21 Start: 7231, Stop: 7587, Start Num: 67  
Candidate Starts for Alice\_21:  
(Start: 67 @7231 has 189 MA's), (112, 7438), (133, 7534),

Gene: Alkhayr\_76 Start: 47301, Stop: 46924, Start Num: 55  
Candidate Starts for Alkhayr\_76:  
(Start: 55 @47301 has 26 MA's), (82, 47241), (86, 47229), (98, 47166), (112, 47073), (114, 47067), (117, 47022), (130, 46977), (137, 46938), (138, 46935),

Gene: AltPhacts\_55 Start: 47883, Stop: 47515, Start Num: 64  
Candidate Starts for AltPhacts\_55:  
(14, 48087), (16, 48042), (18, 48012), (38, 47925), (Start: 62 @47886 has 161 MA's), (Start: 64 @47883 has 125 MA's), (81, 47844), (96, 47772), (97, 47763), (119, 47601), (120, 47598), (133, 47547),

Gene: Altwerkus\_54 Start: 48025, Stop: 47654, Start Num: 62  
Candidate Starts for Altwerkus\_54:  
(14, 48226), (16, 48181), (18, 48151), (Start: 62 @48025 has 161 MA's), (Start: 64 @48022 has 125 MA's), (81, 47983), (97, 47902), (119, 47740), (120, 47737), (133, 47686),

Gene: Amataga\_26 Start: 8154, Stop: 8510, Start Num: 67  
Candidate Starts for Amataga\_26:  
(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Aminay\_80 Start: 51264, Stop: 51629, Start Num: 50  
Candidate Starts for Aminay\_80:  
(3, 50760), (10, 50946), (Start: 50 @51264 has 4 MA's), (102, 51402), (132, 51579), (133, 51594),

Gene: Amochick\_43 Start: 33322, Stop: 32897, Start Num: 32  
Candidate Starts for Amochick\_43:  
(Start: 17 @33415 has 4 MA's), (26, 33361), (Start: 32 @33322 has 17 MA's), (Start: 50 @33298 has 4 MA's), (73, 33256), (74, 33253), (82, 33232), (88, 33211), (94, 33181), (109, 33079), (132, 32965), (133, 32950), (134, 32947), (139, 32926), (148, 32905),

Gene: Amohnition\_72 Start: 50158, Stop: 50541, Start Num: 40

Candidate Starts for Amohnition\_72:

(Start: 40 @50158 has 18 MA's), (Start: 45 @50164 has 19 MA's), (77, 50218), (101, 50305), (106, 50344), (112, 50380), (129, 50473), (132, 50482),

Gene: Amymech\_43 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for Amymech\_43:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: Anderson\_57 Start: 48597, Stop: 48226, Start Num: 62

Candidate Starts for Anderson\_57:

(14, 48798), (16, 48753), (18, 48723), (Start: 62 @48597 has 161 MA's), (Start: 64 @48594 has 125 MA's), (81, 48555), (97, 48474), (119, 48312), (120, 48309), (133, 48258),

Gene: Andies\_40 Start: 29966, Stop: 30364, Start Num: 44

Candidate Starts for Andies\_40:

(Start: 44 @29966 has 32 MA's), (75, 30017), (81, 30032), (112, 30215), (114, 30221), (125, 30272), (131, 30293), (132, 30296), (133, 30311), (139, 30335), (145, 30350), (147, 30353),

Gene: Andre\_58 Start: 48770, Stop: 48402, Start Num: 64

Candidate Starts for Andre\_58:

(14, 48974), (16, 48929), (18, 48899), (Start: 62 @48773 has 161 MA's), (Start: 64 @48770 has 125 MA's), (81, 48731), (97, 48650), (119, 48488), (120, 48485), (133, 48434),

Gene: AngelCake\_57 Start: 48655, Stop: 48287, Start Num: 64

Candidate Starts for AngelCake\_57:

(14, 48859), (16, 48814), (18, 48784), (Start: 62 @48658 has 161 MA's), (Start: 64 @48655 has 125 MA's), (81, 48616), (97, 48535), (119, 48373), (120, 48370), (133, 48319),

Gene: Anselm\_37 Start: 27656, Stop: 28039, Start Num: 52

Candidate Starts for Anselm\_37:

(Start: 52 @27656 has 47 MA's), (94, 27740), (110, 27848), (116, 27899), (119, 27929), (143, 28016),

Gene: Antihero\_48 Start: 47146, Stop: 46748, Start Num: 45

Candidate Starts for Antihero\_48:

(Start: 45 @47146 has 19 MA's), (74, 47098), (75, 47095), (85, 47074), (127, 46828), (135, 46792),

Gene: Antonia\_55 Start: 48134, Stop: 47766, Start Num: 64

Candidate Starts for Antonia\_55:

(14, 48338), (16, 48293), (18, 48263), (38, 48176), (Start: 62 @48137 has 161 MA's), (Start: 64 @48134 has 125 MA's), (81, 48095), (96, 48023), (97, 48014), (119, 47852), (120, 47849), (133, 47798),

Gene: Aonishiki\_57 Start: 48637, Stop: 48269, Start Num: 64

Candidate Starts for Aonishiki\_57:

(14, 48841), (16, 48796), (18, 48766), (Start: 62 @48640 has 161 MA's), (Start: 64 @48637 has 125 MA's), (81, 48598), (97, 48517), (119, 48355), (120, 48352), (133, 48301),

Gene: Apex\_50 Start: 48386, Stop: 47988, Start Num: 45

Candidate Starts for Apex\_50:

(5, 48719), (Start: 45 @48386 has 19 MA's), (74, 48338), (75, 48335), (85, 48314), (120, 48089), (127, 48068), (135, 48032),

Gene: Apizium\_55 Start: 47731, Stop: 47360, Start Num: 62

Candidate Starts for Apizium\_55:

(14, 47932), (16, 47887), (18, 47857), (38, 47770), (Start: 62 @47731 has 161 MA's), (Start: 64 @47728 has 125 MA's), (81, 47689), (96, 47617), (119, 47446), (120, 47443), (133, 47392),

Gene: Applecrisp\_71 Start: 49732, Stop: 50115, Start Num: 40

Candidate Starts for Applecrisp\_71:

(Start: 40 @49732 has 18 MA's), (Start: 45 @49738 has 19 MA's), (77, 49792), (101, 49879), (104, 49897), (106, 49918), (116, 49990), (129, 50047), (132, 50056),

Gene: ArcherS7\_25 Start: 8150, Stop: 8506, Start Num: 67

Candidate Starts for ArcherS7\_25:

(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Argie\_45 Start: 40492, Stop: 40893, Start Num: 41

Candidate Starts for Argie\_45:

(Start: 41 @40492 has 11 MA's), (Start: 52 @40507 has 47 MA's), (109, 40723), (110, 40729), (112, 40744), (126, 40804), (131, 40822), (132, 40825), (133, 40840), (145, 40879), (147, 40882),

Gene: Ashraf\_57 Start: 48338, Stop: 47967, Start Num: 62

Candidate Starts for Ashraf\_57:

(8, 48698), (14, 48539), (16, 48494), (18, 48464), (Start: 62 @48338 has 161 MA's), (Start: 64 @48335 has 125 MA's), (81, 48296), (87, 48278), (96, 48224), (97, 48215), (119, 48053), (120, 48050), (133, 47999),

Gene: Ashwin\_77 Start: 48095, Stop: 47670, Start Num: 29

Candidate Starts for Ashwin\_77:

(Start: 29 @48095 has 4 MA's), (Start: 55 @48047 has 26 MA's), (82, 47987), (86, 47975), (98, 47912), (112, 47819), (114, 47813), (117, 47768), (130, 47723), (137, 47684), (138, 47681),

Gene: Asterius\_27 Start: 8422, Stop: 8778, Start Num: 67

Candidate Starts for Asterius\_27:

(Start: 67 @8422 has 189 MA's), (98, 8536), (112, 8629), (133, 8725),

Gene: Astraea\_27 Start: 8327, Stop: 8683, Start Num: 67

Candidate Starts for Astraea\_27:

(Start: 67 @8327 has 189 MA's), (112, 8534), (133, 8630),

Gene: Atlantean\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for Atlantean\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Audrick\_28 Start: 8133, Stop: 8489, Start Num: 67

Candidate Starts for Audrick\_28:

(Start: 67 @8133 has 189 MA's), (98, 8247), (112, 8340), (133, 8436),

Gene: AuntGwenStacy\_104 Start: 64757, Stop: 65095, Start Num: 54

Candidate Starts for AuntGwenStacy\_104:

(Start: 54 @64757 has 3 MA's), (61, 64769), (82, 64808), (83, 64811), (114, 64967),

Gene: Austelle\_50 Start: 48836, Stop: 48438, Start Num: 45

Candidate Starts for Austelle\_50:

(Start: 45 @48836 has 19 MA's), (74, 48788), (75, 48785), (85, 48764), (120, 48539), (127, 48518), (135, 48482),

Gene: Ava3\_27 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for Ava3\_27:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Babyland\_25 Start: 7595, Stop: 7951, Start Num: 67

Candidate Starts for Babyland\_25:

(Start: 67 @7595 has 189 MA's), (112, 7802), (133, 7898),

Gene: BackyardAgain\_23 Start: 7579, Stop: 7935, Start Num: 67

Candidate Starts for BackyardAgain\_23:

(Start: 67 @7579 has 189 MA's), (98, 7693), (112, 7786), (133, 7882),

Gene: BadAgartude\_27 Start: 8789, Stop: 9145, Start Num: 67

Candidate Starts for BadAgartude\_27:

(Start: 67 @8789 has 189 MA's), (112, 8996), (133, 9092),

Gene: Badfish\_57 Start: 48880, Stop: 48512, Start Num: 64

Candidate Starts for Badfish\_57:

(14, 49084), (16, 49039), (18, 49009), (Start: 62 @48883 has 161 MA's), (Start: 64 @48880 has 125 MA's), (81, 48841), (97, 48760), (119, 48598), (120, 48595), (133, 48544),

Gene: Bae\_55 Start: 49794, Stop: 49378, Start Num: 44

Candidate Starts for Bae\_55:

(4, 50172), (6, 50127), (7, 50124), (11, 50073), (Start: 44 @49794 has 32 MA's), (Start: 56 @49776 has 3 MA's), (81, 49722), (135, 49422), (148, 49389),

Gene: Baehexic\_36 Start: 27724, Stop: 28119, Start Num: 52

Candidate Starts for Baehexic\_36:

(Start: 52 @27724 has 47 MA's), (116, 27982), (119, 28012), (132, 28048),

Gene: BananaFence\_27 Start: 8586, Stop: 8942, Start Num: 67

Candidate Starts for BananaFence\_27:

(Start: 67 @8586 has 189 MA's), (112, 8793), (133, 8889),

Gene: Bangla1971\_25 Start: 8150, Stop: 8506, Start Num: 67

Candidate Starts for Bangla1971\_25:

(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Banjo\_55 Start: 48330, Stop: 47959, Start Num: 62

Candidate Starts for Banjo\_55:

(14, 48531), (16, 48486), (18, 48456), (Start: 62 @48330 has 161 MA's), (Start: 64 @48327 has 125 MA's), (81, 48288), (96, 48216), (119, 48045), (120, 48042), (133, 47991),

Gene: Basato\_56 Start: 48605, Stop: 48234, Start Num: 62

Candidate Starts for Basato\_56:

(14, 48806), (16, 48761), (18, 48731), (38, 48644), (Start: 62 @48605 has 161 MA's), (Start: 64 @48602 has 125 MA's), (81, 48563), (97, 48482), (119, 48320), (120, 48317), (133, 48266),

Gene: Basquiat\_25 Start: 7576, Stop: 7932, Start Num: 67

Candidate Starts for Basquiat\_25:

(Start: 67 @7576 has 189 MA's), (112, 7783), (133, 7879),

Gene: BatteryCK\_56 Start: 48278, Stop: 47907, Start Num: 62

Candidate Starts for BatteryCK\_56:

(8, 48638), (14, 48479), (16, 48434), (18, 48404), (Start: 62 @48278 has 161 MA's), (Start: 64 @48275 has 125 MA's), (81, 48236), (87, 48218), (96, 48164), (97, 48155), (119, 47993), (120, 47990), (133, 47939),

Gene: Beaglebox\_56 Start: 48433, Stop: 48065, Start Num: 64

Candidate Starts for Beaglebox\_56:

(14, 48637), (16, 48592), (18, 48562), (Start: 62 @48436 has 161 MA's), (Start: 64 @48433 has 125 MA's), (81, 48394), (97, 48313), (119, 48151), (120, 48148), (133, 48097),

Gene: BeanWater\_22 Start: 8264, Stop: 8620, Start Num: 67

Candidate Starts for BeanWater\_22:

(Start: 67 @8264 has 189 MA's), (98, 8378), (112, 8471), (133, 8567),

Gene: Beckerton\_70 Start: 52660, Stop: 53028, Start Num: 67

Candidate Starts for Beckerton\_70:

(Start: 67 @52660 has 189 MA's), (77, 52687), (82, 52699), (94, 52747), (95, 52762), (118, 52924), (132, 52960), (134, 52978),

Gene: Belieber\_22 Start: 7343, Stop: 7699, Start Num: 67

Candidate Starts for Belieber\_22:

(Start: 67 @7343 has 189 MA's), (112, 7550), (133, 7646),

Gene: Bernal13\_40 Start: 31063, Stop: 31446, Start Num: 53

Candidate Starts for Bernal13\_40:

(12, 30802), (Start: 39 @31045 has 5 MA's), (Start: 53 @31063 has 1 MA's), (101, 31219), (108, 31270), (112, 31294), (133, 31414), (134, 31417),

Gene: Bezza\_18 Start: 7222, Stop: 7578, Start Num: 67

Candidate Starts for Bezza\_18:

(Start: 67 @7222 has 189 MA's), (112, 7429), (133, 7525),

Gene: BigCity\_30 Start: 9676, Stop: 10035, Start Num: 67

Candidate Starts for BigCity\_30:

(Start: 67 @9676 has 189 MA's), (98, 9790), (112, 9883), (133, 9982),

Gene: BigMama\_54 Start: 42738, Stop: 43118, Start Num: 57

Candidate Starts for BigMama\_54:

(Start: 57 @42738 has 22 MA's), (76, 42771), (77, 42774), (78, 42777), (93, 42831), (94, 42834), (111, 42954), (133, 43065), (134, 43068),

Gene: Bigswole\_32 Start: 10214, Stop: 10570, Start Num: 67

Candidate Starts for Bigswole\_32:

(Start: 67 @10214 has 189 MA's), (98, 10328), (112, 10421), (133, 10517),

Gene: Bipolarisk\_25 Start: 8416, Stop: 8772, Start Num: 67

Candidate Starts for Bipolarisk\_25:

(Start: 67 @8416 has 189 MA's), (98, 8530), (112, 8623), (133, 8719),

Gene: Bishoperium\_56 Start: 48869, Stop: 48498, Start Num: 62

Candidate Starts for Bishoperium\_56:

(14, 49070), (16, 49025), (18, 48995), (Start: 62 @48869 has 161 MA's), (Start: 64 @48866 has 125 MA's), (81, 48827), (97, 48746), (119, 48584), (120, 48581), (133, 48530),

Gene: BlackStallion\_57 Start: 48331, Stop: 47960, Start Num: 62

Candidate Starts for BlackStallion\_57:

(14, 48532), (16, 48487), (18, 48457), (Start: 62 @48331 has 161 MA's), (Start: 64 @48328 has 125 MA's), (81, 48289), (97, 48208), (119, 48046), (120, 48043), (133, 47992),

Gene: Blackbrain\_24 Start: 7392, Stop: 7748, Start Num: 67

Candidate Starts for Blackbrain\_24:

(Start: 67 @7392 has 189 MA's), (112, 7599), (133, 7695),

Gene: Blackdragon\_21 Start: 7190, Stop: 7546, Start Num: 67

Candidate Starts for Blackdragon\_21:

(Start: 67 @7190 has 189 MA's), (112, 7397), (133, 7493),

Gene: BlacksBerry\_55 Start: 48028, Stop: 47657, Start Num: 62

Candidate Starts for BlacksBerry\_55:

(8, 48388), (14, 48229), (16, 48184), (18, 48154), (38, 48067), (Start: 62 @48028 has 161 MA's), (Start: 64 @48025 has 125 MA's), (97, 47905), (119, 47743), (120, 47740), (133, 47689),

Gene: Blessica\_76 Start: 47851, Stop: 47474, Start Num: 55

Candidate Starts for Blessica\_76:

(Start: 55 @47851 has 26 MA's), (82, 47791), (86, 47779), (98, 47716), (112, 47623), (114, 47617), (117, 47572), (130, 47527), (137, 47488), (138, 47485),

Gene: BloominB\_43 Start: 33292, Stop: 32891, Start Num: 50

Candidate Starts for BloominB\_43:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: Blubba\_20 Start: 6880, Stop: 7236, Start Num: 67

Candidate Starts for Blubba\_20:

(Start: 67 @6880 has 189 MA's), (98, 6994), (112, 7087), (133, 7183),

Gene: BlueHusk\_57 Start: 48153, Stop: 47782, Start Num: 62

Candidate Starts for BlueHusk\_57:

(14, 48354), (16, 48309), (18, 48279), (38, 48192), (Start: 62 @48153 has 161 MA's), (Start: 64 @48150 has 125 MA's), (81, 48111), (97, 48030), (119, 47868), (120, 47865), (133, 47814),

Gene: Bluephacebaby\_56 Start: 48872, Stop: 48501, Start Num: 62

Candidate Starts for Bluephacebaby\_56:

(14, 49073), (16, 49028), (18, 48998), (Start: 62 @48872 has 161 MA's), (Start: 64 @48869 has 125 MA's), (81, 48830), (97, 48749), (119, 48587), (120, 48584), (133, 48533),

Gene: Bluvara\_47 Start: 35598, Stop: 35996, Start Num: 41

Candidate Starts for Bluvara\_47:

(Start: 24 @35541 has 1 MA's), (Start: 41 @35598 has 11 MA's), (65, 35628), (81, 35664), (112, 35847), (114, 35853), (119, 35892), (125, 35904), (131, 35925), (132, 35928), (133, 35943), (145, 35982), (147, 35985),

Gene: BobSwaget\_38 Start: 27978, Stop: 28349, Start Num: 70  
Candidate Starts for BobSwaget\_38:  
(Start: 70 @27978 has 4 MA's), (101, 28095), (112, 28170), (119, 28236), (132, 28272), (139, 28311),  
(143, 28323), (147, 28329),

Gene: BobaPhatt\_23 Start: 7587, Stop: 7943, Start Num: 67  
Candidate Starts for BobaPhatt\_23:  
(Start: 67 @7587 has 189 MA's), (112, 7794), (133, 7890),

Gene: BobtimousPrime\_74 Start: 52962, Stop: 53330, Start Num: 67  
Candidate Starts for BobtimousPrime\_74:  
(Start: 67 @52962 has 189 MA's), (77, 52989), (82, 53001), (94, 53049), (95, 53064), (118, 53226),  
(132, 53262), (134, 53280),

Gene: Boehler\_55 Start: 48311, Stop: 47943, Start Num: 64  
Candidate Starts for Boehler\_55:  
(9, 48659), (14, 48515), (16, 48470), (18, 48440), (38, 48353), (Start: 62 @48314 has 161 MA's),  
(Start: 64 @48311 has 125 MA's), (97, 48191), (119, 48029), (120, 48026), (133, 47975),

Gene: Bonray\_26 Start: 8690, Stop: 9046, Start Num: 67  
Candidate Starts for Bonray\_26:  
(Start: 67 @8690 has 189 MA's), (98, 8804), (112, 8897), (133, 8993),

Gene: BoogieWoogie\_57 Start: 48347, Stop: 47976, Start Num: 62  
Candidate Starts for BoogieWoogie\_57:  
(14, 48548), (16, 48503), (18, 48473), (Start: 62 @48347 has 161 MA's), (Start: 64 @48344 has 125  
MA's), (81, 48305), (97, 48224), (119, 48062), (120, 48059), (133, 48008),

Gene: BoostSeason\_40 Start: 31401, Stop: 31018, Start Num: 36  
Candidate Starts for BoostSeason\_40:  
(35, 31404), (Start: 36 @31401 has 11 MA's), (77, 31341), (95, 31278), (104, 31227), (109, 31191),  
(112, 31170), (121, 31098), (133, 31053),

Gene: Bora\_73 Start: 47232, Stop: 46855, Start Num: 55  
Candidate Starts for Bora\_73:  
(Start: 55 @47232 has 26 MA's), (82, 47172), (86, 47160), (98, 47097), (112, 47004), (114, 46998),  
(117, 46953), (130, 46908), (137, 46869), (138, 46866),

Gene: Bowman\_25 Start: 8699, Stop: 9055, Start Num: 67  
Candidate Starts for Bowman\_25:  
(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Bread\_27 Start: 8699, Stop: 9055, Start Num: 67  
Candidate Starts for Bread\_27:  
(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Breeniome\_26 Start: 7573, Stop: 7929, Start Num: 67  
Candidate Starts for Breeniome\_26:  
(Start: 67 @7573 has 189 MA's), (98, 7687), (112, 7780), (133, 7876),

Gene: Brilliant\_58 Start: 48872, Stop: 48501, Start Num: 62  
Candidate Starts for Brilliant\_58:

(8, 49232), (14, 49073), (16, 49028), (18, 48998), (Start: 62 @48872 has 161 MA's), (Start: 64 @48869 has 125 MA's), (81, 48830), (97, 48749), (119, 48587), (120, 48584), (133, 48533),

Gene: Buckeye\_55 Start: 48383, Stop: 48012, Start Num: 62

Candidate Starts for Buckeye\_55:

(14, 48584), (16, 48539), (18, 48509), (Start: 62 @48383 has 161 MA's), (Start: 64 @48380 has 125 MA's), (81, 48341), (97, 48260), (119, 48098), (120, 48095), (133, 48044),

Gene: Buggy\_38 Start: 27869, Stop: 28264, Start Num: 52

Candidate Starts for Buggy\_38:

(Start: 52 @27869 has 47 MA's), (116, 28127), (119, 28157), (132, 28193),

Gene: Burr\_56 Start: 48344, Stop: 47976, Start Num: 64

Candidate Starts for Burr\_56:

(14, 48548), (16, 48503), (18, 48473), (Start: 62 @48347 has 161 MA's), (Start: 64 @48344 has 125 MA's), (81, 48305), (97, 48224), (119, 48062), (120, 48059), (133, 48008),

Gene: Burrough\_26 Start: 8416, Stop: 8772, Start Num: 67

Candidate Starts for Burrough\_26:

(Start: 67 @8416 has 189 MA's), (98, 8530), (112, 8623), (133, 8719),

Gene: Butterscotch\_55 Start: 42722, Stop: 43102, Start Num: 57

Candidate Starts for Butterscotch\_55:

(Start: 57 @42722 has 22 MA's), (76, 42755), (77, 42758), (78, 42761), (93, 42815), (94, 42818), (111, 42938), (133, 43049), (134, 43052),

Gene: Bxz1\_27 Start: 9159, Stop: 9515, Start Num: 67

Candidate Starts for Bxz1\_27:

(Start: 67 @9159 has 189 MA's), (98, 9273), (112, 9366), (133, 9462),

Gene: Cactojaque\_23 Start: 7281, Stop: 7637, Start Num: 67

Candidate Starts for Cactojaque\_23:

(Start: 67 @7281 has 189 MA's), (112, 7488), (133, 7584),

Gene: Cali\_26 Start: 9723, Stop: 10079, Start Num: 67

Candidate Starts for Cali\_26:

(Start: 67 @9723 has 189 MA's), (112, 9930), (133, 10026),

Gene: CamL\_56 Start: 48637, Stop: 48266, Start Num: 62

Candidate Starts for CamL\_56:

(14, 48838), (16, 48793), (18, 48763), (Start: 62 @48637 has 161 MA's), (Start: 64 @48634 has 125 MA's), (81, 48595), (96, 48523), (119, 48352), (120, 48349), (133, 48298),

Gene: CampRoach\_58 Start: 48777, Stop: 48406, Start Num: 62

Candidate Starts for CampRoach\_58:

(14, 48978), (16, 48933), (18, 48903), (Start: 62 @48777 has 161 MA's), (Start: 64 @48774 has 125 MA's), (81, 48735), (97, 48654), (119, 48492), (120, 48489), (133, 48438),

Gene: Candle\_55 Start: 42652, Stop: 43122, Start Num: 20

Candidate Starts for Candle\_55:

(Start: 20 @42652 has 6 MA's), (Start: 28 @42691 has 2 MA's), (Start: 43 @42721 has 1 MA's), (Start: 51 @42733 has 3 MA's), (58, 42745), (68, 42760), (73, 42766), (90, 42817), (107, 42931), (112, 42961), (131, 43051), (132, 43054),

Gene: Cane17\_19 Start: 6752, Stop: 7108, Start Num: 67  
Candidate Starts for Cane17\_19:  
(Start: 67 @6752 has 189 MA's), (98, 6866), (112, 6959), (133, 7055),

Gene: Cannibal\_56 Start: 48620, Stop: 48249, Start Num: 62  
Candidate Starts for Cannibal\_56:  
(14, 48821), (16, 48776), (18, 48746), (38, 48659), (Start: 62 @48620 has 161 MA's), (Start: 64 @48617 has 125 MA's), (81, 48578), (96, 48506), (119, 48335), (120, 48332), (133, 48281),

Gene: Capablanca\_28 Start: 9279, Stop: 9635, Start Num: 67  
Candidate Starts for Capablanca\_28:  
(Start: 67 @9279 has 189 MA's), (98, 9393), (112, 9486), (133, 9582),

Gene: Caravan\_24 Start: 7690, Stop: 8046, Start Num: 67  
Candidate Starts for Caravan\_24:  
(Start: 67 @7690 has 189 MA's), (98, 7804), (112, 7897), (133, 7993),

Gene: Carcharodon\_42 Start: 30650, Stop: 31048, Start Num: 44  
Candidate Starts for Carcharodon\_42:  
(Start: 44 @30650 has 32 MA's), (75, 30701), (81, 30716), (112, 30899), (114, 30905), (125, 30956), (131, 30977), (132, 30980), (133, 30995), (139, 31019), (145, 31034), (147, 31037),

Gene: Carthage\_54 Start: 47615, Stop: 47244, Start Num: 62  
Candidate Starts for Carthage\_54:  
(14, 47816), (16, 47771), (18, 47741), (38, 47654), (Start: 62 @47615 has 161 MA's), (Start: 64 @47612 has 125 MA's), (81, 47573), (87, 47555), (97, 47492), (119, 47330), (120, 47327), (133, 47276),

Gene: Caspiboi\_56 Start: 48348, Stop: 47980, Start Num: 64  
Candidate Starts for Caspiboi\_56:  
(8, 48711), (14, 48552), (16, 48507), (18, 48477), (Start: 62 @48351 has 161 MA's), (Start: 64 @48348 has 125 MA's), (81, 48309), (87, 48291), (96, 48237), (97, 48228), (119, 48066), (120, 48063), (133, 48012),

Gene: Catdawg\_75 Start: 47587, Stop: 47210, Start Num: 55  
Candidate Starts for Catdawg\_75:  
(Start: 55 @47587 has 26 MA's), (82, 47527), (86, 47515), (98, 47452), (112, 47359), (114, 47353), (117, 47308), (130, 47263), (137, 47224), (138, 47221),

Gene: Catera\_24 Start: 7577, Stop: 7933, Start Num: 67  
Candidate Starts for Catera\_24:  
(Start: 67 @7577 has 189 MA's), (98, 7691), (112, 7784), (133, 7880),

Gene: Cborch11\_73 Start: 52182, Stop: 52571, Start Num: 67  
Candidate Starts for Cborch11\_73:  
(Start: 67 @52182 has 189 MA's), (77, 52209), (82, 52221), (93, 52266), (94, 52269), (98, 52299), (118, 52449), (136, 52521),

Gene: Centaur\_37 Start: 27702, Stop: 28097, Start Num: 52  
Candidate Starts for Centaur\_37:  
(Start: 52 @27702 has 47 MA's), (116, 27960), (119, 27990), (132, 28026),

Gene: Cepens\_44 Start: 40207, Stop: 40608, Start Num: 41

Candidate Starts for Cepens\_44:

(Start: 41 @40207 has 11 MA's), (Start: 52 @40222 has 47 MA's), (109, 40438), (110, 40444), (112, 40459), (126, 40519), (131, 40537), (132, 40540), (133, 40555), (145, 40594), (147, 40597),

Gene: Chaelin\_57 Start: 48867, Stop: 48496, Start Num: 62

Candidate Starts for Chaelin\_57:

(14, 49068), (16, 49023), (18, 48993), (Start: 62 @48867 has 161 MA's), (Start: 64 @48864 has 125 MA's), (81, 48825), (97, 48744), (119, 48582), (120, 48579), (133, 48528),

Gene: Chah\_58 Start: 48321, Stop: 47953, Start Num: 64

Candidate Starts for Chah\_58:

(14, 48525), (16, 48480), (18, 48450), (Start: 62 @48324 has 161 MA's), (Start: 64 @48321 has 125 MA's), (81, 48282), (97, 48201), (119, 48039), (120, 48036), (133, 47985),

Gene: Chargie21\_25 Start: 7576, Stop: 7932, Start Num: 67

Candidate Starts for Chargie21\_25:

(Start: 67 @7576 has 189 MA's), (112, 7783), (133, 7879),

Gene: Charles1\_57 Start: 48633, Stop: 48262, Start Num: 62

Candidate Starts for Charles1\_57:

(8, 48993), (14, 48834), (16, 48789), (18, 48759), (38, 48672), (Start: 62 @48633 has 161 MA's), (Start: 64 @48630 has 125 MA's), (97, 48510), (119, 48348), (120, 48345), (133, 48294),

Gene: CharlieB\_26 Start: 7730, Stop: 8086, Start Num: 67

Candidate Starts for CharlieB\_26:

(Start: 67 @7730 has 189 MA's), (112, 7937), (133, 8033),

Gene: CharlieGBrown\_56 Start: 48220, Stop: 47852, Start Num: 64

Candidate Starts for CharlieGBrown\_56:

(9, 48568), (14, 48424), (16, 48379), (18, 48349), (Start: 62 @48223 has 161 MA's), (Start: 64 @48220 has 125 MA's), (81, 48181), (87, 48163), (96, 48109), (97, 48100), (119, 47938), (120, 47935), (133, 47884),

Gene: Charm\_35 Start: 26987, Stop: 27367, Start Num: 52

Candidate Starts for Charm\_35:

(Start: 52 @26987 has 47 MA's), (Start: 70 @27017 has 4 MA's), (92, 27068), (108, 27170), (116, 27230), (119, 27260), (132, 27296),

Gene: ChaylaJr\_25 Start: 7663, Stop: 8019, Start Num: 67

Candidate Starts for ChaylaJr\_25:

(Start: 67 @7663 has 189 MA's), (112, 7870), (133, 7966),

Gene: CheetO\_55 Start: 48353, Stop: 47982, Start Num: 62

Candidate Starts for CheetO\_55:

(14, 48554), (16, 48509), (18, 48479), (38, 48392), (Start: 62 @48353 has 161 MA's), (Start: 64 @48350 has 125 MA's), (81, 48311), (97, 48230), (119, 48068), (120, 48065), (133, 48014),

Gene: Cher\_56 Start: 48886, Stop: 48518, Start Num: 64

Candidate Starts for Cher\_56:

(14, 49090), (16, 49045), (18, 49015), (Start: 62 @48889 has 161 MA's), (Start: 64 @48886 has 125 MA's), (81, 48847), (97, 48766), (119, 48604), (120, 48601), (133, 48550),

Gene: Chewbacca\_44 Start: 30650, Stop: 31048, Start Num: 44

Candidate Starts for Chewbacca\_44:

(Start: 44 @30650 has 32 MA's), (75, 30701), (81, 30716), (112, 30899), (114, 30905), (125, 30956), (131, 30977), (132, 30980), (133, 30995), (139, 31019), (145, 31034), (147, 31037),

Gene: ChickenPhender\_25 Start: 7621, Stop: 7977, Start Num: 67

Candidate Starts for ChickenPhender\_25:

(Start: 67 @7621 has 189 MA's), (112, 7828), (133, 7924),

Gene: Childish\_56 Start: 48899, Stop: 48528, Start Num: 62

Candidate Starts for Childish\_56:

(14, 49100), (16, 49055), (18, 49025), (Start: 62 @48899 has 161 MA's), (Start: 64 @48896 has 125 MA's), (81, 48857), (96, 48785), (119, 48614), (120, 48611), (133, 48560),

Gene: Chill\_58 Start: 42785, Stop: 43165, Start Num: 57

Candidate Starts for Chill\_58:

(Start: 57 @42785 has 22 MA's), (76, 42818), (77, 42821), (78, 42824), (93, 42878), (94, 42881), (111, 43001), (133, 43112), (134, 43115),

Gene: ChipMunk\_38 Start: 28998, Stop: 29381, Start Num: 52

Candidate Starts for ChipMunk\_38:

(Start: 52 @28998 has 47 MA's), (94, 29082), (110, 29190), (116, 29241), (119, 29271), (143, 29358),

Gene: Chipette\_57 Start: 48584, Stop: 48213, Start Num: 62

Candidate Starts for Chipette\_57:

(14, 48785), (16, 48740), (18, 48710), (38, 48623), (Start: 62 @48584 has 161 MA's), (Start: 64 @48581 has 125 MA's), (81, 48542), (97, 48461), (119, 48299), (120, 48296), (133, 48245),

Gene: Chomp\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for Chomp\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Chorkpop\_56 Start: 48376, Stop: 48005, Start Num: 62

Candidate Starts for Chorkpop\_56:

(14, 48577), (16, 48532), (18, 48502), (Start: 62 @48376 has 161 MA's), (Start: 64 @48373 has 125 MA's), (81, 48334), (96, 48262), (119, 48091), (120, 48088), (133, 48037),

Gene: ChrisnMich\_49 Start: 47148, Stop: 46750, Start Num: 45

Candidate Starts for ChrisnMich\_49:

(5, 47481), (Start: 45 @47148 has 19 MA's), (74, 47100), (75, 47097), (85, 47076), (127, 46830), (135, 46794),

Gene: Chuni\_57 Start: 48894, Stop: 48523, Start Num: 62

Candidate Starts for Chuni\_57:

(14, 49095), (16, 49050), (18, 49020), (Start: 62 @48894 has 161 MA's), (Start: 64 @48891 has 125 MA's), (81, 48852), (119, 48609), (120, 48606), (133, 48555),

Gene: Chunky\_54 Start: 47683, Stop: 47312, Start Num: 62

Candidate Starts for Chunky\_54:

(14, 47884), (16, 47839), (18, 47809), (38, 47722), (Start: 62 @47683 has 161 MA's), (Start: 64 @47680 has 125 MA's), (81, 47641), (97, 47560), (119, 47398), (120, 47395), (133, 47344),

Gene: Chute\_56 Start: 48694, Stop: 48323, Start Num: 62

Candidate Starts for Chute\_56:

(8, 49054), (14, 48895), (16, 48850), (18, 48820), (38, 48733), (Start: 62 @48694 has 161 MA's), (Start: 64 @48691 has 125 MA's), (97, 48571), (119, 48409), (120, 48406), (133, 48355),

Gene: CindyLou\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for CindyLou\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Cleatunium\_22 Start: 7852, Stop: 8208, Start Num: 67

Candidate Starts for Cleatunium\_22:

(Start: 67 @7852 has 189 MA's), (98, 7966), (112, 8059), (133, 8155),

Gene: Cobra\_57 Start: 48665, Stop: 48297, Start Num: 64

Candidate Starts for Cobra\_57:

(14, 48869), (16, 48824), (18, 48794), (Start: 62 @48668 has 161 MA's), (Start: 64 @48665 has 125 MA's), (81, 48626), (97, 48545), (119, 48383), (120, 48380), (133, 48329),

Gene: Colbert\_54 Start: 47732, Stop: 47364, Start Num: 64

Candidate Starts for Colbert\_54:

(14, 47936), (16, 47891), (18, 47861), (38, 47774), (Start: 62 @47735 has 161 MA's), (Start: 64 @47732 has 125 MA's), (81, 47693), (97, 47612), (119, 47450), (120, 47447), (133, 47396),

Gene: Coletti\_57 Start: 48694, Stop: 48323, Start Num: 62

Candidate Starts for Coletti\_57:

(8, 49054), (14, 48895), (16, 48850), (18, 48820), (38, 48733), (Start: 62 @48694 has 161 MA's), (Start: 64 @48691 has 125 MA's), (97, 48571), (119, 48409), (120, 48406), (133, 48355),

Gene: Colt\_19 Start: 6758, Stop: 7114, Start Num: 67

Candidate Starts for Colt\_19:

(Start: 67 @6758 has 189 MA's), (98, 6872), (112, 6965), (133, 7061),

Gene: Concombres\_25 Start: 8646, Stop: 9002, Start Num: 67

Candidate Starts for Concombres\_25:

(Start: 67 @8646 has 189 MA's), (98, 8760), (112, 8853), (133, 8949),

Gene: Cooper\_50 Start: 47373, Stop: 46969, Start Num: 45

Candidate Starts for Cooper\_50:

(Start: 45 @47373 has 19 MA's), (74, 47325), (75, 47322), (85, 47301), (91, 47283), (127, 47049), (135, 47013),

Gene: Cornbread\_56 Start: 48356, Stop: 47988, Start Num: 64

Candidate Starts for Cornbread\_56:

(14, 48560), (16, 48515), (18, 48485), (Start: 62 @48359 has 161 MA's), (Start: 64 @48356 has 125 MA's), (81, 48317), (97, 48236), (119, 48074), (120, 48071), (133, 48020),

Gene: Corndog\_78 Start: 48615, Stop: 48190, Start Num: 29

Candidate Starts for Corndog\_78:

(Start: 29 @48615 has 4 MA's), (Start: 55 @48567 has 26 MA's), (82, 48507), (86, 48495), (98, 48432), (112, 48339), (114, 48333), (117, 48288), (130, 48243), (137, 48204), (138, 48201),

Gene: Cornobble\_55 Start: 48290, Stop: 47919, Start Num: 62

Candidate Starts for Cornobble\_55:

(14, 48491), (16, 48446), (18, 48416), (38, 48329), (Start: 62 @48290 has 161 MA's), (Start: 64 @48287 has 125 MA's), (81, 48248), (96, 48176), (119, 48005), (120, 48002), (133, 47951),

Gene: Cosmolli16\_57 Start: 49079, Stop: 48708, Start Num: 62

Candidate Starts for Cosmolli16\_57:

(14, 49280), (16, 49235), (18, 49205), (Start: 62 @49079 has 161 MA's), (Start: 64 @49076 has 125 MA's), (81, 49037), (96, 48965), (119, 48794), (120, 48791), (133, 48740),

Gene: Craff\_59 Start: 49324, Stop: 48953, Start Num: 62

Candidate Starts for Craff\_59:

(14, 49525), (16, 49480), (18, 49450), (Start: 62 @49324 has 161 MA's), (Start: 64 @49321 has 125 MA's), (81, 49282), (97, 49201), (119, 49039), (120, 49036), (133, 48985),

Gene: Crownjwl\_56 Start: 48353, Stop: 47985, Start Num: 64

Candidate Starts for Crownjwl\_56:

(14, 48557), (16, 48512), (18, 48482), (38, 48395), (Start: 62 @48356 has 161 MA's), (Start: 64 @48353 has 125 MA's), (81, 48314), (96, 48242), (97, 48233), (119, 48071), (120, 48068), (133, 48017),

Gene: Crucio\_36 Start: 27264, Stop: 27647, Start Num: 52

Candidate Starts for Crucio\_36:

(Start: 52 @27264 has 47 MA's), (94, 27348), (110, 27456), (116, 27507), (119, 27537), (143, 27624),

Gene: Cuke\_52 Start: 36064, Stop: 36516, Start Num: 25

Candidate Starts for Cuke\_52:

(Start: 25 @36064 has 1 MA's), (33, 36106), (Start: 52 @36133 has 47 MA's), (60, 36148), (77, 36181), (81, 36190), (89, 36217), (94, 36244), (99, 36277), (133, 36463), (139, 36487), (145, 36502),

Gene: D12\_43 Start: 40755, Stop: 41156, Start Num: 41

Candidate Starts for D12\_43:

(Start: 41 @40755 has 11 MA's), (Start: 52 @40770 has 47 MA's), (109, 40986), (110, 40992), (112, 41007), (126, 41067), (131, 41085), (132, 41088), (133, 41103), (145, 41142), (147, 41145),

Gene: DTDevon\_27 Start: 9318, Stop: 9674, Start Num: 67

Candidate Starts for DTDevon\_27:

(Start: 67 @9318 has 189 MA's), (98, 9432), (112, 9525), (133, 9621),

Gene: DaddyDaniels\_58 Start: 48853, Stop: 48485, Start Num: 64

Candidate Starts for DaddyDaniels\_58:

(8, 49216), (14, 49057), (16, 49012), (18, 48982), (Start: 62 @48856 has 161 MA's), (Start: 64 @48853 has 125 MA's), (81, 48814), (96, 48742), (119, 48571), (120, 48568), (133, 48517),

Gene: Daegal\_45 Start: 33993, Stop: 33472, Start Num: 17

Candidate Starts for Daegal\_45:

(Start: 17 @33993 has 4 MA's), (26, 33939), (Start: 32 @33900 has 17 MA's), (Start: 50 @33873 has 4 MA's), (73, 33831), (74, 33828), (82, 33807), (88, 33786), (94, 33756), (109, 33654), (132, 33540), (133, 33525), (134, 33522), (139, 33501), (148, 33480),

Gene: Daffodil\_28 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for Daffodil\_28:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Daffy\_56 Start: 48362, Stop: 47991, Start Num: 62

Candidate Starts for Daffy\_56:

(14, 48563), (16, 48518), (18, 48488), (Start: 62 @48362 has 161 MA's), (Start: 64 @48359 has 125 MA's), (81, 48320), (96, 48248), (119, 48077), (120, 48074), (133, 48023),

Gene: Daka\_58 Start: 48633, Stop: 48265, Start Num: 64

Candidate Starts for Daka\_58:

(14, 48837), (16, 48792), (18, 48762), (38, 48675), (Start: 62 @48636 has 161 MA's), (Start: 64 @48633 has 125 MA's), (81, 48594), (87, 48576), (97, 48513), (119, 48351), (120, 48348), (133, 48297),

Gene: Dalmatian\_37 Start: 27632, Stop: 28015, Start Num: 52

Candidate Starts for Dalmatian\_37:

(Start: 52 @27632 has 47 MA's), (94, 27716), (110, 27824), (116, 27875), (119, 27905), (143, 27992),

Gene: Damien\_71 Start: 52144, Stop: 52533, Start Num: 67

Candidate Starts for Damien\_71:

(Start: 67 @52144 has 189 MA's), (77, 52171), (79, 52177), (82, 52183), (93, 52228), (94, 52231), (98, 52261), (118, 52411), (136, 52483),

Gene: Dandelion\_30 Start: 10013, Stop: 10369, Start Num: 67

Candidate Starts for Dandelion\_30:

(Start: 67 @10013 has 189 MA's), (98, 10127), (112, 10220), (133, 10316),

Gene: Darko\_25 Start: 8555, Stop: 8911, Start Num: 67

Candidate Starts for Darko\_25:

(Start: 67 @8555 has 189 MA's), (112, 8762), (133, 8858),

Gene: DarthP\_72 Start: 50015, Stop: 50398, Start Num: 40

Candidate Starts for DarthP\_72:

(Start: 40 @50015 has 18 MA's), (Start: 45 @50021 has 19 MA's), (77, 50075), (101, 50162), (106, 50201), (112, 50237), (129, 50330), (132, 50339),

Gene: DarthPhader\_38 Start: 29146, Stop: 29526, Start Num: 52

Candidate Starts for DarthPhader\_38:

(Start: 52 @29146 has 47 MA's), (Start: 70 @29176 has 4 MA's), (119, 29419), (121, 29425),

Gene: Dati\_56 Start: 48891, Stop: 48523, Start Num: 64

Candidate Starts for Dati\_56:

(14, 49095), (16, 49050), (18, 49020), (Start: 62 @48894 has 161 MA's), (Start: 64 @48891 has 125 MA's), (81, 48852), (97, 48771), (119, 48609), (120, 48606), (133, 48555),

Gene: DeejaClivia\_22 Start: 7240, Stop: 7596, Start Num: 67

Candidate Starts for DeejaClivia\_22:

(Start: 67 @7240 has 189 MA's), (112, 7447), (133, 7543),

Gene: DeepSoil15\_43 Start: 33409, Stop: 32891, Start Num: 17

Candidate Starts for DeepSoil15\_43:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: DelRivs\_55 Start: 48336, Stop: 47968, Start Num: 64

Candidate Starts for DelRivs\_55:

(8, 48699), (14, 48540), (16, 48495), (18, 48465), (Start: 62 @48339 has 161 MA's), (Start: 64 @48336 has 125 MA's), (81, 48297), (97, 48216), (119, 48054), (120, 48051), (133, 48000),

Gene: Delilah\_26 Start: 8699, Stop: 9055, Start Num: 67  
Candidate Starts for Delilah\_26:  
(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Delton\_57 Start: 43120, Stop: 43500, Start Num: 57  
Candidate Starts for Delton\_57:  
(Start: 57 @43120 has 22 MA's), (76, 43153), (77, 43156), (78, 43159), (93, 43213), (94, 43216), (111, 43336), (133, 43447), (134, 43450),

Gene: Delylah\_27 Start: 8482, Stop: 8838, Start Num: 67  
Candidate Starts for Delylah\_27:  
(Start: 67 @8482 has 189 MA's), (112, 8689), (133, 8785),

Gene: Demodog\_24 Start: 8646, Stop: 9002, Start Num: 67  
Candidate Starts for Demodog\_24:  
(Start: 67 @8646 has 189 MA's), (98, 8760), (112, 8853), (133, 8949),

Gene: Derek\_27 Start: 8111, Stop: 8467, Start Num: 67  
Candidate Starts for Derek\_27:  
(Start: 67 @8111 has 189 MA's), (112, 8318), (133, 8414),

Gene: Derpp\_55 Start: 48209, Stop: 47841, Start Num: 64  
Candidate Starts for Derpp\_55:  
(8, 48572), (14, 48413), (16, 48368), (18, 48338), (Start: 62 @48212 has 161 MA's), (Start: 64 @48209 has 125 MA's), (81, 48170), (87, 48152), (96, 48098), (97, 48089), (119, 47927), (120, 47924), (133, 47873),

Gene: Dessert\_24 Start: 8154, Stop: 8510, Start Num: 67  
Candidate Starts for Dessert\_24:  
(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Dewey\_41 Start: 33316, Stop: 32891, Start Num: 32  
Candidate Starts for Dewey\_41:  
(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: Dice\_55 Start: 48300, Stop: 47932, Start Num: 64  
Candidate Starts for Dice\_55:  
(14, 48504), (16, 48459), (18, 48429), (Start: 62 @48303 has 161 MA's), (Start: 64 @48300 has 125 MA's), (81, 48261), (97, 48180), (119, 48018), (120, 48015), (133, 47964),

Gene: Dietrick\_21 Start: 7349, Stop: 7705, Start Num: 67  
Candidate Starts for Dietrick\_21:  
(Start: 67 @7349 has 189 MA's), (112, 7556), (133, 7652),

Gene: DigitDog\_54 Start: 48511, Stop: 48098, Start Num: 44  
Candidate Starts for DigitDog\_54:  
(4, 48889), (6, 48844), (7, 48841), (Start: 44 @48511 has 32 MA's), (81, 48439), (122, 48193), (123, 48190), (132, 48163),

Gene: Dignity\_37 Start: 27627, Stop: 28025, Start Num: 52

Candidate Starts for Dignity\_37:

(Start: 52 @27627 has 47 MA's), (78, 27675), (119, 27918), (121, 27924), (132, 27954),

Gene: Dingo\_54 Start: 47659, Stop: 47291, Start Num: 64

Candidate Starts for Dingo\_54:

(14, 47863), (16, 47818), (18, 47788), (38, 47701), (Start: 62 @47662 has 161 MA's), (Start: 64 @47659 has 125 MA's), (81, 47620), (97, 47539), (119, 47377), (120, 47374), (133, 47323),

Gene: Dione\_54 Start: 48034, Stop: 47663, Start Num: 62

Candidate Starts for Dione\_54:

(14, 48235), (16, 48190), (18, 48160), (38, 48073), (Start: 62 @48034 has 161 MA's), (Start: 64 @48031 has 125 MA's), (97, 47911), (119, 47749), (120, 47746), (133, 47695),

Gene: DirtJuice\_57 Start: 48622, Stop: 48254, Start Num: 64

Candidate Starts for DirtJuice\_57:

(14, 48826), (16, 48781), (18, 48751), (38, 48664), (Start: 62 @48625 has 161 MA's), (Start: 64 @48622 has 125 MA's), (81, 48583), (87, 48565), (97, 48502), (119, 48340), (120, 48337), (133, 48286),

Gene: DirtMonster\_25 Start: 9243, Stop: 9599, Start Num: 67

Candidate Starts for DirtMonster\_25:

(Start: 67 @9243 has 189 MA's), (98, 9357), (112, 9450), (133, 9546),

Gene: DismalFunk\_39 Start: 31497, Stop: 31114, Start Num: 36

Candidate Starts for DismalFunk\_39:

(Start: 36 @31497 has 11 MA's), (77, 31437), (95, 31374), (104, 31323), (112, 31266), (121, 31194), (133, 31149), (134, 31146), (139, 31125),

Gene: DismalStressor\_39 Start: 31497, Stop: 31114, Start Num: 36

Candidate Starts for DismalStressor\_39:

(Start: 36 @31497 has 11 MA's), (77, 31437), (95, 31374), (104, 31323), (112, 31266), (121, 31194), (133, 31149), (134, 31146), (139, 31125),

Gene: Doddsville\_56 Start: 48368, Stop: 47997, Start Num: 62

Candidate Starts for Doddsville\_56:

(8, 48728), (14, 48569), (16, 48524), (18, 48494), (Start: 62 @48368 has 161 MA's), (Start: 64 @48365 has 125 MA's), (81, 48326), (87, 48308), (96, 48254), (119, 48083), (120, 48080), (133, 48029),

Gene: DoesntMatter\_54 Start: 48324, Stop: 47956, Start Num: 64

Candidate Starts for DoesntMatter\_54:

(14, 48528), (16, 48483), (18, 48453), (Start: 62 @48327 has 161 MA's), (Start: 64 @48324 has 125 MA's), (81, 48285), (97, 48204), (119, 48042), (120, 48039), (133, 47988),

Gene: DoIOn\_60 Start: 49582, Stop: 49211, Start Num: 62

Candidate Starts for DoIOn\_60:

(14, 49783), (16, 49738), (18, 49708), (Start: 62 @49582 has 161 MA's), (Start: 64 @49579 has 125 MA's), (81, 49540), (97, 49459), (119, 49297), (120, 49294), (133, 49243),

Gene: Domi\_21 Start: 7974, Stop: 8330, Start Num: 67

Candidate Starts for Domi\_21:

(Start: 67 @7974 has 189 MA's), (98, 8088), (112, 8181), (133, 8277),

Gene: DonSanchon\_54 Start: 48059, Stop: 47688, Start Num: 62  
Candidate Starts for DonSanchon\_54:  
(14, 48260), (16, 48215), (18, 48185), (Start: 62 @48059 has 161 MA's), (Start: 64 @48056 has 125 MA's), (81, 48017), (97, 47936), (119, 47774), (120, 47771), (133, 47720),

Gene: Donny\_55 Start: 48805, Stop: 48392, Start Num: 44  
Candidate Starts for Donny\_55:  
(4, 49183), (6, 49138), (7, 49135), (Start: 44 @48805 has 32 MA's), (Start: 56 @48787 has 3 MA's), (81, 48733), (135, 48436), (148, 48403),

Gene: Dori\_57 Start: 47308, Stop: 47706, Start Num: 41  
Candidate Starts for Dori\_57:  
(Start: 24 @47251 has 1 MA's), (Start: 41 @47308 has 11 MA's), (65, 47338), (81, 47374), (87, 47392), (112, 47557), (114, 47563), (119, 47602), (125, 47614), (131, 47635), (132, 47638), (133, 47653), (145, 47692), (147, 47695),

Gene: Doughnut\_40 Start: 31391, Stop: 31008, Start Num: 36  
Candidate Starts for Doughnut\_40:  
(35, 31394), (Start: 36 @31391 has 11 MA's), (77, 31331), (95, 31268), (104, 31217), (112, 31160), (121, 31088), (133, 31043),

Gene: DrPhinkDaddy\_26 Start: 8696, Stop: 9052, Start Num: 67  
Candidate Starts for DrPhinkDaddy\_26:  
(Start: 67 @8696 has 189 MA's), (98, 8810), (112, 8903), (133, 8999),

Gene: Drake55\_38 Start: 27765, Stop: 28160, Start Num: 52  
Candidate Starts for Drake55\_38:  
(Start: 52 @27765 has 47 MA's), (116, 28023), (119, 28053), (132, 28089),

Gene: Drazdys\_26 Start: 8484, Stop: 8840, Start Num: 67  
Candidate Starts for Drazdys\_26:  
(Start: 67 @8484 has 189 MA's), (112, 8691), (133, 8787),

Gene: DreamTeam1\_35 Start: 26870, Stop: 27250, Start Num: 52  
Candidate Starts for DreamTeam1\_35:  
(Start: 52 @26870 has 47 MA's), (Start: 70 @26900 has 4 MA's), (92, 26951), (108, 27053), (116, 27113), (119, 27143), (132, 27179),

Gene: DuchessDung\_57 Start: 47883, Stop: 47515, Start Num: 64  
Candidate Starts for DuchessDung\_57:  
(14, 48087), (16, 48042), (18, 48012), (38, 47925), (Start: 62 @47886 has 161 MA's), (Start: 64 @47883 has 125 MA's), (81, 47844), (96, 47772), (119, 47601), (120, 47598), (133, 47547),

Gene: Duckfeet\_23 Start: 7893, Stop: 8249, Start Num: 67  
Candidate Starts for Duckfeet\_23:  
(Start: 67 @7893 has 189 MA's), (112, 8100), (133, 8196),

Gene: DudeLittle\_35 Start: 27298, Stop: 27681, Start Num: 52  
Candidate Starts for DudeLittle\_35:  
(Start: 52 @27298 has 47 MA's), (94, 27382), (110, 27490), (116, 27541), (119, 27571), (132, 27607), (143, 27658),

Gene: Duggie\_56 Start: 48362, Stop: 47994, Start Num: 64  
Candidate Starts for Duggie\_56:  
(8, 48725), (14, 48566), (16, 48521), (18, 48491), (Start: 62 @48365 has 161 MA's), (Start: 64 @48362 has 125 MA's), (81, 48323), (87, 48305), (96, 48251), (119, 48080), (120, 48077), (133, 48026),

Gene: Duplicity\_42 Start: 30659, Stop: 31057, Start Num: 44  
Candidate Starts for Duplicity\_42:  
(Start: 44 @30659 has 32 MA's), (75, 30710), (81, 30725), (112, 30908), (114, 30914), (125, 30965), (131, 30986), (132, 30989), (133, 31004), (139, 31028), (145, 31043), (147, 31046),

Gene: Durga\_58 Start: 48804, Stop: 48433, Start Num: 62  
Candidate Starts for Durga\_58:  
(8, 49164), (14, 49005), (16, 48960), (18, 48930), (Start: 62 @48804 has 161 MA's), (Start: 64 @48801 has 125 MA's), (81, 48762), (87, 48744), (96, 48690), (97, 48681), (119, 48519), (120, 48516), (133, 48465),

Gene: Dylan\_76 Start: 47811, Stop: 47386, Start Num: 29  
Candidate Starts for Dylan\_76:  
(Start: 29 @47811 has 4 MA's), (Start: 55 @47763 has 26 MA's), (82, 47703), (86, 47691), (98, 47628), (112, 47535), (114, 47529), (117, 47484), (130, 47439), (137, 47400), (138, 47397),

Gene: ET08\_21 Start: 8158, Stop: 8514, Start Num: 67  
Candidate Starts for ET08\_21:  
(Start: 67 @8158 has 189 MA's), (112, 8365), (133, 8461),

Gene: EastView9101\_53 Start: 48434, Stop: 48039, Start Num: 56  
Candidate Starts for EastView9101\_53:  
(4, 48830), (6, 48785), (7, 48782), (Start: 44 @48452 has 32 MA's), (Start: 56 @48434 has 3 MA's), (81, 48380), (135, 48083), (148, 48050),

Gene: EasyJones\_25 Start: 7323, Stop: 7679, Start Num: 67  
Candidate Starts for EasyJones\_25:  
(Start: 67 @7323 has 189 MA's), (112, 7530), (133, 7626),

Gene: EggyFarm\_30 Start: 9676, Stop: 10035, Start Num: 67  
Candidate Starts for EggyFarm\_30:  
(Start: 67 @9676 has 189 MA's), (98, 9790), (112, 9883), (133, 9982),

Gene: Ein37\_43 Start: 33292, Stop: 32891, Start Num: 50  
Candidate Starts for Ein37\_43:  
(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: Ekdilam\_69 Start: 50223, Stop: 50606, Start Num: 40  
Candidate Starts for Ekdilam\_69:  
(Start: 40 @50223 has 18 MA's), (Start: 45 @50229 has 19 MA's), (61, 50256), (83, 50298), (106, 50409), (116, 50481), (122, 50520), (129, 50538), (132, 50547),

Gene: Ellie\_70 Start: 49459, Stop: 49842, Start Num: 40  
Candidate Starts for Ellie\_70:  
(Start: 40 @49459 has 18 MA's), (Start: 45 @49465 has 19 MA's), (77, 49519), (101, 49606), (104, 49624), (106, 49645), (116, 49717), (129, 49774), (132, 49783),

Gene: ElvisPhasley\_57 Start: 48902, Stop: 48534, Start Num: 64  
Candidate Starts for ElvisPhasley\_57:  
(14, 49106), (16, 49061), (18, 49031), (38, 48944), (Start: 62 @48905 has 161 MA's), (Start: 64 @48902 has 125 MA's), (81, 48863), (96, 48791), (119, 48620), (120, 48617), (133, 48566),

Gene: EmToTheThree\_29 Start: 10113, Stop: 10469, Start Num: 67  
Candidate Starts for EmToTheThree\_29:  
(Start: 67 @10113 has 189 MA's), (112, 10320), (133, 10416),

Gene: Emiris\_58 Start: 48772, Stop: 48401, Start Num: 62  
Candidate Starts for Emiris\_58:  
(8, 49132), (14, 48973), (16, 48928), (18, 48898), (Start: 62 @48772 has 161 MA's), (Start: 64 @48769 has 125 MA's), (81, 48730), (87, 48712), (96, 48658), (97, 48649), (119, 48487), (120, 48484), (133, 48433),

Gene: EmmaElysia\_24 Start: 7341, Stop: 7697, Start Num: 67  
Candidate Starts for EmmaElysia\_24:  
(Start: 67 @7341 has 189 MA's), (112, 7548), (133, 7644),

Gene: EmpTee\_55 Start: 48340, Stop: 47969, Start Num: 62  
Candidate Starts for EmpTee\_55:  
(9, 48685), (14, 48541), (16, 48496), (18, 48466), (38, 48379), (Start: 62 @48340 has 161 MA's), (Start: 64 @48337 has 125 MA's), (97, 48217), (119, 48055), (120, 48052), (133, 48001),

Gene: Epah\_48 Start: 47146, Stop: 46748, Start Num: 45  
Candidate Starts for Epah\_48:  
(Start: 45 @47146 has 19 MA's), (74, 47098), (75, 47095), (85, 47074), (127, 46828), (135, 46792),

Gene: Equemioh13\_37 Start: 27705, Stop: 28100, Start Num: 52  
Candidate Starts for Equemioh13\_37:  
(Start: 52 @27705 has 47 MA's), (116, 27963), (119, 27993), (132, 28029),

Gene: Erdmann\_27 Start: 8699, Stop: 9055, Start Num: 67  
Candidate Starts for Erdmann\_27:  
(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Eremos\_55 Start: 48330, Stop: 47962, Start Num: 64  
Candidate Starts for Eremos\_55:  
(14, 48534), (16, 48489), (18, 48459), (38, 48372), (Start: 62 @48333 has 161 MA's), (Start: 64 @48330 has 125 MA's), (81, 48291), (96, 48219), (97, 48210), (119, 48048), (120, 48045), (133, 47994),

Gene: Erk16\_55 Start: 42824, Stop: 43204, Start Num: 57  
Candidate Starts for Erk16\_55:  
(Start: 57 @42824 has 22 MA's), (76, 42857), (77, 42860), (78, 42863), (93, 42917), (94, 42920), (111, 43040), (133, 43151), (134, 43154),

Gene: ErnieJ\_27 Start: 8522, Stop: 8878, Start Num: 67  
Candidate Starts for ErnieJ\_27:  
(Start: 67 @8522 has 189 MA's), (112, 8729), (133, 8825),

Gene: Essence\_25 Start: 7876, Stop: 8232, Start Num: 67

Candidate Starts for Essence\_25:

(Start: 67 @7876 has 189 MA's), (98, 7990), (112, 8083), (133, 8179),

Gene: Etaye\_56 Start: 49163, Stop: 48792, Start Num: 62

Candidate Starts for Etaye\_56:

(14, 49364), (16, 49319), (18, 49289), (Start: 62 @49163 has 161 MA's), (Start: 64 @49160 has 125 MA's), (81, 49121), (97, 49040), (119, 48878), (120, 48875), (133, 48824),

Gene: Eugenia\_56 Start: 48725, Stop: 48357, Start Num: 64

Candidate Starts for Eugenia\_56:

(14, 48929), (16, 48884), (18, 48854), (Start: 62 @48728 has 161 MA's), (Start: 64 @48725 has 125 MA's), (81, 48686), (97, 48605), (119, 48443), (120, 48440), (133, 48389),

Gene: Evanesce\_42 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for Evanesce\_42:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: EvilGenius\_38 Start: 29002, Stop: 29385, Start Num: 52

Candidate Starts for EvilGenius\_38:

(Start: 52 @29002 has 47 MA's), (94, 29086), (110, 29194), (116, 29245), (119, 29275), (143, 29362),

Gene: Ewok\_26 Start: 8702, Stop: 9058, Start Num: 67

Candidate Starts for Ewok\_26:

(1, 8036), (2, 8114), (13, 8468), (Start: 67 @8702 has 189 MA's), (98, 8816), (112, 8909), (133, 9005),

Gene: Faiyaz\_105 Start: 64943, Stop: 65281, Start Num: 54

Candidate Starts for Faiyaz\_105:

(Start: 54 @64943 has 3 MA's), (61, 64955), (82, 64994), (83, 64997), (114, 65153),

Gene: Fameo\_36 Start: 27420, Stop: 27818, Start Num: 52

Candidate Starts for Fameo\_36:

(Start: 52 @27420 has 47 MA's), (110, 27627), (121, 27717), (132, 27747), (139, 27786),

Gene: Familton\_76 Start: 47544, Stop: 47167, Start Num: 55

Candidate Starts for Familton\_76:

(Start: 55 @47544 has 26 MA's), (82, 47484), (86, 47472), (98, 47409), (112, 47316), (114, 47310), (117, 47265), (130, 47220), (137, 47181), (138, 47178),

Gene: Fanaw\_48 Start: 47836, Stop: 47438, Start Num: 45

Candidate Starts for Fanaw\_48:

(Start: 45 @47836 has 19 MA's), (74, 47788), (75, 47785), (85, 47764), (120, 47539), (127, 47518), (135, 47482),

Gene: Fang\_57 Start: 48315, Stop: 47947, Start Num: 64

Candidate Starts for Fang\_57:

(14, 48519), (16, 48474), (18, 48444), (Start: 62 @48318 has 161 MA's), (Start: 64 @48315 has 125 MA's), (81, 48276), (97, 48195), (119, 48033), (120, 48030), (133, 47979),

Gene: Findley\_39 Start: 31490, Stop: 31107, Start Num: 36

Candidate Starts for Findley\_39:

(Start: 36 @31490 has 11 MA's), (95, 31367), (104, 31316), (112, 31259), (121, 31187), (133, 31142), (139, 31118),

Gene: Firecracker\_77 Start: 47969, Stop: 47544, Start Num: 29

Candidate Starts for Firecracker\_77:

(Start: 29 @47969 has 4 MA's), (Start: 55 @47921 has 26 MA's), (82, 47861), (86, 47849), (98, 47786), (112, 47693), (114, 47687), (117, 47642), (130, 47597), (137, 47558), (138, 47555),

Gene: FiringLine\_36 Start: 27245, Stop: 27628, Start Num: 52

Candidate Starts for FiringLine\_36:

(Start: 52 @27245 has 47 MA's), (94, 27329), (110, 27437), (116, 27488), (119, 27518), (143, 27605),

Gene: Fixie\_23 Start: 7324, Stop: 7680, Start Num: 67

Candidate Starts for Fixie\_23:

(Start: 67 @7324 has 189 MA's), (112, 7531), (133, 7627),

Gene: Flabslab\_27 Start: 8632, Stop: 8988, Start Num: 67

Candidate Starts for Flabslab\_27:

(Start: 67 @8632 has 189 MA's), (112, 8839), (133, 8935),

Gene: Flake\_56 Start: 48372, Stop: 48004, Start Num: 64

Candidate Starts for Flake\_56:

(14, 48576), (16, 48531), (18, 48501), (Start: 62 @48375 has 161 MA's), (Start: 64 @48372 has 125 MA's), (81, 48333), (87, 48315), (96, 48261), (97, 48252), (119, 48090), (120, 48087), (133, 48036),

Gene: Flare16\_36 Start: 27377, Stop: 27772, Start Num: 52

Candidate Starts for Flare16\_36:

(Start: 52 @27377 has 47 MA's), (116, 27635), (119, 27665), (132, 27701),

Gene: FleetyMac\_57 Start: 48317, Stop: 47946, Start Num: 62

Candidate Starts for FleetyMac\_57:

(14, 48518), (16, 48473), (18, 48443), (Start: 62 @48317 has 161 MA's), (Start: 64 @48314 has 125 MA's), (81, 48275), (97, 48194), (119, 48032), (120, 48029), (133, 47978),

Gene: Fludd\_25 Start: 7577, Stop: 7933, Start Num: 67

Candidate Starts for Fludd\_25:

(Start: 67 @7577 has 189 MA's), (112, 7784), (133, 7880),

Gene: FluffyNinja\_57 Start: 48329, Stop: 47961, Start Num: 64

Candidate Starts for FluffyNinja\_57:

(14, 48533), (16, 48488), (18, 48458), (Start: 62 @48332 has 161 MA's), (Start: 64 @48329 has 125 MA's), (81, 48290), (97, 48209), (119, 48047), (120, 48044), (133, 47993),

Gene: Fongie\_26 Start: 9234, Stop: 9590, Start Num: 67

Candidate Starts for Fongie\_26:

(Start: 67 @9234 has 189 MA's), (98, 9348), (112, 9441), (133, 9537),

Gene: Forge\_41 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for Forge\_41:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: FoulBall\_76 Start: 47587, Stop: 47210, Start Num: 55

Candidate Starts for FoulBall\_76:

(Start: 55 @47587 has 26 MA's), (82, 47527), (86, 47515), (98, 47452), (112, 47359), (114, 47353), (117, 47308), (130, 47263), (137, 47224), (138, 47221),

Gene: Fowlmouth\_56 Start: 39448, Stop: 39924, Start Num: 22

Candidate Starts for Fowlmouth\_56:

(Start: 22 @39448 has 2 MA's), (33, 39502), (Start: 52 @39529 has 47 MA's), (Start: 53 @39532 has 1 MA's), (77, 39577), (81, 39586), (89, 39613), (94, 39640), (134, 39871),

Gene: FoxtrotP1\_26 Start: 9027, Stop: 9383, Start Num: 67

Candidate Starts for FoxtrotP1\_26:

(Start: 67 @9027 has 189 MA's), (98, 9141), (112, 9234), (133, 9330),

Gene: Fozzie\_55 Start: 48666, Stop: 48295, Start Num: 62

Candidate Starts for Fozzie\_55:

(14, 48867), (16, 48822), (18, 48792), (38, 48705), (Start: 62 @48666 has 161 MA's), (Start: 64 @48663 has 125 MA's), (81, 48624), (96, 48552), (119, 48381), (120, 48378), (133, 48327),

Gene: Frankicide\_55 Start: 48361, Stop: 47993, Start Num: 64

Candidate Starts for Frankicide\_55:

(14, 48565), (16, 48520), (18, 48490), (38, 48403), (Start: 62 @48364 has 161 MA's), (Start: 64 @48361 has 125 MA's), (81, 48322), (97, 48241), (119, 48079), (120, 48076), (133, 48025),

Gene: FrayBell\_32 Start: 10270, Stop: 10626, Start Num: 67

Candidate Starts for FrayBell\_32:

(Start: 67 @10270 has 189 MA's), (98, 10384), (112, 10477), (133, 10573),

Gene: FremontTroll\_57 Start: 48931, Stop: 48560, Start Num: 62

Candidate Starts for FremontTroll\_57:

(14, 49132), (16, 49087), (18, 49057), (Start: 62 @48931 has 161 MA's), (Start: 64 @48928 has 125 MA's), (81, 48889), (96, 48817), (119, 48646), (120, 48643), (133, 48592),

Gene: Freya\_54 Start: 48022, Stop: 47654, Start Num: 64

Candidate Starts for Freya\_54:

(14, 48226), (16, 48181), (18, 48151), (Start: 62 @48025 has 161 MA's), (Start: 64 @48022 has 125 MA's), (81, 47983), (97, 47902), (119, 47740), (120, 47737), (133, 47686),

Gene: FriarPreacher\_55 Start: 48209, Stop: 47838, Start Num: 62

Candidate Starts for FriarPreacher\_55:

(9, 48554), (14, 48410), (16, 48365), (18, 48335), (Start: 62 @48209 has 161 MA's), (Start: 64 @48206 has 125 MA's), (81, 48167), (97, 48086), (119, 47924), (120, 47921), (133, 47870),

Gene: Fringe\_60 Start: 49243, Stop: 48872, Start Num: 62

Candidate Starts for Fringe\_60:

(14, 49444), (16, 49399), (18, 49369), (Start: 62 @49243 has 161 MA's), (Start: 64 @49240 has 125 MA's), (81, 49201), (97, 49120), (119, 48958), (120, 48955), (133, 48904),

Gene: FudgeTart\_27 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for FudgeTart\_27:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: FugateOSU\_56 Start: 48867, Stop: 48499, Start Num: 64

Candidate Starts for FugateOSU\_56:

(14, 49071), (16, 49026), (18, 48996), (Start: 62 @48870 has 161 MA's), (Start: 64 @48867 has 125 MA's), (81, 48828), (97, 48747), (119, 48585), (120, 48582), (133, 48531),

Gene: Fulbright\_41 Start: 29739, Stop: 30137, Start Num: 44

Candidate Starts for Fulbright\_41:

(Start: 44 @29739 has 32 MA's), (75, 29790), (81, 29805), (112, 29988), (114, 29994), (125, 30045), (131, 30066), (132, 30069), (133, 30084), (139, 30108), (145, 30123), (147, 30126),

Gene: Gabriel\_26 Start: 7573, Stop: 7929, Start Num: 67

Candidate Starts for Gabriel\_26:

(Start: 67 @7573 has 189 MA's), (98, 7687), (112, 7780), (133, 7876),

Gene: Gamgam\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for Gamgam\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Gancho\_42 Start: 33132, Stop: 32614, Start Num: 17

Candidate Starts for Gancho\_42:

(Start: 17 @33132 has 4 MA's), (26, 33078), (Start: 32 @33039 has 17 MA's), (Start: 50 @33015 has 4 MA's), (73, 32973), (74, 32970), (82, 32949), (88, 32928), (94, 32898), (109, 32796), (132, 32682), (133, 32667), (134, 32664), (139, 32643), (148, 32622),

Gene: Gareth\_56 Start: 48864, Stop: 48493, Start Num: 62

Candidate Starts for Gareth\_56:

(14, 49065), (16, 49020), (18, 48990), (Start: 62 @48864 has 161 MA's), (Start: 64 @48861 has 125 MA's), (81, 48822), (97, 48741), (119, 48579), (120, 48576), (133, 48525),

Gene: GaugeLDP\_37 Start: 27993, Stop: 28460, Start Num: 27

Candidate Starts for GaugeLDP\_37:

(Start: 27 @27993 has 1 MA's), (71, 28089), (78, 28107), (101, 28209), (110, 28269), (116, 28320), (119, 28350), (128, 28374), (143, 28437), (145, 28440), (147, 28443),

Gene: GeneCoco\_56 Start: 48660, Stop: 48289, Start Num: 62

Candidate Starts for GeneCoco\_56:

(8, 49020), (14, 48861), (16, 48816), (18, 48786), (Start: 62 @48660 has 161 MA's), (Start: 64 @48657 has 125 MA's), (81, 48618), (87, 48600), (96, 48546), (97, 48537), (119, 48375), (120, 48372), (133, 48321),

Gene: Georgie2\_37 Start: 27290, Stop: 27673, Start Num: 52

Candidate Starts for Georgie2\_37:

(Start: 52 @27290 has 47 MA's), (94, 27374), (110, 27482), (116, 27533), (119, 27563), (143, 27650),

Gene: Gex\_42 Start: 30666, Stop: 31064, Start Num: 44

Candidate Starts for Gex\_42:

(Start: 44 @30666 has 32 MA's), (75, 30717), (81, 30732), (112, 30915), (114, 30921), (125, 30972), (131, 30993), (132, 30996), (133, 31011), (139, 31035), (145, 31050), (147, 31053),

Gene: Ghost\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for Ghost\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Giles\_41 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for Giles\_41:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: GinPorsche\_49 Start: 47146, Stop: 46748, Start Num: 45

Candidate Starts for GinPorsche\_49:

(Start: 45 @47146 has 19 MA's), (74, 47098), (75, 47095), (85, 47074), (127, 46828), (135, 46792),

Gene: Giraffe\_57 Start: 48860, Stop: 48489, Start Num: 62

Candidate Starts for Giraffe\_57:

(14, 49061), (16, 49016), (18, 48986), (Start: 62 @48860 has 161 MA's), (Start: 64 @48857 has 125 MA's), (81, 48818), (96, 48746), (119, 48575), (120, 48572), (133, 48521),

Gene: Giuseppe\_57 Start: 42690, Stop: 43070, Start Num: 57

Candidate Starts for Giuseppe\_57:

(Start: 57 @42690 has 22 MA's), (76, 42723), (77, 42726), (78, 42729), (93, 42783), (94, 42786), (111, 42906), (133, 43017), (134, 43020),

Gene: Gizmo\_28 Start: 8701, Stop: 9057, Start Num: 67

Candidate Starts for Gizmo\_28:

(Start: 67 @8701 has 189 MA's), (112, 8908), (133, 9004),

Gene: GlutenPhree\_27 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for GlutenPhree\_27:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: GodPhather\_45 Start: 40971, Stop: 41372, Start Num: 41

Candidate Starts for GodPhather\_45:

(Start: 41 @40971 has 11 MA's), (Start: 52 @40986 has 47 MA's), (109, 41202), (110, 41208), (112, 41223), (126, 41283), (131, 41301), (132, 41304), (133, 41319), (145, 41358), (147, 41361),

Gene: Gophee\_57 Start: 48604, Stop: 48233, Start Num: 62

Candidate Starts for Gophee\_57:

(14, 48805), (16, 48760), (18, 48730), (Start: 62 @48604 has 161 MA's), (Start: 64 @48601 has 125 MA's), (81, 48562), (97, 48481), (119, 48319), (120, 48316), (133, 48265),

Gene: Grand2040\_56 Start: 48851, Stop: 48483, Start Num: 64

Candidate Starts for Grand2040\_56:

(14, 49055), (16, 49010), (18, 48980), (Start: 62 @48854 has 161 MA's), (Start: 64 @48851 has 125 MA's), (81, 48812), (96, 48740), (119, 48569), (120, 48566), (133, 48515),

Gene: Grasshills\_30 Start: 9676, Stop: 10035, Start Num: 67

Candidate Starts for Grasshills\_30:

(Start: 67 @9676 has 189 MA's), (98, 9790), (112, 9883), (133, 9982),

Gene: Gratitude\_36 Start: 27705, Stop: 28100, Start Num: 52

Candidate Starts for Gratitude\_36:

(Start: 52 @27705 has 47 MA's), (116, 27963), (119, 27993), (132, 28029),

Gene: Gravaillia\_42 Start: 33359, Stop: 32934, Start Num: 32

Candidate Starts for Gravaillia\_42:

(Start: 17 @33452 has 4 MA's), (Start: 32 @33359 has 17 MA's), (Start: 50 @33335 has 4 MA's), (74, 33290), (82, 33269), (88, 33248), (109, 33116), (132, 33002), (133, 32987), (139, 32963),

Gene: GreenChile\_57 Start: 48346, Stop: 47975, Start Num: 62

Candidate Starts for GreenChile\_57:

(14, 48547), (16, 48502), (18, 48472), (38, 48385), (Start: 62 @48346 has 161 MA's), (Start: 64 @48343 has 125 MA's), (81, 48304), (97, 48223), (119, 48061), (120, 48058), (133, 48007),

Gene: Grungle\_19 Start: 6273, Stop: 6629, Start Num: 67

Candidate Starts for Grungle\_19:

(Start: 67 @6273 has 189 MA's), (112, 6480), (133, 6576),

Gene: Gumball\_55 Start: 42916, Stop: 43296, Start Num: 57

Candidate Starts for Gumball\_55:

(Start: 57 @42916 has 22 MA's), (76, 42949), (77, 42952), (78, 42955), (93, 43009), (94, 43012), (111, 43132), (133, 43243), (134, 43246),

Gene: Guwapp\_26 Start: 8111, Stop: 8467, Start Num: 67

Candidate Starts for Guwapp\_26:

(Start: 67 @8111 has 189 MA's), (98, 8225), (112, 8318), (133, 8414),

Gene: Gwennie1\_56 Start: 48707, Stop: 48339, Start Num: 64

Candidate Starts for Gwennie1\_56:

(14, 48911), (16, 48866), (18, 48836), (Start: 62 @48710 has 161 MA's), (Start: 64 @48707 has 125 MA's), (81, 48668), (96, 48596), (97, 48587), (119, 48425), (120, 48422), (133, 48371),

Gene: Gwilliam\_57 Start: 49214, Stop: 48846, Start Num: 64

Candidate Starts for Gwilliam\_57:

(14, 49418), (16, 49373), (18, 49343), (Start: 62 @49217 has 161 MA's), (Start: 64 @49214 has 125 MA's), (81, 49175), (97, 49094), (119, 48932), (120, 48929), (133, 48878),

Gene: Gyarad\_0054 Start: 47699, Stop: 47328, Start Num: 62

Candidate Starts for Gyarad\_0054:

(14, 47900), (16, 47855), (18, 47825), (38, 47738), (Start: 62 @47699 has 161 MA's), (Start: 64 @47696 has 125 MA's), (81, 47657), (97, 47576), (119, 47414), (120, 47411), (133, 47360),

Gene: HH92\_42 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for HH92\_42:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: HSavage\_55 Start: 48340, Stop: 47972, Start Num: 64

Candidate Starts for HSavage\_55:

(14, 48544), (16, 48499), (18, 48469), (38, 48382), (Start: 62 @48343 has 161 MA's), (Start: 64 @48340 has 125 MA's), (81, 48301), (97, 48220), (119, 48058), (120, 48055), (133, 48004),

Gene: Hadrien\_43 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for Hadrien\_43:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: Hail\_41 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for Hail\_41:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: Haimas\_55 Start: 48359, Stop: 47988, Start Num: 62

Candidate Starts for Haimas\_55:

(14, 48560), (16, 48515), (18, 48485), (Start: 62 @48359 has 161 MA's), (Start: 64 @48356 has 125 MA's), (81, 48317), (97, 48236), (119, 48074), (120, 48071), (133, 48020),

Gene: Haleema\_55 Start: 48358, Stop: 47987, Start Num: 62

Candidate Starts for Haleema\_55:

(14, 48559), (16, 48514), (18, 48484), (Start: 62 @48358 has 161 MA's), (Start: 64 @48355 has 125 MA's), (81, 48316), (96, 48244), (119, 48073), (120, 48070), (133, 48019),

Gene: Halldule\_22 Start: 6943, Stop: 7299, Start Num: 67

Candidate Starts for Halldule\_22:

(Start: 67 @6943 has 189 MA's), (112, 7150), (133, 7246),

Gene: Hally898\_48 Start: 47161, Stop: 46760, Start Num: 45

Candidate Starts for Hally898\_48:

(Start: 45 @47161 has 19 MA's), (74, 47113), (75, 47110), (76, 47107), (85, 47086), (127, 46840), (135, 46804),

Gene: Hamish\_55 Start: 48352, Stop: 47981, Start Num: 62

Candidate Starts for Hamish\_55:

(8, 48712), (14, 48553), (16, 48508), (18, 48478), (38, 48391), (Start: 62 @48352 has 161 MA's), (Start: 64 @48349 has 125 MA's), (97, 48229), (119, 48067), (120, 48064), (133, 48013),

Gene: Hammy\_72 Start: 50000, Stop: 50383, Start Num: 40

Candidate Starts for Hammy\_72:

(Start: 40 @50000 has 18 MA's), (Start: 45 @50006 has 19 MA's), (77, 50060), (101, 50147), (106, 50186), (112, 50222), (129, 50315), (132, 50324),

Gene: Happabalu\_56 Start: 48894, Stop: 48523, Start Num: 62

Candidate Starts for Happabalu\_56:

(14, 49095), (16, 49050), (18, 49020), (Start: 62 @48894 has 161 MA's), (Start: 64 @48891 has 125 MA's), (81, 48852), (97, 48771), (119, 48609), (120, 48606), (133, 48555),

Gene: HarryHoudini\_38 Start: 27804, Stop: 28184, Start Num: 52

Candidate Starts for HarryHoudini\_38:

(Start: 52 @27804 has 47 MA's), (119, 28077), (121, 28083), (132, 28113),

Gene: Hartsy\_57 Start: 48692, Stop: 48321, Start Num: 62

Candidate Starts for Hartsy\_57:

(14, 48893), (16, 48848), (18, 48818), (Start: 62 @48692 has 161 MA's), (Start: 64 @48689 has 125 MA's), (81, 48650), (97, 48569), (119, 48407), (120, 48404), (133, 48353),

Gene: Harvey\_55 Start: 48389, Stop: 48018, Start Num: 62

Candidate Starts for Harvey\_55:

(14, 48590), (16, 48545), (18, 48515), (Start: 62 @48389 has 161 MA's), (Start: 64 @48386 has 125 MA's), (81, 48347), (97, 48266), (119, 48104), (120, 48101), (133, 48050),

Gene: Heath\_48 Start: 47727, Stop: 47389, Start Num: 80  
Candidate Starts for Heath\_48:  
(Start: 80 @47727 has 1 MA's), (127, 47469), (135, 47433),

Gene: Hekos\_53 Start: 47731, Stop: 47360, Start Num: 62  
Candidate Starts for Hekos\_53:  
(14, 47932), (16, 47887), (18, 47857), (38, 47770), (Start: 62 @47731 has 161 MA's), (Start: 64 @47728 has 125 MA's), (81, 47689), (97, 47608), (119, 47446), (120, 47443), (133, 47392),

Gene: Held\_56 Start: 48360, Stop: 47992, Start Num: 64  
Candidate Starts for Held\_56:  
(14, 48564), (16, 48519), (18, 48489), (Start: 62 @48363 has 161 MA's), (Start: 64 @48360 has 125 MA's), (81, 48321), (96, 48249), (119, 48078), (120, 48075), (133, 48024),

Gene: Helpful\_59 Start: 43051, Stop: 43431, Start Num: 57  
Candidate Starts for Helpful\_59:  
(Start: 57 @43051 has 22 MA's), (76, 43084), (77, 43087), (78, 43090), (93, 43144), (94, 43147), (111, 43267), (133, 43378), (134, 43381),

Gene: HenryJackson\_56 Start: 48885, Stop: 48517, Start Num: 64  
Candidate Starts for HenryJackson\_56:  
(14, 49089), (16, 49044), (18, 49014), (Start: 62 @48888 has 161 MA's), (Start: 64 @48885 has 125 MA's), (81, 48846), (97, 48765), (119, 48603), (120, 48600), (133, 48549),

Gene: Hertubise\_56 Start: 48655, Stop: 48284, Start Num: 62  
Candidate Starts for Hertubise\_56:  
(14, 48856), (16, 48811), (18, 48781), (Start: 62 @48655 has 161 MA's), (Start: 64 @48652 has 125 MA's), (81, 48613), (97, 48532), (119, 48370), (120, 48367), (133, 48316),

Gene: Hetaeria\_55 Start: 48387, Stop: 48019, Start Num: 64  
Candidate Starts for Hetaeria\_55:  
(14, 48591), (16, 48546), (18, 48516), (38, 48429), (Start: 62 @48390 has 161 MA's), (Start: 64 @48387 has 125 MA's), (81, 48348), (96, 48276), (119, 48105), (120, 48102), (133, 48051),

Gene: HighStump\_58 Start: 48866, Stop: 48495, Start Num: 62  
Candidate Starts for HighStump\_58:  
(14, 49067), (16, 49022), (18, 48992), (Start: 62 @48866 has 161 MA's), (Start: 64 @48863 has 125 MA's), (81, 48824), (97, 48743), (119, 48581), (120, 48578), (133, 48527),

Gene: Hilltopfarm\_107 Start: 65766, Stop: 66104, Start Num: 54  
Candidate Starts for Hilltopfarm\_107:  
(Start: 54 @65766 has 3 MA's), (61, 65778), (82, 65817), (83, 65820), (114, 65976),

Gene: HippoHollow\_35 Start: 28591, Stop: 28971, Start Num: 52  
Candidate Starts for HippoHollow\_35:  
(Start: 52 @28591 has 47 MA's), (94, 28672), (100, 28714), (119, 28864), (128, 28888),

Gene: Hocus\_56 Start: 48346, Stop: 47978, Start Num: 64  
Candidate Starts for Hocus\_56:  
(8, 48709), (14, 48550), (16, 48505), (18, 48475), (Start: 62 @48349 has 161 MA's), (Start: 64 @48346 has 125 MA's), (81, 48307), (87, 48289), (96, 48235), (97, 48226), (119, 48064), (120, 48061), (133, 48010),

Gene: HogWash\_56 Start: 49185, Stop: 48814, Start Num: 62

Candidate Starts for HogWash\_56:

(14, 49386), (16, 49341), (18, 49311), (Start: 62 @49185 has 161 MA's), (Start: 64 @49182 has 125 MA's), (81, 49143), (97, 49062), (119, 48900), (120, 48897), (133, 48846),

Gene: Horchata\_55 Start: 48343, Stop: 47972, Start Num: 62

Candidate Starts for Horchata\_55:

(14, 48544), (16, 48499), (18, 48469), (38, 48382), (Start: 62 @48343 has 161 MA's), (Start: 64 @48340 has 125 MA's), (81, 48301), (97, 48220), (119, 48058), (120, 48055), (133, 48004),

Gene: Hurricane\_75 Start: 49943, Stop: 50338, Start Num: 34

Candidate Starts for Hurricane\_75:

(Start: 34 @49943 has 6 MA's), (Start: 56 @49979 has 3 MA's), (77, 50015), (96, 50072), (112, 50177), (116, 50213), (132, 50279), (144, 50330),

Gene: HyRo\_25 Start: 8889, Stop: 9245, Start Num: 67

Candidate Starts for HyRo\_25:

(Start: 67 @8889 has 189 MA's), (112, 9096), (133, 9192),

Gene: Hydro\_49 Start: 48214, Stop: 47816, Start Num: 45

Candidate Starts for Hydro\_49:

(Start: 45 @48214 has 19 MA's), (74, 48166), (75, 48163), (85, 48142), (120, 47917), (127, 47896), (135, 47860),

Gene: I3\_28 Start: 9266, Stop: 9622, Start Num: 67

Candidate Starts for I3\_28:

(Start: 67 @9266 has 189 MA's), (98, 9380), (112, 9473), (133, 9569),

Gene: Ibrahim\_40 Start: 31491, Stop: 31892, Start Num: 39

Candidate Starts for Ibrahim\_40:

(12, 31248), (Start: 39 @31491 has 5 MA's), (Start: 53 @31509 has 1 MA's), (101, 31665), (108, 31716), (112, 31740), (133, 31860), (134, 31863),

Gene: IdentityCrisis\_40 Start: 28510, Stop: 28902, Start Num: 44

Candidate Starts for IdentityCrisis\_40:

(Start: 44 @28510 has 32 MA's), (Start: 53 @28519 has 1 MA's), (75, 28555), (114, 28759), (125, 28810), (132, 28834), (134, 28852), (145, 28888),

Gene: Idergollasper\_75 Start: 47538, Stop: 47161, Start Num: 55

Candidate Starts for Idergollasper\_75:

(Start: 55 @47538 has 26 MA's), (82, 47478), (86, 47466), (98, 47403), (112, 47310), (114, 47304), (117, 47259), (130, 47214), (137, 47175), (138, 47172),

Gene: IkeLoa\_22 Start: 8000, Stop: 8356, Start Num: 67

Candidate Starts for IkeLoa\_22:

(Start: 67 @8000 has 189 MA's), (98, 8114), (112, 8207), (133, 8303),

Gene: Imara\_74 Start: 47387, Stop: 47010, Start Num: 55

Candidate Starts for Imara\_74:

(Start: 55 @47387 has 26 MA's), (82, 47327), (86, 47315), (98, 47252), (112, 47159), (114, 47153), (117, 47108), (130, 47063), (137, 47024), (138, 47021),

Gene: ImtiyazSitla\_57 Start: 48338, Stop: 47967, Start Num: 62

Candidate Starts for ImtiyazSitla\_57:

(8, 48698), (14, 48539), (16, 48494), (18, 48464), (Start: 62 @48338 has 161 MA's), (Start: 64 @48335 has 125 MA's), (81, 48296), (87, 48278), (96, 48224), (97, 48215), (119, 48053), (120, 48050), (133, 47999),

Gene: Inchworm\_58 Start: 48737, Stop: 48366, Start Num: 62

Candidate Starts for Inchworm\_58:

(14, 48938), (16, 48893), (18, 48863), (Start: 62 @48737 has 161 MA's), (Start: 64 @48734 has 125 MA's), (81, 48695), (97, 48614), (119, 48452), (120, 48449), (133, 48398),

Gene: Indlulamithi\_55 Start: 41815, Stop: 42213, Start Num: 47

Candidate Starts for Indlulamithi\_55:

(42, 41809), (Start: 47 @41815 has 1 MA's), (86, 41890), (124, 42121),

Gene: InigoMontoya\_27 Start: 8115, Stop: 8471, Start Num: 67

Candidate Starts for InigoMontoya\_27:

(Start: 67 @8115 has 189 MA's), (98, 8229), (112, 8322), (133, 8418),

Gene: InterFolia\_33 Start: 10805, Stop: 11161, Start Num: 67

Candidate Starts for InterFolia\_33:

(Start: 67 @10805 has 189 MA's), (98, 10919), (112, 11012), (133, 11108),

Gene: Inverness\_55 Start: 48352, Stop: 47981, Start Num: 62

Candidate Starts for Inverness\_55:

(14, 48553), (16, 48508), (18, 48478), (38, 48391), (Start: 62 @48352 has 161 MA's), (Start: 64 @48349 has 125 MA's), (81, 48310), (96, 48238), (119, 48067), (120, 48064), (133, 48013),

Gene: Iota\_23 Start: 8234, Stop: 8590, Start Num: 67

Candidate Starts for Iota\_23:

(Start: 67 @8234 has 189 MA's), (112, 8441), (133, 8537),

Gene: Iridessa\_57 Start: 48307, Stop: 47939, Start Num: 64

Candidate Starts for Iridessa\_57:

(14, 48511), (16, 48466), (18, 48436), (Start: 62 @48310 has 161 MA's), (Start: 64 @48307 has 125 MA's), (81, 48268), (97, 48187), (119, 48025), (120, 48022), (133, 47971),

Gene: Iridoclysis\_57 Start: 48632, Stop: 48264, Start Num: 64

Candidate Starts for Iridoclysis\_57:

(14, 48836), (16, 48791), (18, 48761), (Start: 62 @48635 has 161 MA's), (Start: 64 @48632 has 125 MA's), (81, 48593), (96, 48521), (119, 48350), (120, 48347), (133, 48296),

Gene: IsaacEli\_57 Start: 48873, Stop: 48505, Start Num: 64

Candidate Starts for IsaacEli\_57:

(14, 49077), (16, 49032), (18, 49002), (Start: 62 @48876 has 161 MA's), (Start: 64 @48873 has 125 MA's), (81, 48834), (97, 48753), (119, 48591), (120, 48588), (133, 48537),

Gene: Issimir\_26 Start: 8694, Stop: 9050, Start Num: 67

Candidate Starts for Issimir\_26:

(13, 8460), (Start: 67 @8694 has 189 MA's), (98, 8808), (112, 8901), (133, 8997),

Gene: Izajani\_27 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for Izajani\_27:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: JAMaL\_49 Start: 48340, Stop: 47954, Start Num: 45

Candidate Starts for JAMaL\_49:

(5, 48673), (Start: 45 @48340 has 19 MA's), (Start: 48 @48337 has 1 MA's), (74, 48301), (75, 48298), (120, 48055), (127, 48034), (135, 47998),

Gene: JDog\_55 Start: 48889, Stop: 48521, Start Num: 64

Candidate Starts for JDog\_55:

(14, 49093), (16, 49048), (18, 49018), (Start: 62 @48892 has 161 MA's), (Start: 64 @48889 has 125 MA's), (81, 48850), (97, 48769), (119, 48607), (120, 48604), (133, 48553),

Gene: JPickles\_24 Start: 7351, Stop: 7707, Start Num: 67

Candidate Starts for JPickles\_24:

(Start: 67 @7351 has 189 MA's), (112, 7558), (133, 7654),

Gene: JacAttac\_57 Start: 48297, Stop: 47926, Start Num: 62

Candidate Starts for JacAttac\_57:

(14, 48498), (16, 48453), (18, 48423), (Start: 62 @48297 has 161 MA's), (Start: 64 @48294 has 125 MA's), (81, 48255), (97, 48174), (119, 48012), (120, 48009), (133, 47958),

Gene: JacoRen57\_55 Start: 43848, Stop: 44240, Start Num: 48

Candidate Starts for JacoRen57\_55:

(Start: 48 @43848 has 1 MA's), (Start: 67 @43881 has 189 MA's), (81, 43917), (103, 44025), (106, 44049), (112, 44085), (127, 44175), (140, 44229),

Gene: JaguarMi\_51 Start: 49281, Stop: 48883, Start Num: 45

Candidate Starts for JaguarMi\_51:

(Start: 45 @49281 has 19 MA's), (72, 49239), (74, 49233), (75, 49230), (120, 48984), (127, 48963), (135, 48927),

Gene: JakeO\_56 Start: 48368, Stop: 47997, Start Num: 62

Candidate Starts for JakeO\_56:

(14, 48569), (16, 48524), (18, 48494), (38, 48407), (Start: 62 @48368 has 161 MA's), (Start: 64 @48365 has 125 MA's), (81, 48326), (96, 48254), (119, 48083), (120, 48080), (133, 48029),

Gene: Jamie19\_40 Start: 29847, Stop: 30245, Start Num: 44

Candidate Starts for Jamie19\_40:

(Start: 44 @29847 has 32 MA's), (75, 29898), (81, 29913), (112, 30096), (114, 30102), (125, 30153), (131, 30174), (132, 30177), (133, 30192), (139, 30216), (145, 30231), (147, 30234),

Gene: JangDynasty\_75 Start: 47605, Stop: 47228, Start Num: 55

Candidate Starts for JangDynasty\_75:

(Start: 55 @47605 has 26 MA's), (82, 47545), (86, 47533), (98, 47470), (112, 47377), (114, 47371), (117, 47326), (130, 47281), (137, 47242), (138, 47239),

Gene: JangoPhett\_56 Start: 48637, Stop: 48275, Start Num: 62

Candidate Starts for JangoPhett\_56:

(8, 48997), (14, 48838), (16, 48793), (18, 48763), (Start: 62 @48637 has 161 MA's), (Start: 64 @48634 has 125 MA's), (81, 48595), (87, 48577), (96, 48532), (97, 48523), (119, 48361), (120, 48358), (133, 48307),

Gene: Janiyra\_26 Start: 8133, Stop: 8489, Start Num: 67

Candidate Starts for Janiyra\_26:  
(Start: 67 @8133 has 189 MA's), (98, 8247), (112, 8340), (133, 8436),

Gene: JayJay\_29 Start: 8667, Stop: 9023, Start Num: 67  
Candidate Starts for JayJay\_29:  
(Start: 67 @8667 has 189 MA's), (98, 8781), (112, 8874), (133, 8970),

Gene: Jaygup\_26 Start: 8150, Stop: 8506, Start Num: 67  
Candidate Starts for Jaygup\_26:  
(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Jedediah\_26 Start: 7619, Stop: 7975, Start Num: 67  
Candidate Starts for Jedediah\_26:  
(Start: 67 @7619 has 189 MA's), (98, 7733), (112, 7826), (133, 7922),

Gene: Jemmno\_26 Start: 8154, Stop: 8510, Start Num: 67  
Candidate Starts for Jemmno\_26:  
(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Jeon\_44 Start: 40713, Stop: 41114, Start Num: 41  
Candidate Starts for Jeon\_44:  
(Start: 41 @40713 has 11 MA's), (Start: 52 @40728 has 47 MA's), (109, 40944), (110, 40950), (112, 40965), (126, 41025), (131, 41043), (132, 41046), (133, 41061), (145, 41100), (147, 41103),

Gene: Jerm\_37 Start: 27620, Stop: 28018, Start Num: 52  
Candidate Starts for Jerm\_37:  
(Start: 52 @27620 has 47 MA's), (78, 27668), (119, 27911), (121, 27917), (132, 27947),

Gene: Jesabah\_57 Start: 48890, Stop: 48522, Start Num: 64  
Candidate Starts for Jesabah\_57:  
(14, 49094), (16, 49049), (18, 49019), (Start: 62 @48893 has 161 MA's), (Start: 64 @48890 has 125 MA's), (81, 48851), (97, 48770), (119, 48608), (120, 48605), (133, 48554),

Gene: Jessibeth14\_25 Start: 8422, Stop: 8778, Start Num: 67  
Candidate Starts for Jessibeth14\_25:  
(Start: 67 @8422 has 189 MA's), (112, 8629), (133, 8725),

Gene: Jezreel\_25 Start: 8171, Stop: 8527, Start Num: 67  
Candidate Starts for Jezreel\_25:  
(Start: 67 @8171 has 189 MA's), (98, 8285), (112, 8378), (133, 8474),

Gene: JigglyPuff\_26 Start: 8695, Stop: 9051, Start Num: 67  
Candidate Starts for JigglyPuff\_26:  
(Start: 67 @8695 has 189 MA's), (98, 8809), (112, 8902), (133, 8998),

Gene: Jillium\_56 Start: 48884, Stop: 48513, Start Num: 62  
Candidate Starts for Jillium\_56:  
(14, 49085), (16, 49040), (18, 49010), (Start: 62 @48884 has 161 MA's), (Start: 64 @48881 has 125 MA's), (81, 48842), (97, 48761), (119, 48599), (120, 48596), (133, 48545),

Gene: Jiminy\_56 Start: 48200, Stop: 47832, Start Num: 64  
Candidate Starts for Jiminy\_56:

(8, 48563), (14, 48404), (16, 48359), (18, 48329), (Start: 62 @48203 has 161 MA's), (Start: 64 @48200 has 125 MA's), (81, 48161), (87, 48143), (96, 48089), (119, 47918), (120, 47915), (133, 47864),

Gene: Jiraiya\_56 Start: 48353, Stop: 47985, Start Num: 64

Candidate Starts for Jiraiya\_56:

(8, 48716), (14, 48557), (16, 48512), (18, 48482), (Start: 62 @48356 has 161 MA's), (Start: 64 @48353 has 125 MA's), (81, 48314), (87, 48296), (96, 48242), (119, 48071), (120, 48068), (133, 48017),

Gene: JohnLord\_60 Start: 46724, Stop: 47107, Start Num: 53

Candidate Starts for JohnLord\_60:

(Start: 24 @46652 has 1 MA's), (Start: 41 @46709 has 11 MA's), (Start: 53 @46724 has 1 MA's), (65, 46739), (81, 46775), (87, 46793), (112, 46958), (114, 46964), (119, 47003), (125, 47015), (131, 47036), (132, 47039), (133, 47054), (145, 47093), (147, 47096),

Gene: JoshKayV\_37 Start: 27589, Stop: 27972, Start Num: 52

Candidate Starts for JoshKayV\_37:

(Start: 52 @27589 has 47 MA's), (94, 27673), (110, 27781), (116, 27832), (119, 27862), (132, 27898), (139, 27937), (143, 27949),

Gene: JulietS\_21 Start: 6576, Stop: 6932, Start Num: 67

Candidate Starts for JulietS\_21:

(Start: 67 @6576 has 189 MA's), (112, 6783), (133, 6879),

Gene: JustASigh\_40 Start: 31548, Stop: 31102, Start Num: 24

Candidate Starts for JustASigh\_40:

(Start: 24 @31548 has 1 MA's), (Start: 27 @31539 has 1 MA's), (Start: 28 @31521 has 2 MA's), (58, 31479), (73, 31458), (78, 31443), (112, 31263), (124, 31194), (131, 31173), (132, 31170), (145, 31116),

Gene: JustHall\_25 Start: 8599, Stop: 8955, Start Num: 67

Candidate Starts for JustHall\_25:

(Start: 67 @8599 has 189 MA's), (98, 8713), (112, 8806), (133, 8902),

Gene: KLucky39\_54 Start: 47698, Stop: 47327, Start Num: 62

Candidate Starts for KLucky39\_54:

(14, 47899), (16, 47854), (18, 47824), (38, 47737), (Start: 62 @47698 has 161 MA's), (Start: 64 @47695 has 125 MA's), (81, 47656), (97, 47575), (119, 47413), (120, 47410), (133, 47359),

Gene: Kahve\_56 Start: 48885, Stop: 48514, Start Num: 62

Candidate Starts for Kahve\_56:

(14, 49086), (16, 49041), (18, 49011), (Start: 62 @48885 has 161 MA's), (Start: 64 @48882 has 125 MA's), (81, 48843), (97, 48762), (119, 48600), (120, 48597), (133, 48546),

Gene: Kailash\_56 Start: 48722, Stop: 48351, Start Num: 62

Candidate Starts for Kailash\_56:

(8, 49082), (14, 48923), (16, 48878), (18, 48848), (Start: 62 @48722 has 161 MA's), (Start: 64 @48719 has 125 MA's), (81, 48680), (87, 48662), (96, 48608), (97, 48599), (119, 48437), (120, 48434), (133, 48383),

Gene: Kamryn\_26 Start: 8478, Stop: 8834, Start Num: 67

Candidate Starts for Kamryn\_26:

(Start: 67 @8478 has 189 MA's), (98, 8592), (112, 8685), (133, 8781),

Gene: KandZ\_55 Start: 42849, Stop: 43229, Start Num: 57

Candidate Starts for KandZ\_55:

(Start: 57 @42849 has 22 MA's), (76, 42882), (77, 42885), (78, 42888), (93, 42942), (94, 42945), (111, 43065), (133, 43176), (134, 43179),

Gene: KarasumaRum\_54 Start: 48662, Stop: 48249, Start Num: 44

Candidate Starts for KarasumaRum\_54:

(Start: 44 @48662 has 32 MA's), (115, 48389), (122, 48344), (123, 48341), (132, 48314),

Gene: Karn\_56 Start: 48363, Stop: 47992, Start Num: 62

Candidate Starts for Karn\_56:

(8, 48723), (14, 48564), (16, 48519), (18, 48489), (Start: 62 @48363 has 161 MA's), (Start: 64 @48360 has 125 MA's), (81, 48321), (87, 48303), (96, 48249), (119, 48078), (120, 48075), (133, 48024),

Gene: Katniss\_57 Start: 48324, Stop: 47953, Start Num: 62

Candidate Starts for Katniss\_57:

(14, 48525), (16, 48480), (18, 48450), (Start: 62 @48324 has 161 MA's), (Start: 64 @48321 has 125 MA's), (81, 48282), (97, 48201), (119, 48039), (120, 48036), (133, 47985),

Gene: Kboogie\_26 Start: 7632, Stop: 7988, Start Num: 67

Candidate Starts for Kboogie\_26:

(Start: 67 @7632 has 189 MA's), (112, 7839), (133, 7935),

Gene: Keitherie\_57 Start: 48703, Stop: 48332, Start Num: 62

Candidate Starts for Keitherie\_57:

(8, 49063), (14, 48904), (16, 48859), (18, 48829), (38, 48742), (Start: 62 @48703 has 161 MA's), (Start: 64 @48700 has 125 MA's), (97, 48580), (119, 48418), (120, 48415), (133, 48364),

Gene: Keshu\_77 Start: 50098, Stop: 50493, Start Num: 34

Candidate Starts for Keshu\_77:

(Start: 34 @50098 has 6 MA's), (Start: 56 @50134 has 3 MA's), (77, 50170), (110, 50317), (112, 50332), (116, 50368), (132, 50434), (144, 50485),

Gene: Khaleesi\_25 Start: 8449, Stop: 8805, Start Num: 67

Candidate Starts for Khaleesi\_25:

(Start: 67 @8449 has 189 MA's), (112, 8656), (133, 8752),

Gene: Khan1\_57 Start: 48841, Stop: 48470, Start Num: 62

Candidate Starts for Khan1\_57:

(8, 49201), (14, 49042), (16, 48997), (18, 48967), (Start: 62 @48841 has 161 MA's), (Start: 64 @48838 has 125 MA's), (81, 48799), (96, 48727), (119, 48556), (120, 48553), (133, 48502),

Gene: Kikipoo\_57 Start: 48876, Stop: 48505, Start Num: 62

Candidate Starts for Kikipoo\_57:

(14, 49077), (16, 49032), (18, 49002), (Start: 62 @48876 has 161 MA's), (Start: 64 @48873 has 125 MA's), (81, 48834), (97, 48753), (119, 48591), (120, 48588), (133, 48537),

Gene: Kimbrough\_57 Start: 48885, Stop: 48514, Start Num: 62

Candidate Starts for Kimbrough\_57:

(14, 49086), (16, 49041), (18, 49011), (Start: 62 @48885 has 161 MA's), (Start: 64 @48882 has 125 MA's), (81, 48843), (97, 48762), (119, 48600), (120, 48597), (133, 48546),

Gene: Kinbote\_43 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for Kinbote\_43:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: KingCyrus\_38 Start: 28997, Stop: 29380, Start Num: 52

Candidate Starts for KingCyrus\_38:

(Start: 52 @28997 has 47 MA's), (94, 29081), (110, 29189), (116, 29240), (119, 29270), (143, 29357),

Gene: KingPhillip3\_74 Start: 47553, Stop: 47176, Start Num: 55

Candidate Starts for KingPhillip3\_74:

(Start: 55 @47553 has 26 MA's), (82, 47493), (86, 47481), (98, 47418), (112, 47325), (114, 47319), (117, 47274), (130, 47229), (137, 47190), (138, 47187),

Gene: KingTut\_48 Start: 44549, Stop: 44178, Start Num: 62

Candidate Starts for KingTut\_48:

(14, 44750), (16, 44705), (18, 44675), (Start: 62 @44549 has 161 MA's), (Start: 64 @44546 has 125 MA's), (81, 44507), (97, 44426), (119, 44264), (120, 44261), (133, 44210),

Gene: KingVeVeVe\_54 Start: 47652, Stop: 47281, Start Num: 62

Candidate Starts for KingVeVeVe\_54:

(14, 47853), (16, 47808), (18, 47778), (38, 47691), (Start: 62 @47652 has 161 MA's), (Start: 64 @47649 has 125 MA's), (81, 47610), (97, 47529), (119, 47367), (120, 47364), (133, 47313),

Gene: KlimbOn\_55 Start: 48341, Stop: 47973, Start Num: 64

Candidate Starts for KlimbOn\_55:

(14, 48545), (16, 48500), (18, 48470), (38, 48383), (Start: 62 @48344 has 161 MA's), (Start: 64 @48341 has 125 MA's), (81, 48302), (97, 48221), (119, 48059), (120, 48056), (133, 48005),

Gene: Kloppinator\_56 Start: 48181, Stop: 47813, Start Num: 64

Candidate Starts for Kloppinator\_56:

(8, 48544), (14, 48385), (16, 48340), (18, 48310), (38, 48223), (Start: 62 @48184 has 161 MA's), (Start: 64 @48181 has 125 MA's), (97, 48061), (119, 47899), (120, 47896), (133, 47845),

Gene: Koguma\_22 Start: 6919, Stop: 7275, Start Num: 67

Candidate Starts for Koguma\_22:

(Start: 67 @6919 has 189 MA's), (112, 7126), (133, 7222),

Gene: Konstantine\_75 Start: 52975, Stop: 53364, Start Num: 67

Candidate Starts for Konstantine\_75:

(Start: 67 @52975 has 189 MA's), (77, 53002), (82, 53014), (93, 53059), (94, 53062), (98, 53092), (118, 53242), (136, 53314),

Gene: Krili\_75 Start: 47097, Stop: 46720, Start Num: 55

Candidate Starts for Krili\_75:

(Start: 55 @47097 has 26 MA's), (82, 47037), (86, 47025), (98, 46962), (112, 46869), (114, 46863), (117, 46818), (130, 46773), (137, 46734), (138, 46731),

Gene: Krueger\_78 Start: 49845, Stop: 50228, Start Num: 40

Candidate Starts for Krueger\_78:

(Start: 40 @49845 has 18 MA's), (Start: 56 @49866 has 3 MA's), (77, 49905), (83, 49920), (101, 49992), (106, 50031), (112, 50067), (116, 50103), (132, 50169),

Gene: Kwadwo\_55 Start: 48337, Stop: 47966, Start Num: 62

Candidate Starts for Kwadwo\_55:

(14, 48538), (16, 48493), (18, 48463), (Start: 62 @48337 has 161 MA's), (Start: 64 @48334 has 125 MA's), (81, 48295), (96, 48223), (119, 48052), (120, 48049), (133, 47998),

Gene: Kwksand96\_56 Start: 48215, Stop: 47847, Start Num: 64

Candidate Starts for Kwksand96\_56:

(8, 48578), (14, 48419), (16, 48374), (18, 48344), (Start: 62 @48218 has 161 MA's), (Start: 64 @48215 has 125 MA's), (81, 48176), (87, 48158), (96, 48104), (97, 48095), (119, 47933), (120, 47930), (133, 47879),

Gene: LRRHood\_23 Start: 8842, Stop: 9198, Start Num: 67

Candidate Starts for LRRHood\_23:

(Start: 67 @8842 has 189 MA's), (112, 9049), (133, 9145),

Gene: Labeouficaum\_56 Start: 48209, Stop: 47841, Start Num: 64

Candidate Starts for Labeouficaum\_56:

(8, 48572), (14, 48413), (16, 48368), (18, 48338), (Start: 62 @48212 has 161 MA's), (Start: 64 @48209 has 125 MA's), (81, 48170), (87, 48152), (96, 48098), (97, 48089), (119, 47927), (120, 47924), (133, 47873),

Gene: Labradorite\_25 Start: 8150, Stop: 8506, Start Num: 67

Candidate Starts for Labradorite\_25:

(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Lambano\_48 Start: 47161, Stop: 46760, Start Num: 45

Candidate Starts for Lambano\_48:

(Start: 45 @47161 has 19 MA's), (74, 47113), (75, 47110), (76, 47107), (85, 47086), (127, 46840), (135, 46804),

Gene: Larenn\_37 Start: 27686, Stop: 28081, Start Num: 52

Candidate Starts for Larenn\_37:

(Start: 52 @27686 has 47 MA's), (78, 27734), (119, 27974), (121, 27980), (132, 28010),

Gene: Larson\_58 Start: 48435, Stop: 48064, Start Num: 62

Candidate Starts for Larson\_58:

(14, 48636), (16, 48591), (18, 48561), (Start: 62 @48435 has 161 MA's), (Start: 64 @48432 has 125 MA's), (81, 48393), (87, 48375), (96, 48321), (97, 48312), (119, 48150), (120, 48147), (133, 48096),

Gene: LasagnaCat\_58 Start: 48749, Stop: 48378, Start Num: 62

Candidate Starts for LasagnaCat\_58:

(14, 48950), (16, 48905), (18, 48875), (Start: 62 @48749 has 161 MA's), (Start: 64 @48746 has 125 MA's), (81, 48707), (97, 48626), (119, 48464), (120, 48461), (133, 48410),

Gene: Lasso\_56 Start: 48612, Stop: 48241, Start Num: 62

Candidate Starts for Lasso\_56:

(14, 48813), (16, 48768), (18, 48738), (Start: 62 @48612 has 161 MA's), (Start: 64 @48609 has 125 MA's), (81, 48570), (96, 48498), (119, 48327), (120, 48324), (133, 48273),

Gene: Latch\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for Latch\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Lea83\_75 Start: 50034, Stop: 50417, Start Num: 34

Candidate Starts for Lea83\_75:

(Start: 34 @50034 has 6 MA's), (Start: 56 @50070 has 3 MA's), (77, 50106), (95, 50160), (109, 50247), (110, 50253), (112, 50268), (132, 50370), (133, 50385),

Gene: Lee7\_25 Start: 8696, Stop: 9052, Start Num: 67

Candidate Starts for Lee7\_25:

(Start: 67 @8696 has 189 MA's), (112, 8903), (133, 8999),

Gene: LeeLot\_56 Start: 48664, Stop: 48293, Start Num: 62

Candidate Starts for LeeLot\_56:

(14, 48865), (16, 48820), (18, 48790), (Start: 62 @48664 has 161 MA's), (Start: 64 @48661 has 125 MA's), (81, 48622), (97, 48541), (119, 48379), (120, 48376), (133, 48325),

Gene: Lego3393\_55 Start: 48876, Stop: 48505, Start Num: 62

Candidate Starts for Lego3393\_55:

(14, 49077), (16, 49032), (18, 49002), (Start: 62 @48876 has 161 MA's), (Start: 64 @48873 has 125 MA's), (81, 48834), (97, 48753), (119, 48591), (120, 48588), (133, 48537),

Gene: Legolas\_58 Start: 48763, Stop: 48392, Start Num: 62

Candidate Starts for Legolas\_58:

(14, 48964), (16, 48919), (18, 48889), (Start: 62 @48763 has 161 MA's), (Start: 64 @48760 has 125 MA's), (81, 48721), (97, 48640), (119, 48478), (120, 48475), (133, 48424),

Gene: Lehmann\_56 Start: 48235, Stop: 47864, Start Num: 62

Candidate Starts for Lehmann\_56:

(14, 48436), (16, 48391), (18, 48361), (38, 48274), (Start: 62 @48235 has 161 MA's), (Start: 64 @48232 has 125 MA's), (81, 48193), (96, 48121), (97, 48112), (119, 47950), (120, 47947), (133, 47896),

Gene: LeiMonet\_58 Start: 48279, Stop: 47911, Start Num: 64

Candidate Starts for LeiMonet\_58:

(14, 48483), (16, 48438), (18, 48408), (38, 48321), (Start: 62 @48282 has 161 MA's), (Start: 64 @48279 has 125 MA's), (81, 48240), (96, 48168), (119, 47997), (120, 47994), (133, 47943),

Gene: LemonSlice\_57 Start: 48354, Stop: 47983, Start Num: 62

Candidate Starts for LemonSlice\_57:

(14, 48555), (16, 48510), (18, 48480), (Start: 62 @48354 has 161 MA's), (Start: 64 @48351 has 125 MA's), (81, 48312), (87, 48294), (96, 48240), (97, 48231), (119, 48069), (120, 48066), (133, 48015),

Gene: Lethe\_25 Start: 8393, Stop: 8749, Start Num: 67

Candidate Starts for Lethe\_25:

(Start: 67 @8393 has 189 MA's), (112, 8600), (133, 8696),

Gene: Leviathan\_37 Start: 27676, Stop: 28074, Start Num: 52

Candidate Starts for Leviathan\_37:

(Start: 52 @27676 has 47 MA's), (78, 27724), (119, 27967), (121, 27973), (132, 28003),

Gene: LifeSavor\_27 Start: 8150, Stop: 8506, Start Num: 67

Candidate Starts for LifeSavor\_27:

(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: LilHazelnut\_43 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for LilHazelnut\_43:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: LilTurb\_36 Start: 27509, Stop: 27907, Start Num: 52

Candidate Starts for LilTurb\_36:

(Start: 52 @27509 has 47 MA's), (78, 27557), (119, 27800), (121, 27806), (132, 27836),

Gene: LinStu\_26 Start: 9052, Stop: 9408, Start Num: 67

Candidate Starts for LinStu\_26:

(Start: 67 @9052 has 189 MA's), (112, 9259), (133, 9355),

Gene: LionsBait\_37 Start: 28638, Stop: 28988, Start Num: 70

Candidate Starts for LionsBait\_37:

(Start: 27 @28545 has 1 MA's), (69, 28635), (Start: 70 @28638 has 4 MA's), (94, 28689), (100, 28731), (119, 28881), (128, 28905),

Gene: LittleDigger\_48 Start: 47174, Stop: 46776, Start Num: 45

Candidate Starts for LittleDigger\_48:

(Start: 45 @47174 has 19 MA's), (74, 47126), (75, 47123), (85, 47102), (127, 46856), (135, 46820),

Gene: Littleton\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for Littleton\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Loanshark\_26 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for Loanshark\_26:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Lokk\_39 Start: 28500, Stop: 28871, Start Num: 70

Candidate Starts for Lokk\_39:

(Start: 70 @28500 has 4 MA's), (101, 28617), (112, 28692), (119, 28758), (132, 28794), (139, 28833), (143, 28845), (147, 28851),

Gene: LolaVinca\_29 Start: 9911, Stop: 10267, Start Num: 67

Candidate Starts for LolaVinca\_29:

(Start: 67 @9911 has 189 MA's), (98, 10025), (112, 10118), (133, 10214),

Gene: Lolalove\_50 Start: 48182, Stop: 47784, Start Num: 45

Candidate Starts for Lolalove\_50:

(5, 48515), (Start: 45 @48182 has 19 MA's), (74, 48134), (75, 48131), (85, 48110), (120, 47885), (127, 47864), (135, 47828),

Gene: Longacauda\_57 Start: 48726, Stop: 48355, Start Num: 62

Candidate Starts for Longacauda\_57:

(14, 48927), (16, 48882), (18, 48852), (Start: 62 @48726 has 161 MA's), (Start: 64 @48723 has 125 MA's), (81, 48684), (97, 48603), (119, 48441), (120, 48438), (133, 48387),

Gene: LookingGlass\_29 Start: 9473, Stop: 9829, Start Num: 67

Candidate Starts for LookingGlass\_29:

(Start: 67 @9473 has 189 MA's), (98, 9587), (112, 9680), (133, 9776),

Gene: Lopsy\_53 Start: 47237, Stop: 46869, Start Num: 64

Candidate Starts for Lopsy\_53:

(14, 47441), (16, 47396), (18, 47366), (38, 47279), (Start: 62 @47240 has 161 MA's), (Start: 64 @47237 has 125 MA's), (81, 47198), (96, 47126), (97, 47117), (119, 46955), (120, 46952), (133, 46901),

Gene: LordLeafolot\_32 Start: 10269, Stop: 10625, Start Num: 67

Candidate Starts for LordLeafolot\_32:

(Start: 67 @10269 has 189 MA's), (98, 10383), (112, 10476), (133, 10572),

Gene: LostAndPhound\_56 Start: 48369, Stop: 47998, Start Num: 62

Candidate Starts for LostAndPhound\_56:

(14, 48570), (16, 48525), (18, 48495), (Start: 62 @48369 has 161 MA's), (Start: 64 @48366 has 125 MA's), (81, 48327), (96, 48255), (119, 48084), (120, 48081), (133, 48030),

Gene: LuckyMarjie\_54 Start: 48045, Stop: 47674, Start Num: 62

Candidate Starts for LuckyMarjie\_54:

(14, 48246), (16, 48201), (18, 48171), (38, 48084), (Start: 62 @48045 has 161 MA's), (Start: 64 @48042 has 125 MA's), (97, 47922), (119, 47760), (120, 47757), (133, 47706),

Gene: Luke\_43 Start: 33271, Stop: 32846, Start Num: 32

Candidate Starts for Luke\_43:

(Start: 17 @33364 has 4 MA's), (Start: 32 @33271 has 17 MA's), (Start: 50 @33247 has 4 MA's), (73, 33205), (74, 33202), (82, 33181), (88, 33160), (94, 33130), (109, 33028), (132, 32914), (133, 32899), (134, 32896), (139, 32875), (148, 32854),

Gene: Lukilu\_19 Start: 7293, Stop: 7649, Start Num: 67

Candidate Starts for Lukilu\_19:

(Start: 67 @7293 has 189 MA's), (112, 7500), (133, 7596),

Gene: Lulumae\_54 Start: 48030, Stop: 47659, Start Num: 62

Candidate Starts for Lulumae\_54:

(14, 48231), (16, 48186), (18, 48156), (38, 48069), (Start: 62 @48030 has 161 MA's), (Start: 64 @48027 has 125 MA's), (97, 47907), (119, 47745), (120, 47742), (133, 47691),

Gene: Lulwa\_54 Start: 47669, Stop: 47298, Start Num: 62

Candidate Starts for Lulwa\_54:

(14, 47870), (16, 47825), (18, 47795), (Start: 62 @47669 has 161 MA's), (Start: 64 @47666 has 125 MA's), (81, 47627), (96, 47555), (119, 47384), (120, 47381), (133, 47330),

Gene: Lumine\_57 Start: 48514, Stop: 48143, Start Num: 62

Candidate Starts for Lumine\_57:

(14, 48715), (16, 48670), (18, 48640), (Start: 62 @48514 has 161 MA's), (Start: 64 @48511 has 125 MA's), (81, 48472), (97, 48391), (119, 48229), (120, 48226), (133, 48175),

Gene: Luna22\_41 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for Luna22\_41:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: Lunareta\_25 Start: 8433, Stop: 8789, Start Num: 67

Candidate Starts for Lunareta\_25:

(Start: 67 @8433 has 189 MA's), (112, 8640), (133, 8736),

Gene: MRabcd\_55 Start: 48427, Stop: 48056, Start Num: 62

Candidate Starts for MRabcd\_55:

(14, 48628), (16, 48583), (18, 48553), (Start: 62 @48427 has 161 MA's), (Start: 64 @48424 has 125 MA's), (81, 48385), (96, 48313), (119, 48142), (120, 48139), (133, 48088),

Gene: Maby2021\_27 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for Maby2021\_27:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: MacnCheese\_77 Start: 50498, Stop: 50944, Start Num: 23

Candidate Starts for MacnCheese\_77:

(Start: 23 @50498 has 1 MA's), (Start: 40 @50567 has 18 MA's), (Start: 52 @50582 has 47 MA's), (Start: 56 @50588 has 3 MA's), (63, 50603), (77, 50618), (79, 50624), (101, 50708), (110, 50768), (112, 50783), (129, 50876),

Gene: MadKillah\_77 Start: 47366, Stop: 46989, Start Num: 55

Candidate Starts for MadKillah\_77:

(Start: 55 @47366 has 26 MA's), (82, 47306), (86, 47294), (98, 47231), (112, 47138), (114, 47132), (117, 47087), (130, 47042), (137, 47003), (138, 47000),

Gene: Mag7\_56 Start: 48272, Stop: 47901, Start Num: 62

Candidate Starts for Mag7\_56:

(8, 48632), (14, 48473), (16, 48428), (18, 48398), (Start: 62 @48272 has 161 MA's), (Start: 64 @48269 has 125 MA's), (81, 48230), (87, 48212), (96, 48158), (97, 48149), (119, 47987), (120, 47984), (133, 47933),

Gene: Magic8\_57 Start: 48665, Stop: 48297, Start Num: 64

Candidate Starts for Magic8\_57:

(14, 48869), (16, 48824), (18, 48794), (Start: 62 @48668 has 161 MA's), (Start: 64 @48665 has 125 MA's), (81, 48626), (97, 48545), (119, 48383), (120, 48380), (133, 48329),

Gene: Magpie\_48 Start: 48017, Stop: 47619, Start Num: 45

Candidate Starts for Magpie\_48:

(Start: 45 @48017 has 19 MA's), (74, 47969), (75, 47966), (85, 47945), (120, 47720), (127, 47699), (135, 47663),

Gene: Magsby\_42 Start: 30667, Stop: 31065, Start Num: 44

Candidate Starts for Magsby\_42:

(Start: 44 @30667 has 32 MA's), (75, 30718), (81, 30733), (112, 30916), (114, 30922), (125, 30973), (131, 30994), (132, 30997), (133, 31012), (139, 31036), (145, 31051), (147, 31054),

Gene: Malec\_38 Start: 28247, Stop: 28645, Start Num: 52

Candidate Starts for Malec\_38:

(Start: 52 @28247 has 47 MA's), (100, 28388), (119, 28538), (121, 28544), (132, 28574),

Gene: Mana\_55 Start: 48352, Stop: 47981, Start Num: 62

Candidate Starts for Mana\_55:

(14, 48553), (16, 48508), (18, 48478), (Start: 62 @48352 has 161 MA's), (Start: 64 @48349 has 125 MA's), (81, 48310), (96, 48238), (119, 48067), (120, 48064), (133, 48013),

Gene: Manad\_55 Start: 48327, Stop: 47956, Start Num: 62

Candidate Starts for Manad\_55:

(14, 48528), (16, 48483), (18, 48453), (38, 48366), (Start: 62 @48327 has 161 MA's), (Start: 64 @48324 has 125 MA's), (81, 48285), (96, 48213), (97, 48204), (119, 48042), (120, 48039), (133, 47988),

Gene: Mangeria\_29 Start: 9225, Stop: 9581, Start Num: 67

Candidate Starts for Mangeria\_29:

(Start: 67 @9225 has 189 MA's), (98, 9339), (112, 9432), (133, 9528),

Gene: Mao1\_56 Start: 45715, Stop: 46089, Start Num: 32

Candidate Starts for Mao1\_56:

(Start: 20 @45658 has 6 MA's), (Start: 32 @45715 has 17 MA's), (38, 45730), (49, 45745), (72, 45781), (83, 45808), (112, 45958), (132, 46036), (133, 46051),

Gene: Marcoliusprime\_39 Start: 31497, Stop: 31114, Start Num: 36

Candidate Starts for Marcoliusprime\_39:

(Start: 36 @31497 has 11 MA's), (77, 31437), (95, 31374), (104, 31323), (112, 31266), (121, 31194), (133, 31149), (134, 31146), (139, 31125),

Gene: MarkPhew\_75 Start: 49591, Stop: 49965, Start Num: 40

Candidate Starts for MarkPhew\_75:

(Start: 40 @49591 has 18 MA's), (79, 49648), (95, 49696), (104, 49747), (106, 49768), (112, 49804), (116, 49840), (122, 49879), (129, 49897), (132, 49906), (133, 49921),

Gene: Marshawn\_72 Start: 49975, Stop: 50358, Start Num: 40

Candidate Starts for Marshawn\_72:

(Start: 40 @49975 has 18 MA's), (Start: 45 @49981 has 19 MA's), (77, 50035), (78, 50038), (83, 50050), (101, 50122), (104, 50140), (106, 50161), (112, 50197), (116, 50233), (122, 50272), (129, 50290), (132, 50299), (146, 50353),

Gene: Maru\_56 Start: 48788, Stop: 48420, Start Num: 64

Candidate Starts for Maru\_56:

(14, 48992), (16, 48947), (18, 48917), (Start: 62 @48791 has 161 MA's), (Start: 64 @48788 has 125 MA's), (81, 48749), (96, 48677), (119, 48506), (120, 48503), (133, 48452),

Gene: Mask\_57 Start: 48051, Stop: 48449, Start Num: 41

Candidate Starts for Mask\_57:

(Start: 41 @48051 has 11 MA's), (65, 48081), (81, 48117), (112, 48300), (114, 48306), (119, 48345), (125, 48357), (131, 48378), (132, 48381), (133, 48396), (145, 48435), (147, 48438),

Gene: Maskar\_57 Start: 48338, Stop: 47967, Start Num: 62

Candidate Starts for Maskar\_57:

(8, 48698), (14, 48539), (16, 48494), (18, 48464), (Start: 62 @48338 has 161 MA's), (Start: 64 @48335 has 125 MA's), (81, 48296), (87, 48278), (96, 48224), (97, 48215), (119, 48053), (120, 48050), (133, 47999),

Gene: Matalotodo\_55 Start: 48362, Stop: 47991, Start Num: 62

Candidate Starts for Matalotodo\_55:

(14, 48563), (16, 48518), (18, 48488), (Start: 62 @48362 has 161 MA's), (Start: 64 @48359 has 125 MA's), (81, 48320), (97, 48239), (119, 48077), (120, 48074), (133, 48023),

Gene: Matsumoto\_25 Start: 8115, Stop: 8471, Start Num: 67

Candidate Starts for Matsumoto\_25:

(Start: 67 @8115 has 189 MA's), (98, 8229), (112, 8322), (133, 8418),

Gene: Maturis\_26 Start: 8472, Stop: 8828, Start Num: 67

Candidate Starts for Maturis\_26:

(Start: 67 @8472 has 189 MA's), (112, 8679), (133, 8775),

Gene: McGee\_25 Start: 7341, Stop: 7697, Start Num: 67

Candidate Starts for McGee\_25:

(Start: 67 @7341 has 189 MA's), (112, 7548), (133, 7644),

Gene: McWolfish\_25 Start: 8449, Stop: 8805, Start Num: 67

Candidate Starts for McWolfish\_25:

(Start: 67 @8449 has 189 MA's), (112, 8656), (133, 8752),

Gene: Mcshane\_55 Start: 48347, Stop: 47979, Start Num: 64

Candidate Starts for Mcshane\_55:

(14, 48551), (16, 48506), (18, 48476), (Start: 62 @48350 has 161 MA's), (Start: 64 @48347 has 125 MA's), (81, 48308), (97, 48227), (119, 48065), (120, 48062), (133, 48011),

Gene: Mecca\_56 Start: 48873, Stop: 48502, Start Num: 62

Candidate Starts for Mecca\_56:

(14, 49074), (16, 49029), (18, 48999), (Start: 62 @48873 has 161 MA's), (Start: 64 @48870 has 125 MA's), (81, 48831), (97, 48750), (119, 48588), (120, 48585), (133, 48534),

Gene: Megabear\_44 Start: 40128, Stop: 40529, Start Num: 41

Candidate Starts for Megabear\_44:

(Start: 41 @40128 has 11 MA's), (Start: 52 @40143 has 47 MA's), (109, 40359), (110, 40365), (112, 40380), (126, 40440), (131, 40458), (132, 40461), (133, 40476), (145, 40515), (147, 40518),

Gene: Megamind\_26 Start: 8690, Stop: 9046, Start Num: 67

Candidate Starts for Megamind\_26:

(Start: 67 @8690 has 189 MA's), (98, 8804), (112, 8897), (133, 8993),

Gene: Megamind20\_57 Start: 48338, Stop: 47967, Start Num: 62

Candidate Starts for Megamind20\_57:

(14, 48539), (16, 48494), (18, 48464), (Start: 62 @48338 has 161 MA's), (Start: 64 @48335 has 125 MA's), (81, 48296), (97, 48215), (119, 48053), (120, 48050), (133, 47999),

Gene: Megatron\_57 Start: 48864, Stop: 48493, Start Num: 62

Candidate Starts for Megatron\_57:

(14, 49065), (16, 49020), (18, 48990), (Start: 62 @48864 has 161 MA's), (Start: 64 @48861 has 125 MA's), (81, 48822), (97, 48741), (119, 48579), (120, 48576), (133, 48525),

Gene: Megatron06\_72 Start: 52721, Stop: 53110, Start Num: 67

Candidate Starts for Megatron06\_72:

(Start: 67 @52721 has 189 MA's), (77, 52748), (82, 52760), (93, 52805), (94, 52808), (98, 52838), (118, 52988), (136, 53060),

Gene: Melc17\_56 Start: 49179, Stop: 48811, Start Num: 64

Candidate Starts for Melc17\_56:

(14, 49383), (16, 49338), (18, 49308), (Start: 62 @49182 has 161 MA's), (Start: 64 @49179 has 125 MA's), (81, 49140), (97, 49059), (119, 48897), (120, 48894), (133, 48843),

Gene: Melpomini\_25 Start: 7556, Stop: 7912, Start Num: 67  
Candidate Starts for Melpomini\_25:  
(Start: 67 @7556 has 189 MA's), (98, 7670), (112, 7763), (133, 7859),

Gene: MelsMeow\_56 Start: 48391, Stop: 48020, Start Num: 62  
Candidate Starts for MelsMeow\_56:  
(8, 48751), (14, 48592), (16, 48547), (18, 48517), (Start: 62 @48391 has 161 MA's), (Start: 64 @48388 has 125 MA's), (81, 48349), (87, 48331), (96, 48277), (97, 48268), (119, 48106), (120, 48103), (133, 48052),

Gene: Melville\_45 Start: 30651, Stop: 31049, Start Num: 44  
Candidate Starts for Melville\_45:  
(Start: 44 @30651 has 32 MA's), (75, 30702), (81, 30717), (112, 30900), (114, 30906), (125, 30957), (131, 30978), (132, 30981), (133, 30996), (139, 31020), (145, 31035), (147, 31038),

Gene: Mendokysei\_38 Start: 30582, Stop: 30983, Start Num: 39  
Candidate Starts for Mendokysei\_38:  
(Start: 39 @30582 has 5 MA's), (Start: 53 @30600 has 1 MA's), (77, 30648), (108, 30807), (112, 30831), (133, 30951),

Gene: Mesh1\_57 Start: 48881, Stop: 48513, Start Num: 64  
Candidate Starts for Mesh1\_57:  
(14, 49085), (16, 49040), (18, 49010), (Start: 62 @48884 has 161 MA's), (Start: 64 @48881 has 125 MA's), (81, 48842), (96, 48770), (119, 48599), (120, 48596), (133, 48545),

Gene: Mesmerelda\_55 Start: 48321, Stop: 47953, Start Num: 64  
Candidate Starts for Mesmerelda\_55:  
(14, 48525), (16, 48480), (18, 48450), (Start: 62 @48324 has 161 MA's), (Start: 64 @48321 has 125 MA's), (81, 48282), (97, 48201), (119, 48039), (120, 48036), (133, 47985),

Gene: MichaelPhcott\_56 Start: 48266, Stop: 47898, Start Num: 64  
Candidate Starts for MichaelPhcott\_56:  
(8, 48629), (14, 48470), (16, 48425), (18, 48395), (Start: 62 @48269 has 161 MA's), (Start: 64 @48266 has 125 MA's), (81, 48227), (87, 48209), (96, 48155), (97, 48146), (119, 47984), (120, 47981), (133, 47930),

Gene: MiculUcigas\_36 Start: 27376, Stop: 27771, Start Num: 52  
Candidate Starts for MiculUcigas\_36:  
(Start: 52 @27376 has 47 MA's), (116, 27634), (119, 27664), (132, 27700),

Gene: MikeLiesIn\_26 Start: 8699, Stop: 9055, Start Num: 67  
Candidate Starts for MikeLiesIn\_26:  
(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Miko\_39 Start: 28708, Stop: 29079, Start Num: 70  
Candidate Starts for Miko\_39:  
(Start: 70 @28708 has 4 MA's), (101, 28825), (112, 28900), (116, 28936), (119, 28966), (132, 29002), (139, 29041), (143, 29053), (147, 29059),

Gene: Mikota\_54 Start: 47646, Stop: 47278, Start Num: 64  
Candidate Starts for Mikota\_54:  
(14, 47850), (16, 47805), (18, 47775), (38, 47688), (Start: 62 @47649 has 161 MA's), (Start: 64 @47646 has 125 MA's), (81, 47607), (97, 47526), (119, 47364), (120, 47361), (133, 47310),

Gene: Mikro\_24 Start: 9185, Stop: 9541, Start Num: 67  
Candidate Starts for Mikro\_24:  
(Start: 67 @9185 has 189 MA's), (98, 9299), (112, 9392), (133, 9488),

Gene: Milly\_39 Start: 31470, Stop: 31087, Start Num: 36  
Candidate Starts for Milly\_39:  
(Start: 36 @31470 has 11 MA's), (77, 31410), (95, 31347), (104, 31296), (112, 31239), (121, 31167),  
(133, 31122), (139, 31098),

Gene: MiniBoss\_54 Start: 47652, Stop: 47284, Start Num: 64  
Candidate Starts for MiniBoss\_54:  
(14, 47856), (16, 47811), (18, 47781), (38, 47694), (Start: 62 @47655 has 161 MA's), (Start: 64  
@47652 has 125 MA's), (81, 47613), (97, 47532), (119, 47370), (120, 47367), (133, 47316),

Gene: MitKao\_56 Start: 48359, Stop: 47991, Start Num: 64  
Candidate Starts for MitKao\_56:  
(14, 48563), (16, 48518), (18, 48488), (Start: 62 @48362 has 161 MA's), (Start: 64 @48359 has 125  
MA's), (81, 48320), (96, 48248), (119, 48077), (120, 48074), (133, 48023),

Gene: MoMoMixon\_27 Start: 9016, Stop: 9372, Start Num: 67  
Candidate Starts for MoMoMixon\_27:  
(Start: 67 @9016 has 189 MA's), (112, 9223), (133, 9319),

Gene: Moby\_20 Start: 5697, Stop: 6053, Start Num: 67  
Candidate Starts for Moby\_20:  
(Start: 67 @5697 has 189 MA's), (112, 5904), (133, 6000),

Gene: Moiqah\_20 Start: 5697, Stop: 6053, Start Num: 67  
Candidate Starts for Moiqah\_20:  
(Start: 67 @5697 has 189 MA's), (112, 5904), (133, 6000),

Gene: Momo\_25 Start: 8154, Stop: 8510, Start Num: 67  
Candidate Starts for Momo\_25:  
(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Montpel\_25 Start: 8433, Stop: 8789, Start Num: 67  
Candidate Starts for Montpel\_25:  
(Start: 67 @8433 has 189 MA's), (112, 8640), (133, 8736),

Gene: MontyDev\_56 Start: 42299, Stop: 42769, Start Num: 20  
Candidate Starts for MontyDev\_56:  
(Start: 20 @42299 has 6 MA's), (Start: 28 @42338 has 2 MA's), (Start: 43 @42368 has 1 MA's), (Start:  
51 @42380 has 3 MA's), (58, 42392), (68, 42407), (73, 42413), (90, 42464), (107, 42578), (112,  
42608), (131, 42698), (132, 42701), (133, 42716),

Gene: Mopey\_57 Start: 42726, Stop: 43106, Start Num: 57  
Candidate Starts for Mopey\_57:  
(Start: 57 @42726 has 22 MA's), (76, 42759), (77, 42762), (78, 42765), (93, 42819), (94, 42822), (111,  
42942), (133, 43053), (134, 43056),

Gene: Morgushi\_56 Start: 48348, Stop: 47980, Start Num: 64  
Candidate Starts for Morgushi\_56:

(14, 48552), (16, 48507), (18, 48477), (Start: 62 @48351 has 161 MA's), (Start: 64 @48348 has 125 MA's), (81, 48309), (96, 48237), (119, 48066), (120, 48063), (133, 48012),

Gene: Mori\_76 Start: 47628, Stop: 47251, Start Num: 55

Candidate Starts for Mori\_76:

(Start: 55 @47628 has 26 MA's), (82, 47568), (86, 47556), (98, 47493), (112, 47400), (114, 47394), (117, 47349), (130, 47304), (137, 47265), (138, 47262),

Gene: Morizzled23\_25 Start: 7556, Stop: 7912, Start Num: 67

Candidate Starts for Morizzled23\_25:

(Start: 67 @7556 has 189 MA's), (98, 7670), (112, 7763), (133, 7859),

Gene: Morty\_57 Start: 48873, Stop: 48502, Start Num: 62

Candidate Starts for Morty\_57:

(14, 49074), (16, 49029), (18, 48999), (Start: 62 @48873 has 161 MA's), (Start: 64 @48870 has 125 MA's), (81, 48831), (97, 48750), (119, 48588), (120, 48585), (133, 48534),

Gene: Mosaic\_55 Start: 48356, Stop: 47985, Start Num: 62

Candidate Starts for Mosaic\_55:

(14, 48557), (16, 48512), (18, 48482), (Start: 62 @48356 has 161 MA's), (Start: 64 @48353 has 125 MA's), (81, 48314), (96, 48242), (119, 48071), (120, 48068), (133, 48017),

Gene: MrMiyagi\_55 Start: 39832, Stop: 40308, Start Num: 22

Candidate Starts for MrMiyagi\_55:

(Start: 22 @39832 has 2 MA's), (33, 39886), (Start: 52 @39913 has 47 MA's), (Start: 53 @39916 has 1 MA's), (77, 39961), (81, 39970), (89, 39997), (94, 40024), (134, 40255),

Gene: MrPhizzler\_58 Start: 48815, Stop: 48447, Start Num: 64

Candidate Starts for MrPhizzler\_58:

(8, 49178), (14, 49019), (16, 48974), (18, 48944), (Start: 62 @48818 has 161 MA's), (Start: 64 @48815 has 125 MA's), (81, 48776), (96, 48704), (119, 48533), (120, 48530), (133, 48479),

Gene: Mudslide\_49 Start: 48447, Stop: 48049, Start Num: 45

Candidate Starts for Mudslide\_49:

(Start: 45 @48447 has 19 MA's), (74, 48399), (75, 48396), (85, 48375), (120, 48150), (127, 48129), (135, 48093),

Gene: Mufasa\_40 Start: 31391, Stop: 31008, Start Num: 36

Candidate Starts for Mufasa\_40:

(Start: 36 @31391 has 11 MA's), (77, 31331), (95, 31268), (104, 31217), (109, 31181), (112, 31160), (121, 31088), (133, 31043),

Gene: Mulan\_56 Start: 48587, Stop: 48219, Start Num: 64

Candidate Starts for Mulan\_56:

(14, 48791), (16, 48746), (18, 48716), (Start: 62 @48590 has 161 MA's), (Start: 64 @48587 has 125 MA's), (81, 48548), (97, 48467), (119, 48305), (120, 48302), (133, 48251),

Gene: Murai\_76 Start: 47760, Stop: 47383, Start Num: 55

Candidate Starts for Murai\_76:

(Start: 55 @47760 has 26 MA's), (82, 47700), (86, 47688), (98, 47625), (112, 47532), (114, 47526), (117, 47481), (130, 47436), (137, 47397), (138, 47394),

Gene: Murdoc\_55 Start: 48349, Stop: 47981, Start Num: 64

Candidate Starts for Murdoc\_55:

(14, 48553), (16, 48508), (18, 48478), (Start: 62 @48352 has 161 MA's), (Start: 64 @48349 has 125 MA's), (81, 48310), (97, 48229), (119, 48067), (120, 48064), (133, 48013),

Gene: Mutante\_56 Start: 48359, Stop: 47991, Start Num: 64

Candidate Starts for Mutante\_56:

(14, 48563), (16, 48518), (18, 48488), (Start: 62 @48362 has 161 MA's), (Start: 64 @48359 has 125 MA's), (81, 48320), (97, 48239), (119, 48077), (120, 48074), (133, 48023),

Gene: Mysterious\_52 Start: 48647, Stop: 48231, Start Num: 44

Candidate Starts for Mysterious\_52:

(4, 49025), (6, 48980), (7, 48977), (Start: 44 @48647 has 32 MA's), (74, 48593), (120, 48332),

Gene: NaSiaTalie\_36 Start: 27374, Stop: 27769, Start Num: 52

Candidate Starts for NaSiaTalie\_36:

(Start: 52 @27374 has 47 MA's), (116, 27632), (119, 27662), (132, 27698),

Gene: Nacho\_0057 Start: 48867, Stop: 48496, Start Num: 62

Candidate Starts for Nacho\_0057:

(14, 49068), (16, 49023), (18, 48993), (Start: 62 @48867 has 161 MA's), (Start: 64 @48864 has 125 MA's), (81, 48825), (97, 48744), (119, 48582), (120, 48579), (133, 48528),

Gene: Naija\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for Naija\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Nairb\_39 Start: 31045, Stop: 31446, Start Num: 39

Candidate Starts for Nairb\_39:

(12, 30802), (Start: 39 @31045 has 5 MA's), (Start: 53 @31063 has 1 MA's), (101, 31219), (108, 31270), (112, 31294), (133, 31414), (134, 31417),

Gene: Nanao\_48 Start: 47151, Stop: 46753, Start Num: 45

Candidate Starts for Nanao\_48:

(Start: 45 @47151 has 19 MA's), (74, 47103), (75, 47100), (85, 47079), (127, 46833), (135, 46797),

Gene: Nangang\_54 Start: 48876, Stop: 48463, Start Num: 44

Candidate Starts for Nangang\_54:

(4, 49254), (6, 49209), (7, 49206), (Start: 44 @48876 has 32 MA's), (81, 48804), (122, 48558), (123, 48555), (132, 48528),

Gene: Napoleon13\_25 Start: 7575, Stop: 7931, Start Num: 67

Candidate Starts for Napoleon13\_25:

(Start: 67 @7575 has 189 MA's), (98, 7689), (112, 7782), (133, 7878),

Gene: Nappy\_27 Start: 8863, Stop: 9219, Start Num: 67

Candidate Starts for Nappy\_27:

(Start: 67 @8863 has 189 MA's), (98, 8977), (112, 9070), (133, 9166),

Gene: Nathan\_57 Start: 48443, Stop: 48072, Start Num: 62

Candidate Starts for Nathan\_57:

(14, 48644), (16, 48599), (18, 48569), (38, 48482), (Start: 62 @48443 has 161 MA's), (Start: 64 @48440 has 125 MA's), (97, 48320), (119, 48158), (120, 48155), (133, 48104),

Gene: Naval22\_28 Start: 8739, Stop: 9095, Start Num: 67  
Candidate Starts for Naval22\_28:  
(Start: 67 @8739 has 189 MA's), (98, 8853), (112, 8946), (133, 9042),

Gene: NedWong\_27 Start: 8699, Stop: 9055, Start Num: 67  
Candidate Starts for NedWong\_27:  
(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Nehemiah\_53 Start: 48647, Stop: 48231, Start Num: 44  
Candidate Starts for Nehemiah\_53:  
(4, 49025), (6, 48980), (7, 48977), (Start: 44 @48647 has 32 MA's), (74, 48593), (120, 48332),

Gene: Nette\_41 Start: 30591, Stop: 30992, Start Num: 39  
Candidate Starts for Nette\_41:  
(Start: 39 @30591 has 5 MA's), (Start: 53 @30609 has 1 MA's), (77, 30657), (108, 30816), (112, 30840), (133, 30960),

Gene: Newman\_55 Start: 48347, Stop: 47976, Start Num: 62  
Candidate Starts for Newman\_55:  
(14, 48548), (16, 48503), (18, 48473), (38, 48386), (Start: 62 @48347 has 161 MA's), (Start: 64 @48344 has 125 MA's), (81, 48305), (96, 48233), (119, 48062), (120, 48059), (133, 48008),

Gene: Ngannou\_24 Start: 7330, Stop: 7686, Start Num: 67  
Candidate Starts for Ngannou\_24:  
(Start: 67 @7330 has 189 MA's), (98, 7444), (112, 7537), (133, 7633),

Gene: NiaNia\_59 Start: 48343, Stop: 47972, Start Num: 62  
Candidate Starts for NiaNia\_59:  
(14, 48544), (16, 48499), (18, 48469), (Start: 62 @48343 has 161 MA's), (Start: 64 @48340 has 125 MA's), (81, 48301), (97, 48220), (119, 48058), (120, 48055), (133, 48004),

Gene: Nicole21\_57 Start: 48596, Stop: 48228, Start Num: 64  
Candidate Starts for Nicole21\_57:  
(14, 48800), (16, 48755), (18, 48725), (Start: 62 @48599 has 161 MA's), (Start: 64 @48596 has 125 MA's), (81, 48557), (97, 48476), (119, 48314), (120, 48311), (133, 48260),

Gene: Nidhogg\_27 Start: 8769, Stop: 9125, Start Num: 67  
Candidate Starts for Nidhogg\_27:  
(Start: 67 @8769 has 189 MA's), (112, 8976), (133, 9072),

Gene: NiebruSaylor\_75 Start: 47016, Stop: 46639, Start Num: 55  
Candidate Starts for NiebruSaylor\_75:  
(Start: 55 @47016 has 26 MA's), (82, 46956), (86, 46944), (98, 46881), (112, 46788), (114, 46782), (117, 46737), (130, 46692), (137, 46653), (138, 46650),

Gene: Nigel\_50 Start: 48156, Stop: 47758, Start Num: 45  
Candidate Starts for Nigel\_50:  
(Start: 45 @48156 has 19 MA's), (74, 48108), (75, 48105), (85, 48084), (113, 47919), (120, 47859), (132, 47823),

Gene: Nilo\_57 Start: 42651, Stop: 43121, Start Num: 20  
Candidate Starts for Nilo\_57:

(Start: 20 @42651 has 6 MA's), (Start: 28 @42690 has 2 MA's), (Start: 43 @42720 has 1 MA's), (Start: 51 @42732 has 3 MA's), (58, 42744), (68, 42759), (73, 42765), (90, 42816), (107, 42930), (112, 42960), (131, 43050), (132, 43053), (133, 43068),

Gene: NoodleTree\_25 Start: 8186, Stop: 8542, Start Num: 67

Candidate Starts for NoodleTree\_25:

(Start: 67 @8186 has 189 MA's), (112, 8393), (133, 8489),

Gene: Norm\_26 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for Norm\_26:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Nova\_55 Start: 43178, Stop: 43558, Start Num: 57

Candidate Starts for Nova\_55:

(Start: 57 @43178 has 22 MA's), (76, 43211), (77, 43214), (78, 43217), (93, 43271), (94, 43274), (111, 43394), (133, 43505), (134, 43508),

Gene: Nova1\_57 Start: 48551, Stop: 48180, Start Num: 62

Candidate Starts for Nova1\_57:

(14, 48752), (16, 48707), (18, 48677), (38, 48590), (Start: 62 @48551 has 161 MA's), (Start: 64 @48548 has 125 MA's), (81, 48509), (96, 48437), (119, 48266), (120, 48263), (133, 48212),

Gene: November\_71 Start: 49896, Stop: 50279, Start Num: 40

Candidate Starts for November\_71:

(Start: 40 @49896 has 18 MA's), (78, 49959), (83, 49971), (106, 50082), (112, 50118), (129, 50211), (132, 50220),

Gene: NovoPizza\_44 Start: 34983, Stop: 34570, Start Num: 41

Candidate Starts for NovoPizza\_44:

(Start: 41 @34983 has 11 MA's), (68, 34941), (110, 34749), (132, 34641), (133, 34626), (139, 34602), (145, 34587),

Gene: NuevoMundo\_29 Start: 9756, Stop: 10112, Start Num: 67

Candidate Starts for NuevoMundo\_29:

(Start: 67 @9756 has 189 MA's), (98, 9870), (112, 9963), (133, 10059),

Gene: Numberten\_55 Start: 48342, Stop: 47971, Start Num: 62

Candidate Starts for Numberten\_55:

(8, 48702), (14, 48543), (16, 48498), (18, 48468), (38, 48381), (Start: 62 @48342 has 161 MA's), (Start: 64 @48339 has 125 MA's), (97, 48219), (119, 48057), (120, 48054), (133, 48003),

Gene: Nyala\_55 Start: 48315, Stop: 47947, Start Num: 64

Candidate Starts for Nyala\_55:

(14, 48519), (16, 48474), (18, 48444), (Start: 62 @48318 has 161 MA's), (Start: 64 @48315 has 125 MA's), (81, 48276), (97, 48195), (119, 48033), (120, 48030), (133, 47979),

Gene: OBUpride\_43 Start: 33310, Stop: 32885, Start Num: 32

Candidate Starts for OBUpride\_43:

(Start: 17 @33403 has 4 MA's), (Start: 32 @33310 has 17 MA's), (Start: 50 @33286 has 4 MA's), (73, 33244), (74, 33241), (82, 33220), (88, 33199), (94, 33169), (109, 33067), (132, 32953), (133, 32938), (134, 32935), (139, 32914), (148, 32893),

Gene: OSmaximus\_57 Start: 48906, Stop: 48535, Start Num: 62

Candidate Starts for OSmaximus\_57:

(14, 49107), (16, 49062), (18, 49032), (38, 48945), (Start: 62 @48906 has 161 MA's), (Start: 64 @48903 has 125 MA's), (81, 48864), (96, 48792), (119, 48621), (120, 48618), (133, 48567),

Gene: Oaker\_71 Start: 52771, Stop: 53139, Start Num: 67

Candidate Starts for Oaker\_71:

(Start: 67 @52771 has 189 MA's), (77, 52798), (82, 52810), (94, 52858), (95, 52873), (118, 53035), (132, 53071), (134, 53089),

Gene: Olak\_55 Start: 48318, Stop: 47950, Start Num: 64

Candidate Starts for Olak\_55:

(14, 48522), (16, 48477), (18, 48447), (Start: 62 @48321 has 161 MA's), (Start: 64 @48318 has 125 MA's), (81, 48279), (97, 48198), (119, 48036), (120, 48033), (133, 47982),

Gene: Oline\_56 Start: 48216, Stop: 47845, Start Num: 62

Candidate Starts for Oline\_56:

(8, 48576), (14, 48417), (16, 48372), (18, 48342), (Start: 62 @48216 has 161 MA's), (Start: 64 @48213 has 125 MA's), (81, 48174), (87, 48156), (96, 48102), (97, 48093), (119, 47931), (120, 47928), (133, 47877),

Gene: Olive\_55 Start: 48332, Stop: 47961, Start Num: 62

Candidate Starts for Olive\_55:

(9, 48677), (14, 48533), (16, 48488), (18, 48458), (38, 48371), (Start: 62 @48332 has 161 MA's), (Start: 64 @48329 has 125 MA's), (97, 48209), (119, 48047), (120, 48044), (133, 47993),

Gene: OliverWalter\_55 Start: 48353, Stop: 47982, Start Num: 62

Candidate Starts for OliverWalter\_55:

(14, 48554), (16, 48509), (18, 48479), (38, 48392), (Start: 62 @48353 has 161 MA's), (Start: 64 @48350 has 125 MA's), (81, 48311), (97, 48230), (119, 48068), (120, 48065), (133, 48014),

Gene: Omniscient\_57 Start: 49180, Stop: 48809, Start Num: 62

Candidate Starts for Omniscient\_57:

(8, 49540), (14, 49381), (16, 49336), (18, 49306), (Start: 62 @49180 has 161 MA's), (Start: 64 @49177 has 125 MA's), (81, 49138), (97, 49057), (119, 48895), (120, 48892), (133, 48841),

Gene: OneBrain\_57 Start: 48384, Stop: 48013, Start Num: 62

Candidate Starts for OneBrain\_57:

(14, 48585), (16, 48540), (18, 48510), (38, 48423), (Start: 62 @48384 has 161 MA's), (Start: 64 @48381 has 125 MA's), (81, 48342), (97, 48261), (119, 48099), (120, 48096), (133, 48045),

Gene: Oosterbaan\_56 Start: 48639, Stop: 48271, Start Num: 64

Candidate Starts for Oosterbaan\_56:

(14, 48843), (16, 48798), (18, 48768), (Start: 62 @48642 has 161 MA's), (Start: 64 @48639 has 125 MA's), (81, 48600), (97, 48519), (119, 48357), (120, 48354), (133, 48303),

Gene: OrediggerDelux\_25 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for OrediggerDelux\_25:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Orfeu\_54 Start: 48312, Stop: 47944, Start Num: 64

Candidate Starts for Orfeu\_54:

(14, 48516), (16, 48471), (18, 48441), (Start: 62 @48315 has 161 MA's), (Start: 64 @48312 has 125 MA's), (81, 48273), (97, 48192), (119, 48030), (120, 48027), (133, 47976),

Gene: Orion\_57 Start: 48301, Stop: 47933, Start Num: 64

Candidate Starts for Orion\_57:

(14, 48505), (16, 48460), (18, 48430), (Start: 62 @48304 has 161 MA's), (Start: 64 @48301 has 125 MA's), (81, 48262), (97, 48181), (119, 48019), (120, 48016), (133, 47965),

Gene: Orwigg\_56 Start: 48281, Stop: 47913, Start Num: 64

Candidate Starts for Orwigg\_56:

(14, 48485), (16, 48440), (18, 48410), (Start: 62 @48284 has 161 MA's), (Start: 64 @48281 has 125 MA's), (81, 48242), (97, 48161), (119, 47999), (120, 47996), (133, 47945),

Gene: PBI1\_53 Start: 42653, Stop: 43033, Start Num: 57

Candidate Starts for PBI1\_53:

(Start: 57 @42653 has 22 MA's), (76, 42686), (77, 42689), (78, 42692), (93, 42746), (94, 42749), (111, 42869), (133, 42980), (134, 42983),

Gene: PG1\_57 Start: 48872, Stop: 48504, Start Num: 64

Candidate Starts for PG1\_57:

(14, 49076), (16, 49031), (18, 49001), (Start: 62 @48875 has 161 MA's), (Start: 64 @48872 has 125 MA's), (81, 48833), (97, 48752), (119, 48590), (120, 48587), (133, 48536),

Gene: PLOT\_56 Start: 42705, Stop: 43085, Start Num: 57

Candidate Starts for PLOT\_56:

(Start: 57 @42705 has 22 MA's), (76, 42738), (77, 42741), (78, 42744), (93, 42798), (94, 42801), (111, 42921), (133, 43032), (134, 43035),

Gene: PR\_44 Start: 40732, Stop: 41133, Start Num: 41

Candidate Starts for PR\_44:

(Start: 41 @40732 has 11 MA's), (Start: 52 @40747 has 47 MA's), (109, 40963), (110, 40969), (112, 40984), (126, 41044), (131, 41062), (132, 41065), (133, 41080), (145, 41119), (147, 41122),

Gene: Pacifista\_55 Start: 48314, Stop: 47946, Start Num: 64

Candidate Starts for Pacifista\_55:

(14, 48518), (16, 48473), (18, 48443), (Start: 62 @48317 has 161 MA's), (Start: 64 @48314 has 125 MA's), (81, 48275), (97, 48194), (119, 48032), (120, 48029), (133, 47978),

Gene: PallasAthena\_58 Start: 48361, Stop: 47990, Start Num: 62

Candidate Starts for PallasAthena\_58:

(14, 48562), (16, 48517), (18, 48487), (Start: 62 @48361 has 161 MA's), (Start: 64 @48358 has 125 MA's), (81, 48319), (97, 48238), (119, 48076), (120, 48073), (133, 48022),

Gene: Panchino\_39 Start: 31193, Stop: 31591, Start Num: 44

Candidate Starts for Panchino\_39:

(Start: 44 @31193 has 32 MA's), (75, 31244), (81, 31259), (112, 31442), (114, 31448), (125, 31499), (131, 31520), (132, 31523), (133, 31538), (139, 31562), (145, 31577), (147, 31580),

Gene: Papyrus\_56 Start: 42546, Stop: 42977, Start Num: 28

Candidate Starts for Papyrus\_56:

(Start: 28 @42546 has 2 MA's), (Start: 43 @42576 has 1 MA's), (Start: 51 @42588 has 3 MA's), (58, 42600), (73, 42621), (90, 42672), (107, 42786), (112, 42816), (131, 42906), (132, 42909), (133, 42924),

Gene: ParkTD\_25 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for ParkTD\_25:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Parmesanjohn\_42 Start: 30670, Stop: 31068, Start Num: 44

Candidate Starts for Parmesanjohn\_42:

(Start: 44 @30670 has 32 MA's), (75, 30721), (81, 30736), (112, 30919), (114, 30925), (125, 30976), (131, 30997), (132, 31000), (133, 31015), (139, 31039), (145, 31054), (147, 31057),

Gene: Patter\_26 Start: 8171, Stop: 8527, Start Num: 67

Candidate Starts for Patter\_26:

(Start: 67 @8171 has 189 MA's), (98, 8285), (112, 8378), (133, 8474),

Gene: Penelope2018\_56 Start: 42723, Stop: 43103, Start Num: 57

Candidate Starts for Penelope2018\_56:

(Start: 57 @42723 has 22 MA's), (76, 42756), (77, 42759), (78, 42762), (93, 42816), (94, 42819), (111, 42939), (133, 43050), (134, 43053),

Gene: Phamished\_57 Start: 48321, Stop: 47953, Start Num: 64

Candidate Starts for Phamished\_57:

(14, 48525), (16, 48480), (18, 48450), (38, 48363), (Start: 62 @48324 has 161 MA's), (Start: 64 @48321 has 125 MA's), (81, 48282), (97, 48201), (119, 48039), (120, 48036), (133, 47985),

Gene: Pharb\_73 Start: 49246, Stop: 49617, Start Num: 40

Candidate Starts for Pharb\_73:

(Start: 40 @49246 has 18 MA's), (Start: 52 @49261 has 47 MA's), (Start: 56 @49267 has 3 MA's), (77, 49297), (96, 49351), (101, 49381), (106, 49420), (110, 49441), (112, 49456), (116, 49492), (129, 49549), (132, 49558), (144, 49609),

Gene: Phareon\_55 Start: 48039, Stop: 47668, Start Num: 62

Candidate Starts for Phareon\_55:

(14, 48240), (16, 48195), (18, 48165), (38, 48078), (Start: 62 @48039 has 161 MA's), (Start: 64 @48036 has 125 MA's), (97, 47916), (119, 47754), (120, 47751), (133, 47700),

Gene: PharkleMinkus\_31 Start: 10270, Stop: 10626, Start Num: 67

Candidate Starts for PharkleMinkus\_31:

(Start: 67 @10270 has 189 MA's), (98, 10384), (112, 10477), (133, 10573),

Gene: PhatCats2014\_57 Start: 48879, Stop: 48508, Start Num: 62

Candidate Starts for PhatCats2014\_57:

(14, 49080), (16, 49035), (18, 49005), (Start: 62 @48879 has 161 MA's), (Start: 64 @48876 has 125 MA's), (81, 48837), (97, 48756), (119, 48594), (120, 48591), (133, 48540),

Gene: PhatLouie\_57 Start: 48655, Stop: 48284, Start Num: 62

Candidate Starts for PhatLouie\_57:

(8, 49015), (14, 48856), (16, 48811), (18, 48781), (38, 48694), (Start: 62 @48655 has 161 MA's), (Start: 64 @48652 has 125 MA's), (97, 48532), (119, 48370), (120, 48367), (133, 48316),

Gene: Phelemich\_52 Start: 48646, Stop: 48230, Start Num: 44

Candidate Starts for Phelemich\_52:

(4, 49024), (6, 48979), (7, 48976), (Start: 44 @48646 has 32 MA's), (74, 48592), (120, 48331),

Gene: PhenghisKhan\_56 Start: 48272, Stop: 47904, Start Num: 64

Candidate Starts for PhenghisKhan\_56:

(8, 48635), (14, 48476), (16, 48431), (18, 48401), (Start: 62 @48275 has 161 MA's), (Start: 64 @48272 has 125 MA's), (81, 48233), (87, 48215), (96, 48161), (97, 48152), (119, 47990), (120, 47987), (133, 47936),

Gene: Pherdinand\_57 Start: 48334, Stop: 47963, Start Num: 62

Candidate Starts for Pherdinand\_57:

(14, 48535), (16, 48490), (18, 48460), (Start: 62 @48334 has 161 MA's), (Start: 64 @48331 has 125 MA's), (81, 48292), (97, 48211), (119, 48049), (120, 48046), (133, 47995),

Gene: Phergie\_57 Start: 48264, Stop: 47896, Start Num: 64

Candidate Starts for Phergie\_57:

(8, 48627), (14, 48468), (16, 48423), (18, 48393), (Start: 62 @48267 has 161 MA's), (Start: 64 @48264 has 125 MA's), (81, 48225), (87, 48207), (96, 48153), (97, 48144), (119, 47982), (120, 47979), (133, 47928),

Gene: Phipps\_56 Start: 48152, Stop: 47781, Start Num: 62

Candidate Starts for Phipps\_56:

(14, 48353), (16, 48308), (18, 48278), (Start: 62 @48152 has 161 MA's), (Start: 64 @48149 has 125 MA's), (81, 48110), (97, 48029), (119, 47867), (120, 47864), (133, 47813),

Gene: Phlegm\_28 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for Phlegm\_28:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Phleuron\_56 Start: 48269, Stop: 47901, Start Num: 64

Candidate Starts for Phleuron\_56:

(8, 48632), (14, 48473), (16, 48428), (18, 48398), (Start: 62 @48272 has 161 MA's), (Start: 64 @48269 has 125 MA's), (81, 48230), (87, 48212), (96, 48158), (97, 48149), (119, 47987), (120, 47984), (133, 47933),

Gene: Phloss\_40 Start: 30077, Stop: 30475, Start Num: 44

Candidate Starts for Phloss\_40:

(Start: 44 @30077 has 32 MA's), (75, 30128), (81, 30143), (112, 30326), (114, 30332), (125, 30383), (131, 30404), (132, 30407), (133, 30422), (139, 30446), (145, 30461), (147, 30464),

Gene: Phox\_25 Start: 8866, Stop: 9222, Start Num: 67

Candidate Starts for Phox\_25:

(Start: 67 @8866 has 189 MA's), (112, 9073), (133, 9169),

Gene: PhrankReynolds\_55 Start: 48272, Stop: 47901, Start Num: 62

Candidate Starts for PhrankReynolds\_55:

(8, 48632), (14, 48473), (16, 48428), (18, 48398), (Start: 62 @48272 has 161 MA's), (Start: 64 @48269 has 125 MA's), (81, 48230), (87, 48212), (96, 48158), (97, 48149), (119, 47987), (120, 47984), (133, 47933),

Gene: Phrann\_44 Start: 31873, Stop: 32271, Start Num: 44

Candidate Starts for Phrann\_44:

(Start: 44 @31873 has 32 MA's), (75, 31924), (81, 31939), (112, 32122), (114, 32128), (125, 32179), (131, 32200), (132, 32203), (133, 32218), (139, 32242), (145, 32257), (147, 32260),

Gene: Phrappuccino\_28 Start: 15030, Stop: 15431, Start Num: 51

Candidate Starts for Phrappuccino\_28:

(Start: 51 @15030 has 3 MA's), (75, 15078), (86, 15108), (107, 15240), (124, 15339), (132, 15363), (133, 15378), (145, 15417),

Gene: Phreeze\_70 Start: 51738, Stop: 52106, Start Num: 67

Candidate Starts for Phreeze\_70:

(Start: 67 @51738 has 189 MA's), (77, 51765), (82, 51777), (94, 51825), (95, 51840), (118, 52002), (132, 52038), (134, 52056),

Gene: PhrodoBaggins\_57 Start: 48737, Stop: 48369, Start Num: 64

Candidate Starts for PhrodoBaggins\_57:

(14, 48941), (16, 48896), (18, 48866), (Start: 62 @48740 has 161 MA's), (Start: 64 @48737 has 125 MA's), (81, 48698), (97, 48617), (119, 48455), (120, 48452), (133, 48401),

Gene: Phunky\_55 Start: 48336, Stop: 47965, Start Num: 62

Candidate Starts for Phunky\_55:

(14, 48537), (16, 48492), (18, 48462), (38, 48375), (Start: 62 @48336 has 161 MA's), (Start: 64 @48333 has 125 MA's), (97, 48213), (119, 48051), (120, 48048), (133, 47997),

Gene: Phusco\_26 Start: 8150, Stop: 8506, Start Num: 67

Candidate Starts for Phusco\_26:

(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Pier\_28 Start: 8857, Stop: 9213, Start Num: 67

Candidate Starts for Pier\_28:

(Start: 67 @8857 has 189 MA's), (98, 8971), (112, 9064), (133, 9160),

Gene: Piglet\_0056 Start: 48852, Stop: 48481, Start Num: 62

Candidate Starts for Piglet\_0056:

(14, 49053), (16, 49008), (18, 48978), (Start: 62 @48852 has 161 MA's), (Start: 64 @48849 has 125 MA's), (81, 48810), (97, 48729), (119, 48567), (120, 48564), (133, 48513),

Gene: PinheadLarry\_57 Start: 48874, Stop: 48506, Start Num: 64

Candidate Starts for PinheadLarry\_57:

(14, 49078), (16, 49033), (18, 49003), (Start: 62 @48877 has 161 MA's), (Start: 64 @48874 has 125 MA's), (81, 48835), (97, 48754), (119, 48592), (120, 48589), (133, 48538),

Gene: Pinkcreek\_18 Start: 6561, Stop: 6917, Start Num: 67

Candidate Starts for Pinkcreek\_18:

(Start: 67 @6561 has 189 MA's), (112, 6768), (133, 6864),

Gene: Pinkman\_55 Start: 48210, Stop: 47839, Start Num: 62

Candidate Starts for Pinkman\_55:

(8, 48570), (14, 48411), (16, 48366), (18, 48336), (Start: 62 @48210 has 161 MA's), (Start: 64 @48207 has 125 MA's), (81, 48168), (87, 48150), (96, 48096), (97, 48087), (119, 47925), (120, 47922), (133, 47871),

Gene: Pio\_29 Start: 9548, Stop: 9904, Start Num: 67

Candidate Starts for Pio\_29:

(Start: 67 @9548 has 189 MA's), (98, 9662), (112, 9755), (133, 9851),

Gene: Pipsqueak\_55 Start: 48365, Stop: 47994, Start Num: 62

Candidate Starts for Pipsqueak\_55:

(14, 48566), (16, 48521), (18, 48491), (Start: 62 @48365 has 161 MA's), (Start: 64 @48362 has 125 MA's), (81, 48323), (97, 48242), (119, 48080), (120, 48077), (133, 48026),

Gene: Pipsqueaks\_42 Start: 30647, Stop: 31045, Start Num: 44

Candidate Starts for Pipsqueaks\_42:

(Start: 44 @30647 has 32 MA's), (75, 30698), (81, 30713), (112, 30896), (114, 30902), (125, 30953), (131, 30974), (132, 30977), (133, 30992), (139, 31016), (145, 31031), (147, 31034),

Gene: Piro94\_36 Start: 27692, Stop: 28087, Start Num: 52

Candidate Starts for Piro94\_36:

(Start: 52 @27692 has 47 MA's), (116, 27950), (119, 27980), (132, 28016),

Gene: Pivoine\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for Pivoine\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Pixie\_74 Start: 49525, Stop: 49920, Start Num: 34

Candidate Starts for Pixie\_74:

(Start: 34 @49525 has 6 MA's), (Start: 56 @49561 has 3 MA's), (77, 49597), (110, 49744), (112, 49759), (116, 49795), (144, 49912),

Gene: Placalicious\_56 Start: 48864, Stop: 48496, Start Num: 64

Candidate Starts for Placalicious\_56:

(14, 49068), (16, 49023), (18, 48993), (Start: 62 @48867 has 161 MA's), (Start: 64 @48864 has 125 MA's), (81, 48825), (97, 48744), (119, 48582), (120, 48579), (133, 48528),

Gene: Plata\_56 Start: 48363, Stop: 47992, Start Num: 62

Candidate Starts for Plata\_56:

(14, 48564), (16, 48519), (18, 48489), (Start: 62 @48363 has 161 MA's), (Start: 64 @48360 has 125 MA's), (81, 48321), (97, 48240), (119, 48078), (120, 48075), (133, 48024),

Gene: Pleione\_28 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for Pleione\_28:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Plmatters\_55 Start: 48339, Stop: 47968, Start Num: 62

Candidate Starts for Plmatters\_55:

(8, 48699), (14, 48540), (16, 48495), (18, 48465), (Start: 62 @48339 has 161 MA's), (Start: 64 @48336 has 125 MA's), (81, 48297), (96, 48225), (119, 48054), (120, 48051), (133, 48000),

Gene: Podrick\_54 Start: 47673, Stop: 47305, Start Num: 64

Candidate Starts for Podrick\_54:

(14, 47877), (16, 47832), (18, 47802), (Start: 62 @47676 has 161 MA's), (Start: 64 @47673 has 125 MA's), (81, 47634), (96, 47562), (119, 47391), (120, 47388), (133, 47337),

Gene: Pops\_55 Start: 48324, Stop: 47953, Start Num: 62

Candidate Starts for Pops\_55:

(9, 48666), (14, 48525), (16, 48480), (18, 48450), (Start: 62 @48324 has 161 MA's), (Start: 64 @48321 has 125 MA's), (81, 48282), (87, 48264), (96, 48210), (97, 48201), (119, 48039), (120, 48036), (133, 47985),

Gene: Poster\_48 Start: 47152, Stop: 46754, Start Num: 45

Candidate Starts for Poster\_48:

(Start: 45 @47152 has 19 MA's), (74, 47104), (75, 47101), (85, 47080), (127, 46834), (135, 46798),

Gene: Potter\_55 Start: 48373, Stop: 48002, Start Num: 62

Candidate Starts for Potter\_55:

(14, 48574), (16, 48529), (18, 48499), (Start: 62 @48373 has 161 MA's), (Start: 64 @48370 has 125 MA's), (81, 48331), (96, 48259), (119, 48088), (120, 48085), (133, 48034),

Gene: Power\_35 Start: 27298, Stop: 27681, Start Num: 52

Candidate Starts for Power\_35:

(Start: 52 @27298 has 47 MA's), (94, 27382), (110, 27490), (116, 27541), (119, 27571), (143, 27658),

Gene: Prager\_56 Start: 42742, Stop: 43122, Start Num: 57

Candidate Starts for Prager\_56:

(Start: 57 @42742 has 22 MA's), (76, 42775), (77, 42778), (78, 42781), (93, 42835), (94, 42838), (111, 42958), (133, 43069), (134, 43072),

Gene: Prickles\_57 Start: 48631, Stop: 48260, Start Num: 62

Candidate Starts for Prickles\_57:

(14, 48832), (16, 48787), (18, 48757), (38, 48670), (Start: 62 @48631 has 161 MA's), (Start: 64 @48628 has 125 MA's), (81, 48589), (87, 48571), (97, 48508), (119, 48346), (120, 48343), (133, 48292),

Gene: Primadonna\_21 Start: 7806, Stop: 8162, Start Num: 67

Candidate Starts for Primadonna\_21:

(Start: 67 @7806 has 189 MA's), (112, 8013), (133, 8109),

Gene: Prince\_49 Start: 48357, Stop: 47959, Start Num: 45

Candidate Starts for Prince\_49:

(5, 48690), (Start: 45 @48357 has 19 MA's), (74, 48309), (75, 48306), (85, 48285), (120, 48060), (127, 48039), (135, 48003),

Gene: ProfessorX\_55 Start: 48328, Stop: 47960, Start Num: 64

Candidate Starts for ProfessorX\_55:

(14, 48532), (16, 48487), (18, 48457), (Start: 62 @48331 has 161 MA's), (Start: 64 @48328 has 125 MA's), (81, 48289), (97, 48208), (119, 48046), (120, 48043), (133, 47992),

Gene: Puhltonio\_56 Start: 48647, Stop: 48276, Start Num: 62

Candidate Starts for Puhltonio\_56:

(14, 48848), (16, 48803), (18, 48773), (Start: 62 @48647 has 161 MA's), (Start: 64 @48644 has 125 MA's), (81, 48605), (96, 48533), (119, 48362), (120, 48359), (133, 48308),

Gene: Puissant\_68 Start: 51841, Stop: 52215, Start Num: 67

Candidate Starts for Puissant\_68:

(Start: 67 @51841 has 189 MA's), (77, 51868), (94, 51928), (132, 52144),

Gene: Pupusa\_33 Start: 10807, Stop: 11163, Start Num: 67

Candidate Starts for Pupusa\_33:

(Start: 67 @10807 has 189 MA's), (112, 11014), (133, 11110),

Gene: PurduePete\_25 Start: 8416, Stop: 8772, Start Num: 67

Candidate Starts for PurduePete\_25:

(Start: 67 @8416 has 189 MA's), (98, 8530), (112, 8623), (133, 8719),

Gene: QBert\_24 Start: 8866, Stop: 9222, Start Num: 67  
Candidate Starts for QBert\_24:  
(Start: 67 @8866 has 189 MA's), (112, 9073), (133, 9169),

Gene: Quasimodo\_26 Start: 9114, Stop: 9470, Start Num: 67  
Candidate Starts for Quasimodo\_26:  
(Start: 67 @9114 has 189 MA's), (98, 9228), (112, 9321), (133, 9417),

Gene: QueenB2\_36 Start: 27362, Stop: 27739, Start Num: 52  
Candidate Starts for QueenB2\_36:  
(Start: 52 @27362 has 47 MA's), (116, 27602), (119, 27632), (121, 27638), (132, 27668),

Gene: QueenBeane\_56 Start: 48637, Stop: 48266, Start Num: 62  
Candidate Starts for QueenBeane\_56:  
(14, 48838), (16, 48793), (18, 48763), (Start: 62 @48637 has 161 MA's), (Start: 64 @48634 has 125 MA's), (81, 48595), (96, 48523), (119, 48352), (120, 48349), (133, 48298),

Gene: QueenBeesly\_36 Start: 27245, Stop: 27628, Start Num: 52  
Candidate Starts for QueenBeesly\_36:  
(Start: 52 @27245 has 47 MA's), (94, 27329), (110, 27437), (116, 27488), (119, 27518), (143, 27605),

Gene: Quisquilliae\_57 Start: 48637, Stop: 48269, Start Num: 64  
Candidate Starts for Quisquilliae\_57:  
(14, 48841), (16, 48796), (18, 48766), (Start: 62 @48640 has 161 MA's), (Start: 64 @48637 has 125 MA's), (81, 48598), (97, 48517), (119, 48355), (120, 48352), (133, 48301),

Gene: Rabinovish\_25 Start: 9154, Stop: 9510, Start Num: 67  
Candidate Starts for Rabinovish\_25:  
(Start: 67 @9154 has 189 MA's), (112, 9361), (133, 9457),

Gene: Rachaly\_39 Start: 28574, Stop: 28945, Start Num: 70  
Candidate Starts for Rachaly\_39:  
(Start: 70 @28574 has 4 MA's), (101, 28691), (112, 28766), (116, 28802), (119, 28832), (132, 28868), (139, 28907), (143, 28919), (147, 28925),

Gene: Rahel\_26 Start: 8150, Stop: 8506, Start Num: 67  
Candidate Starts for Rahel\_26:  
(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: RawrgerThat\_50 Start: 48212, Stop: 47814, Start Num: 45  
Candidate Starts for RawrgerThat\_50:  
(Start: 45 @48212 has 19 MA's), (74, 48164), (75, 48161), (85, 48140), (127, 47894), (135, 47858),

Gene: Reccee\_54 Start: 48685, Stop: 48290, Start Num: 56  
Candidate Starts for Reccee\_54:  
(4, 49081), (6, 49036), (7, 49033), (Start: 44 @48703 has 32 MA's), (Start: 56 @48685 has 3 MA's), (81, 48631), (135, 48334),

Gene: RedMaple\_57 Start: 48873, Stop: 48502, Start Num: 62  
Candidate Starts for RedMaple\_57:  
(14, 49074), (16, 49029), (18, 48999), (38, 48912), (Start: 62 @48873 has 161 MA's), (Start: 64 @48870 has 125 MA's), (81, 48831), (96, 48759), (119, 48588), (120, 48585), (133, 48534),

Gene: RedRaider89\_56 Start: 48561, Stop: 48193, Start Num: 64

Candidate Starts for RedRaider89\_56:

(14, 48765), (16, 48720), (18, 48690), (38, 48603), (Start: 62 @48564 has 161 MA's), (Start: 64 @48561 has 125 MA's), (81, 48522), (97, 48441), (119, 48279), (120, 48276), (133, 48225),

Gene: Renkei\_48 Start: 47168, Stop: 46770, Start Num: 45

Candidate Starts for Renkei\_48:

(Start: 45 @47168 has 19 MA's), (74, 47120), (75, 47117), (85, 47096), (127, 46850), (135, 46814),

Gene: Reprobate\_53 Start: 48651, Stop: 48235, Start Num: 44

Candidate Starts for Reprobate\_53:

(4, 49029), (6, 48984), (7, 48981), (Start: 44 @48651 has 32 MA's), (74, 48597), (120, 48336),

Gene: Retro23\_37 Start: 27627, Stop: 28010, Start Num: 52

Candidate Starts for Retro23\_37:

(Start: 52 @27627 has 47 MA's), (94, 27711), (110, 27819), (116, 27870), (119, 27900), (132, 27936), (143, 27987),

Gene: Rich\_54 Start: 50085, Stop: 49669, Start Num: 44

Candidate Starts for Rich\_54:

(4, 50463), (6, 50418), (7, 50415), (11, 50364), (Start: 44 @50085 has 32 MA's), (Start: 56 @50067 has 3 MA's), (81, 50013), (135, 49713), (148, 49680),

Gene: Ricotta\_55 Start: 48327, Stop: 47959, Start Num: 64

Candidate Starts for Ricotta\_55:

(14, 48531), (16, 48486), (18, 48456), (Start: 62 @48330 has 161 MA's), (Start: 64 @48327 has 125 MA's), (81, 48288), (97, 48207), (119, 48045), (120, 48042), (133, 47991),

Gene: Riggan\_57 Start: 48630, Stop: 48259, Start Num: 62

Candidate Starts for Riggan\_57:

(14, 48831), (16, 48786), (18, 48756), (Start: 62 @48630 has 161 MA's), (Start: 64 @48627 has 125 MA's), (81, 48588), (96, 48516), (119, 48345), (120, 48342), (133, 48291),

Gene: Riparian\_57 Start: 42099, Stop: 42569, Start Num: 20

Candidate Starts for Riparian\_57:

(Start: 20 @42099 has 6 MA's), (Start: 28 @42138 has 2 MA's), (Start: 43 @42168 has 1 MA's), (Start: 51 @42180 has 3 MA's), (58, 42192), (68, 42207), (73, 42213), (90, 42264), (107, 42378), (112, 42408), (131, 42498), (132, 42501), (133, 42516),

Gene: Rita130\_53 Start: 48505, Stop: 48110, Start Num: 56

Candidate Starts for Rita130\_53:

(4, 48901), (6, 48856), (7, 48853), (Start: 44 @48523 has 32 MA's), (Start: 56 @48505 has 3 MA's), (81, 48451), (135, 48154),

Gene: Riverton\_55 Start: 48358, Stop: 47987, Start Num: 62

Candidate Starts for Riverton\_55:

(14, 48559), (16, 48514), (18, 48484), (38, 48397), (Start: 62 @48358 has 161 MA's), (Start: 64 @48355 has 125 MA's), (81, 48316), (97, 48235), (119, 48073), (120, 48070), (133, 48019),

Gene: Rizal\_24 Start: 7616, Stop: 7972, Start Num: 67

Candidate Starts for Rizal\_24:

(Start: 67 @7616 has 189 MA's), (112, 7823), (133, 7919),

Gene: RoMag\_21 Start: 7951, Stop: 8307, Start Num: 67  
Candidate Starts for RoMag\_21:  
(Start: 67 @7951 has 189 MA's), (112, 8158), (133, 8254),

Gene: Robyn\_55 Start: 48276, Stop: 47905, Start Num: 62  
Candidate Starts for Robyn\_55:  
(14, 48477), (16, 48432), (18, 48402), (38, 48315), (Start: 62 @48276 has 161 MA's), (Start: 64 @48273 has 125 MA's), (81, 48234), (96, 48162), (97, 48153), (119, 47991), (120, 47988), (133, 47937),

Gene: Rocha\_24 Start: 7647, Stop: 8003, Start Num: 67  
Candidate Starts for Rocha\_24:  
(Start: 67 @7647 has 189 MA's), (98, 7761), (112, 7854), (133, 7950),

Gene: Roliet\_54 Start: 47673, Stop: 47302, Start Num: 62  
Candidate Starts for Roliet\_54:  
(14, 47874), (16, 47829), (18, 47799), (38, 47712), (Start: 62 @47673 has 161 MA's), (Start: 64 @47670 has 125 MA's), (81, 47631), (97, 47550), (119, 47388), (120, 47385), (133, 47334),

Gene: RonRayGun\_40 Start: 31491, Stop: 31892, Start Num: 39  
Candidate Starts for RonRayGun\_40:  
(12, 31248), (Start: 39 @31491 has 5 MA's), (Start: 53 @31509 has 1 MA's), (101, 31665), (108, 31716), (112, 31740), (133, 31860), (134, 31863),

Gene: Ronan\_21 Start: 6262, Stop: 6618, Start Num: 67  
Candidate Starts for Ronan\_21:  
(Start: 67 @6262 has 189 MA's), (112, 6469), (133, 6565),

Gene: Roots515\_26 Start: 8698, Stop: 9054, Start Num: 67  
Candidate Starts for Roots515\_26:  
(Start: 67 @8698 has 189 MA's), (112, 8905), (133, 9001),

Gene: Rope\_56 Start: 42577, Stop: 42966, Start Num: 51  
Candidate Starts for Rope\_56:  
(Start: 28 @42535 has 2 MA's), (Start: 43 @42565 has 1 MA's), (Start: 51 @42577 has 3 MA's), (58, 42589), (68, 42604), (73, 42610), (90, 42661), (107, 42775), (112, 42805), (131, 42895), (132, 42898), (133, 42913),

Gene: Roscoe\_56 Start: 48576, Stop: 48205, Start Num: 62  
Candidate Starts for Roscoe\_56:  
(14, 48777), (16, 48732), (18, 48702), (38, 48615), (Start: 62 @48576 has 161 MA's), (Start: 64 @48573 has 125 MA's), (81, 48534), (96, 48462), (97, 48453), (119, 48291), (120, 48288), (133, 48237),

Gene: Roy17\_55 Start: 48030, Stop: 47659, Start Num: 62  
Candidate Starts for Roy17\_55:  
(14, 48231), (16, 48186), (18, 48156), (38, 48069), (Start: 62 @48030 has 161 MA's), (Start: 64 @48027 has 125 MA's), (97, 47907), (119, 47745), (120, 47742), (133, 47691),

Gene: Ryadel\_79 Start: 48372, Stop: 47995, Start Num: 55  
Candidate Starts for Ryadel\_79:  
(Start: 55 @48372 has 26 MA's), (82, 48312), (86, 48300), (98, 48237), (112, 48144), (114, 48138), (117, 48093), (130, 48048), (137, 48009), (138, 48006),

Gene: SDcharge11\_55 Start: 47644, Stop: 47273, Start Num: 62

Candidate Starts for SDcharge11\_55:

(14, 47845), (16, 47800), (18, 47770), (38, 47683), (Start: 62 @47644 has 161 MA's), (Start: 64 @47641 has 125 MA's), (81, 47602), (97, 47521), (119, 47359), (120, 47356), (133, 47305),

Gene: SVoro\_25 Start: 8693, Stop: 9049, Start Num: 67

Candidate Starts for SVoro\_25:

(Start: 67 @8693 has 189 MA's), (112, 8900), (133, 8996),

Gene: Salacia\_28 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for Salacia\_28:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: SallyH\_57 Start: 48314, Stop: 47946, Start Num: 64

Candidate Starts for SallyH\_57:

(14, 48518), (16, 48473), (18, 48443), (Start: 62 @48317 has 161 MA's), (Start: 64 @48314 has 125 MA's), (81, 48275), (97, 48194), (119, 48032), (120, 48029), (133, 47978),

Gene: Samaymay\_56 Start: 48637, Stop: 48266, Start Num: 62

Candidate Starts for Samaymay\_56:

(14, 48838), (16, 48793), (18, 48763), (Start: 62 @48637 has 161 MA's), (Start: 64 @48634 has 125 MA's), (81, 48595), (96, 48523), (119, 48352), (120, 48349), (133, 48298),

Gene: SassyCat97\_55 Start: 48364, Stop: 47993, Start Num: 62

Candidate Starts for SassyCat97\_55:

(14, 48565), (16, 48520), (18, 48490), (38, 48403), (Start: 62 @48364 has 161 MA's), (Start: 64 @48361 has 125 MA's), (81, 48322), (96, 48250), (119, 48079), (120, 48076), (133, 48025),

Gene: Sauce\_27 Start: 8829, Stop: 9185, Start Num: 67

Candidate Starts for Sauce\_27:

(Start: 67 @8829 has 189 MA's), (112, 9036), (133, 9132),

Gene: Sbash\_50 Start: 38735, Stop: 39223, Start Num: 19

Candidate Starts for Sbash\_50:

(Start: 19 @38735 has 1 MA's), (31, 38795), (65, 38855), (81, 38891), (112, 39074), (119, 39119), (125, 39131), (131, 39152), (132, 39155), (133, 39170), (143, 39206), (145, 39209), (147, 39212),

Gene: Schadenfreude\_55 Start: 48120, Stop: 47752, Start Num: 64

Candidate Starts for Schadenfreude\_55:

(14, 48324), (16, 48279), (18, 48249), (38, 48162), (Start: 62 @48123 has 161 MA's), (Start: 64 @48120 has 125 MA's), (81, 48081), (96, 48009), (97, 48000), (119, 47838), (120, 47835), (133, 47784),

Gene: Schnauzer\_43 Start: 30670, Stop: 31068, Start Num: 44

Candidate Starts for Schnauzer\_43:

(Start: 44 @30670 has 32 MA's), (75, 30721), (81, 30736), (112, 30919), (114, 30925), (125, 30976), (131, 30997), (132, 31000), (133, 31015), (139, 31039), (145, 31054), (147, 31057),

Gene: SchoolBus\_75 Start: 47520, Stop: 47143, Start Num: 55

Candidate Starts for SchoolBus\_75:

(Start: 55 @47520 has 26 MA's), (82, 47460), (86, 47448), (98, 47385), (112, 47292), (114, 47286), (117, 47241), (130, 47196), (137, 47157), (138, 47154),

Gene: Schueller\_56 Start: 48350, Stop: 47982, Start Num: 64

Candidate Starts for Schueller\_56:

(8, 48713), (14, 48554), (16, 48509), (18, 48479), (Start: 62 @48353 has 161 MA's), (Start: 64 @48350 has 125 MA's), (81, 48311), (87, 48293), (96, 48239), (119, 48068), (120, 48065), (133, 48014),

Gene: Schuy\_77 Start: 47372, Stop: 46995, Start Num: 55

Candidate Starts for Schuy\_77:

(Start: 55 @47372 has 26 MA's), (82, 47312), (86, 47300), (98, 47237), (112, 47144), (114, 47138), (117, 47093), (130, 47048), (137, 47009), (138, 47006),

Gene: Scitech\_39 Start: 28686, Stop: 29084, Start Num: 44

Candidate Starts for Scitech\_39:

(Start: 44 @28686 has 32 MA's), (75, 28737), (81, 28752), (112, 28935), (114, 28941), (125, 28992), (131, 29013), (132, 29016), (133, 29031), (139, 29055), (145, 29070), (147, 29073),

Gene: Scoot17C\_57 Start: 48303, Stop: 47935, Start Num: 64

Candidate Starts for Scoot17C\_57:

(14, 48507), (16, 48462), (18, 48432), (Start: 62 @48306 has 161 MA's), (Start: 64 @48303 has 125 MA's), (81, 48264), (97, 48183), (119, 48021), (120, 48018), (133, 47967),

Gene: ScottMcG\_26 Start: 9009, Stop: 9365, Start Num: 67

Candidate Starts for ScottMcG\_26:

(Start: 67 @9009 has 189 MA's), (112, 9216), (133, 9312),

Gene: Scrick\_57 Start: 48378, Stop: 48007, Start Num: 62

Candidate Starts for Scrick\_57:

(14, 48579), (16, 48534), (18, 48504), (Start: 62 @48378 has 161 MA's), (Start: 64 @48375 has 125 MA's), (81, 48336), (97, 48255), (119, 48093), (120, 48090), (133, 48039),

Gene: Sebata\_26 Start: 9052, Stop: 9408, Start Num: 67

Candidate Starts for Sebata\_26:

(Start: 67 @9052 has 189 MA's), (112, 9259), (133, 9355),

Gene: Selr12\_56 Start: 48343, Stop: 47975, Start Num: 64

Candidate Starts for Selr12\_56:

(14, 48547), (16, 48502), (18, 48472), (Start: 62 @48346 has 161 MA's), (Start: 64 @48343 has 125 MA's), (81, 48304), (97, 48223), (119, 48061), (120, 48058), (133, 48007),

Gene: SemperFi\_37 Start: 27513, Stop: 27896, Start Num: 52

Candidate Starts for SemperFi\_37:

(Start: 52 @27513 has 47 MA's), (94, 27597), (110, 27705), (116, 27756), (119, 27786), (143, 27873),

Gene: Send513\_56 Start: 42632, Stop: 43102, Start Num: 20

Candidate Starts for Send513\_56:

(Start: 20 @42632 has 6 MA's), (Start: 28 @42671 has 2 MA's), (Start: 43 @42701 has 1 MA's), (Start: 51 @42713 has 3 MA's), (58, 42725), (68, 42740), (73, 42746), (90, 42797), (107, 42911), (112, 42941), (131, 43031), (132, 43034), (133, 43049),

Gene: Serendipitous\_53 Start: 48341, Stop: 47952, Start Num: 56

Candidate Starts for Serendipitous\_53:

(Start: 56 @48341 has 3 MA's), (112, 48122), (120, 48053), (135, 47996), (139, 47984),

Gene: Serendipity\_56 Start: 48658, Stop: 48290, Start Num: 64  
Candidate Starts for Serendipity\_56:  
(14, 48862), (16, 48817), (18, 48787), (Start: 62 @48661 has 161 MA's), (Start: 64 @48658 has 125 MA's), (81, 48619), (96, 48547), (119, 48376), (120, 48373), (133, 48322),

Gene: Serpentine\_0056 Start: 48744, Stop: 48373, Start Num: 62  
Candidate Starts for Serpentine\_0056:  
(14, 48945), (16, 48900), (18, 48870), (Start: 62 @48744 has 161 MA's), (Start: 64 @48741 has 125 MA's), (81, 48702), (97, 48621), (119, 48459), (120, 48456), (133, 48405),

Gene: Settecandela\_28 Start: 15030, Stop: 15431, Start Num: 51  
Candidate Starts for Settecandela\_28:  
(Start: 51 @15030 has 3 MA's), (75, 15078), (86, 15108), (107, 15240), (124, 15339), (132, 15363), (133, 15378), (145, 15417),

Gene: Shadow1\_78 Start: 49985, Stop: 50368, Start Num: 40  
Candidate Starts for Shadow1\_78:  
(Start: 40 @49985 has 18 MA's), (Start: 56 @50006 has 3 MA's), (83, 50060), (101, 50132), (106, 50171), (112, 50207), (116, 50243), (132, 50309),

Gene: ShadowBud\_57 Start: 48634, Stop: 48266, Start Num: 64  
Candidate Starts for ShadowBud\_57:  
(14, 48838), (16, 48793), (18, 48763), (Start: 62 @48637 has 161 MA's), (Start: 64 @48634 has 125 MA's), (81, 48595), (97, 48514), (119, 48352), (120, 48349), (133, 48298),

Gene: Shaqnato\_22 Start: 7276, Stop: 7632, Start Num: 67  
Candidate Starts for Shaqnato\_22:  
(Start: 67 @7276 has 189 MA's), (112, 7483), (133, 7579),

Gene: ShedlockHolmes\_77 Start: 50038, Stop: 50421, Start Num: 34  
Candidate Starts for ShedlockHolmes\_77:  
(Start: 34 @50038 has 6 MA's), (Start: 56 @50074 has 3 MA's), (77, 50110), (95, 50164), (104, 50215), (109, 50251), (110, 50257), (112, 50272), (132, 50374), (133, 50389),

Gene: Sheila\_54 Start: 47702, Stop: 47334, Start Num: 64  
Candidate Starts for Sheila\_54:  
(14, 47906), (16, 47861), (18, 47831), (38, 47744), (Start: 62 @47705 has 161 MA's), (Start: 64 @47702 has 125 MA's), (81, 47663), (97, 47582), (119, 47420), (120, 47417), (133, 47366),

Gene: Shelob\_28 Start: 9584, Stop: 9940, Start Num: 67  
Candidate Starts for Shelob\_28:  
(Start: 67 @9584 has 189 MA's), (112, 9791), (133, 9887),

Gene: Shenyu\_54 Start: 48876, Stop: 48463, Start Num: 44  
Candidate Starts for Shenyu\_54:  
(Start: 44 @48876 has 32 MA's), (81, 48804), (122, 48558), (123, 48555), (132, 48528),

Gene: ShiaLabeouf\_26 Start: 8150, Stop: 8506, Start Num: 67  
Candidate Starts for ShiaLabeouf\_26:  
(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Shida\_75 Start: 47211, Stop: 46834, Start Num: 55  
Candidate Starts for Shida\_75:

(Start: 55 @47211 has 26 MA's), (82, 47151), (86, 47139), (98, 47076), (112, 46983), (114, 46977), (117, 46932), (130, 46887), (137, 46848), (138, 46845),

Gene: Shifa\_23 Start: 8335, Stop: 8691, Start Num: 67

Candidate Starts for Shifa\_23:

(Start: 67 @8335 has 189 MA's), (112, 8542), (133, 8638),

Gene: Shnickers\_26 Start: 8150, Stop: 8506, Start Num: 67

Candidate Starts for Shnickers\_26:

(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Shrimp\_26 Start: 8703, Stop: 9059, Start Num: 67

Candidate Starts for Shrimp\_26:

(Start: 67 @8703 has 189 MA's), (112, 8910), (133, 9006),

Gene: Shweta\_40 Start: 29977, Stop: 30375, Start Num: 44

Candidate Starts for Shweta\_40:

(Start: 44 @29977 has 32 MA's), (75, 30028), (81, 30043), (112, 30226), (114, 30232), (119, 30271), (125, 30283), (131, 30304), (132, 30307), (133, 30322), (145, 30361), (147, 30364),

Gene: Sigman\_57 Start: 48294, Stop: 47926, Start Num: 64

Candidate Starts for Sigman\_57:

(14, 48498), (16, 48453), (18, 48423), (Start: 62 @48297 has 161 MA's), (Start: 64 @48294 has 125 MA's), (81, 48255), (97, 48174), (119, 48012), (120, 48009), (133, 47958),

Gene: Silvafighter\_43 Start: 30643, Stop: 31041, Start Num: 44

Candidate Starts for Silvafighter\_43:

(Start: 44 @30643 has 32 MA's), (46, 30646), (75, 30694), (81, 30709), (112, 30892), (114, 30898), (125, 30949), (131, 30970), (132, 30973), (133, 30988), (139, 31012), (145, 31027), (147, 31030),

Gene: SilverBell\_55 Start: 48382, Stop: 48011, Start Num: 62

Candidate Starts for SilverBell\_55:

(14, 48583), (16, 48538), (18, 48508), (Start: 62 @48382 has 161 MA's), (Start: 64 @48379 has 125 MA's), (81, 48340), (97, 48259), (119, 48097), (120, 48094), (133, 48043),

Gene: SilverDipper\_27 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for SilverDipper\_27:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Simielle\_55 Start: 48297, Stop: 47929, Start Num: 64

Candidate Starts for Simielle\_55:

(8, 48660), (14, 48501), (16, 48456), (18, 48426), (Start: 62 @48300 has 161 MA's), (Start: 64 @48297 has 125 MA's), (81, 48258), (97, 48177), (119, 48015), (120, 48012), (133, 47961),

Gene: SirBeauregard\_57 Start: 48867, Stop: 48496, Start Num: 62

Candidate Starts for SirBeauregard\_57:

(14, 49068), (16, 49023), (18, 48993), (Start: 62 @48867 has 161 MA's), (Start: 64 @48864 has 125 MA's), (81, 48825), (97, 48744), (119, 48582), (120, 48579), (133, 48528),

Gene: SirHarley\_57 Start: 42899, Stop: 43279, Start Num: 57

Candidate Starts for SirHarley\_57:

(Start: 57 @42899 has 22 MA's), (76, 42932), (77, 42935), (78, 42938), (93, 42992), (94, 42995), (111, 43115), (133, 43226), (134, 43229),

Gene: SirJeffery\_53 Start: 48507, Stop: 48112, Start Num: 56

Candidate Starts for SirJeffery\_53:

(4, 48903), (6, 48858), (7, 48855), (Start: 44 @48525 has 32 MA's), (Start: 56 @48507 has 3 MA's), (81, 48453), (135, 48156), (148, 48123),

Gene: SirPhilip\_73 Start: 50211, Stop: 50594, Start Num: 40

Candidate Starts for SirPhilip\_73:

(Start: 40 @50211 has 18 MA's), (Start: 45 @50217 has 19 MA's), (77, 50271), (83, 50286), (96, 50328), (101, 50358), (106, 50397), (112, 50433), (122, 50508), (132, 50535),

Gene: Skippy\_57 Start: 48594, Stop: 48226, Start Num: 64

Candidate Starts for Skippy\_57:

(14, 48798), (16, 48753), (18, 48723), (Start: 62 @48597 has 161 MA's), (Start: 64 @48594 has 125 MA's), (81, 48555), (97, 48474), (119, 48312), (120, 48309), (133, 48258),

Gene: Sknot\_36 Start: 27377, Stop: 27772, Start Num: 52

Candidate Starts for Sknot\_36:

(Start: 52 @27377 has 47 MA's), (116, 27635), (119, 27665), (132, 27701),

Gene: Slatt\_57 Start: 48659, Stop: 48291, Start Num: 64

Candidate Starts for Slatt\_57:

(14, 48863), (16, 48818), (18, 48788), (Start: 62 @48662 has 161 MA's), (Start: 64 @48659 has 125 MA's), (81, 48620), (97, 48539), (119, 48377), (120, 48374), (133, 48323),

Gene: SmallFry\_26 Start: 8150, Stop: 8506, Start Num: 67

Candidate Starts for SmallFry\_26:

(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Smeagan\_38 Start: 27763, Stop: 28161, Start Num: 52

Candidate Starts for Smeagan\_38:

(Start: 52 @27763 has 47 MA's), (78, 27811), (119, 28054), (121, 28060), (132, 28090),

Gene: Smooch\_78 Start: 49262, Stop: 48885, Start Num: 55

Candidate Starts for Smooch\_78:

(Start: 29 @49310 has 4 MA's), (Start: 55 @49262 has 26 MA's), (82, 49202), (86, 49190), (98, 49127), (112, 49034), (114, 49028), (117, 48983), (130, 48938), (137, 48899), (138, 48896),

Gene: Smurph\_42 Start: 30670, Stop: 31068, Start Num: 44

Candidate Starts for Smurph\_42:

(Start: 44 @30670 has 32 MA's), (75, 30721), (81, 30736), (112, 30919), (114, 30925), (125, 30976), (131, 30997), (132, 31000), (133, 31015), (139, 31039), (145, 31054), (147, 31057),

Gene: SnapTap\_36 Start: 27324, Stop: 27707, Start Num: 52

Candidate Starts for SnapTap\_36:

(Start: 52 @27324 has 47 MA's), (94, 27408), (110, 27516), (116, 27567), (119, 27597), (143, 27684),

Gene: Snekmaggedon\_40 Start: 29847, Stop: 30245, Start Num: 44

Candidate Starts for Snekmaggedon\_40:

(Start: 44 @29847 has 32 MA's), (75, 29898), (81, 29913), (112, 30096), (114, 30102), (125, 30153), (131, 30174), (132, 30177), (133, 30192), (139, 30216), (145, 30231), (147, 30234),

Gene: SoilZilla\_23 Start: 8404, Stop: 8760, Start Num: 67

Candidate Starts for SoilZilla\_23:

(Start: 67 @8404 has 189 MA's), (98, 8518), (112, 8611), (133, 8707),

Gene: Soile\_57 Start: 48882, Stop: 48514, Start Num: 64

Candidate Starts for Soile\_57:

(8, 49245), (14, 49086), (16, 49041), (18, 49011), (Start: 62 @48885 has 161 MA's), (Start: 64 @48882 has 125 MA's), (81, 48843), (97, 48762), (119, 48600), (120, 48597), (133, 48546),

Gene: Solosis\_55 Start: 48358, Stop: 47987, Start Num: 62

Candidate Starts for Solosis\_55:

(14, 48559), (16, 48514), (18, 48484), (38, 48397), (Start: 62 @48358 has 161 MA's), (Start: 64 @48355 has 125 MA's), (81, 48316), (96, 48244), (119, 48073), (120, 48070), (133, 48019),

Gene: Sophia\_55 Start: 48352, Stop: 47981, Start Num: 62

Candidate Starts for Sophia\_55:

(14, 48553), (16, 48508), (18, 48478), (Start: 62 @48352 has 161 MA's), (Start: 64 @48349 has 125 MA's), (81, 48310), (96, 48238), (119, 48067), (120, 48064), (133, 48013),

Gene: Soto\_54 Start: 47677, Stop: 47306, Start Num: 62

Candidate Starts for Soto\_54:

(14, 47878), (16, 47833), (18, 47803), (38, 47716), (Start: 62 @47677 has 161 MA's), (Start: 64 @47674 has 125 MA's), (81, 47635), (97, 47554), (119, 47392), (120, 47389), (133, 47338),

Gene: Spartan300\_55 Start: 48336, Stop: 47965, Start Num: 62

Candidate Starts for Spartan300\_55:

(9, 48681), (14, 48537), (16, 48492), (18, 48462), (38, 48375), (Start: 62 @48336 has 161 MA's), (Start: 64 @48333 has 125 MA's), (97, 48213), (119, 48051), (120, 48048), (133, 47997),

Gene: Spec\_24 Start: 8156, Stop: 8512, Start Num: 67

Candidate Starts for Spec\_24:

(Start: 67 @8156 has 189 MA's), (98, 8270), (112, 8363), (133, 8459),

Gene: Specks\_31 Start: 9988, Stop: 10344, Start Num: 67

Candidate Starts for Specks\_31:

(Start: 67 @9988 has 189 MA's), (98, 10102), (112, 10195), (133, 10291),

Gene: SpongeBob\_40 Start: 29847, Stop: 30245, Start Num: 44

Candidate Starts for SpongeBob\_40:

(Start: 44 @29847 has 32 MA's), (75, 29898), (81, 29913), (112, 30096), (114, 30102), (125, 30153), (131, 30174), (132, 30177), (133, 30192), (139, 30216), (145, 30231), (147, 30234),

Gene: Sprinklers\_26 Start: 8191, Stop: 8547, Start Num: 67

Candidate Starts for Sprinklers\_26:

(Start: 67 @8191 has 189 MA's), (112, 8398), (133, 8494),

Gene: Spud\_28 Start: 9548, Stop: 9904, Start Num: 67

Candidate Starts for Spud\_28:

(Start: 67 @9548 has 189 MA's), (98, 9662), (112, 9755), (133, 9851),

Gene: Squid\_56 Start: 48364, Stop: 47993, Start Num: 62

Candidate Starts for Squid\_56:

(14, 48565), (16, 48520), (18, 48490), (38, 48403), (Start: 62 @48364 has 161 MA's), (Start: 64 @48361 has 125 MA's), (81, 48322), (96, 48250), (119, 48079), (120, 48076), (133, 48025),

Gene: Squiggle\_57 Start: 48369, Stop: 48001, Start Num: 64

Candidate Starts for Squiggle\_57:

(14, 48573), (16, 48528), (18, 48498), (Start: 62 @48372 has 161 MA's), (Start: 64 @48369 has 125 MA's), (81, 48330), (97, 48249), (119, 48087), (120, 48084), (133, 48033),

Gene: SrishMeg2525\_25 Start: 8416, Stop: 8772, Start Num: 67

Candidate Starts for SrishMeg2525\_25:

(Start: 67 @8416 has 189 MA's), (98, 8530), (112, 8623), (133, 8719),

Gene: StephanieG\_26 Start: 8882, Stop: 9238, Start Num: 67

Candidate Starts for StephanieG\_26:

(Start: 67 @8882 has 189 MA's), (98, 8996), (112, 9089), (133, 9185),

Gene: Stinger\_49 Start: 46888, Stop: 46490, Start Num: 45

Candidate Starts for Stinger\_49:

(Start: 45 @46888 has 19 MA's), (74, 46840), (75, 46837), (85, 46816), (120, 46591), (127, 46570), (135, 46534),

Gene: StinkyVeggy\_54 Start: 48662, Stop: 48249, Start Num: 44

Candidate Starts for StinkyVeggy\_54:

(Start: 44 @48662 has 32 MA's), (115, 48389), (122, 48344), (123, 48341), (132, 48314),

Gene: Strobilo\_39 Start: 31471, Stop: 31088, Start Num: 36

Candidate Starts for Strobilo\_39:

(Start: 36 @31471 has 11 MA's), (95, 31348), (104, 31297), (112, 31240), (121, 31168), (133, 31123), (139, 31099),

Gene: Struggle\_56 Start: 48201, Stop: 47830, Start Num: 62

Candidate Starts for Struggle\_56:

(8, 48561), (14, 48402), (16, 48357), (18, 48327), (Start: 62 @48201 has 161 MA's), (Start: 64 @48198 has 125 MA's), (81, 48159), (87, 48141), (96, 48087), (119, 47916), (120, 47913), (133, 47862),

Gene: Stubby\_24 Start: 7962, Stop: 8318, Start Num: 67

Candidate Starts for Stubby\_24:

(Start: 67 @7962 has 189 MA's), (112, 8169), (133, 8265),

Gene: StubbySaigey\_25 Start: 7342, Stop: 7698, Start Num: 67

Candidate Starts for StubbySaigey\_25:

(Start: 67 @7342 has 189 MA's), (112, 7549), (133, 7645),

Gene: Stuck\_56 Start: 40451, Stop: 40849, Start Num: 41

Candidate Starts for Stuck\_56:

(Start: 24 @40394 has 1 MA's), (Start: 41 @40451 has 11 MA's), (65, 40481), (81, 40517), (112, 40700), (114, 40706), (119, 40745), (125, 40757), (131, 40778), (132, 40781), (133, 40796), (145, 40835), (147, 40838),

Gene: Substance289\_23 Start: 7630, Stop: 7986, Start Num: 67

Candidate Starts for Substance289\_23:

(Start: 67 @7630 has 189 MA's), (98, 7744), (112, 7837), (133, 7933),

Gene: Suffolk\_54 Start: 47667, Stop: 47296, Start Num: 62

Candidate Starts for Suffolk\_54:

(14, 47868), (16, 47823), (18, 47793), (38, 47706), (Start: 62 @47667 has 161 MA's), (Start: 64 @47664 has 125 MA's), (81, 47625), (97, 47544), (119, 47382), (120, 47379), (133, 47328),

Gene: Suigeneris\_55 Start: 48805, Stop: 48392, Start Num: 44

Candidate Starts for Suigeneris\_55:

(4, 49183), (6, 49138), (7, 49135), (Start: 44 @48805 has 32 MA's), (Start: 56 @48787 has 3 MA's), (81, 48733), (135, 48436), (148, 48403),

Gene: Sunflower1121\_79 Start: 50131, Stop: 50514, Start Num: 40

Candidate Starts for Sunflower1121\_79:

(Start: 40 @50131 has 18 MA's), (Start: 56 @50152 has 3 MA's), (83, 50206), (101, 50278), (106, 50317), (112, 50353), (116, 50389), (129, 50446), (132, 50455),

Gene: SuperheroCarly\_56 Start: 42573, Stop: 42953, Start Num: 57

Candidate Starts for SuperheroCarly\_56:

(Start: 57 @42573 has 22 MA's), (76, 42606), (77, 42609), (78, 42612), (93, 42666), (94, 42669), (111, 42789), (133, 42900), (134, 42903),

Gene: Surely\_56 Start: 48654, Stop: 48283, Start Num: 62

Candidate Starts for Surely\_56:

(14, 48855), (16, 48810), (18, 48780), (38, 48693), (Start: 62 @48654 has 161 MA's), (Start: 64 @48651 has 125 MA's), (81, 48612), (96, 48540), (119, 48369), (120, 48366), (133, 48315),

Gene: SweetiePie\_36 Start: 27324, Stop: 27707, Start Num: 52

Candidate Starts for SweetiePie\_36:

(Start: 52 @27324 has 47 MA's), (94, 27408), (110, 27516), (116, 27567), (119, 27597), (143, 27684),

Gene: Swiphy\_57 Start: 48652, Stop: 48284, Start Num: 64

Candidate Starts for Swiphy\_57:

(8, 49015), (14, 48856), (16, 48811), (18, 48781), (38, 48694), (Start: 62 @48655 has 161 MA's), (Start: 64 @48652 has 125 MA's), (97, 48532), (119, 48370), (120, 48367), (133, 48316),

Gene: Swish\_57 Start: 48316, Stop: 47948, Start Num: 64

Candidate Starts for Swish\_57:

(14, 48520), (16, 48475), (18, 48445), (Start: 62 @48319 has 161 MA's), (Start: 64 @48316 has 125 MA's), (81, 48277), (97, 48196), (119, 48034), (120, 48031), (133, 47980),

Gene: Syra333\_77 Start: 49859, Stop: 50242, Start Num: 40

Candidate Starts for Syra333\_77:

(Start: 40 @49859 has 18 MA's), (Start: 45 @49865 has 19 MA's), (Start: 56 @49880 has 3 MA's), (59, 49886), (77, 49919), (83, 49934), (101, 50006), (106, 50045), (112, 50081), (116, 50117), (129, 50174), (132, 50183), (146, 50237),

Gene: TBond007\_71 Start: 49524, Stop: 49919, Start Num: 34

Candidate Starts for TBond007\_71:

(Start: 34 @49524 has 6 MA's), (Start: 56 @49560 has 3 MA's), (77, 49596), (110, 49743), (112, 49758), (116, 49794), (144, 49911),

Gene: TClif\_75 Start: 49609, Stop: 49980, Start Num: 40

Candidate Starts for TClif\_75:

(Start: 40 @49609 has 18 MA's), (77, 49660), (101, 49744), (112, 49819), (129, 49912), (132, 49921),

Gene: TM4\_93 Start: 31140, Stop: 30757, Start Num: 36

Candidate Starts for TM4\_93:

(Start: 36 @31140 has 11 MA's), (77, 31080), (95, 31017), (104, 30966), (109, 30930), (112, 30909), (121, 30837), (133, 30792),

Gene: Tainan\_31 Start: 10269, Stop: 10625, Start Num: 67

Candidate Starts for Tainan\_31:

(Start: 67 @10269 has 189 MA's), (98, 10383), (112, 10476), (133, 10572),

Gene: TallGrassMM\_56 Start: 48268, Stop: 47897, Start Num: 62

Candidate Starts for TallGrassMM\_56:

(14, 48469), (16, 48424), (18, 48394), (38, 48307), (Start: 62 @48268 has 161 MA's), (Start: 64 @48265 has 125 MA's), (81, 48226), (96, 48154), (119, 47983), (120, 47980), (133, 47929),

Gene: Tapioca\_44 Start: 30636, Stop: 31034, Start Num: 44

Candidate Starts for Tapioca\_44:

(Start: 44 @30636 has 32 MA's), (75, 30687), (81, 30702), (112, 30885), (114, 30891), (125, 30942), (131, 30963), (132, 30966), (133, 30981), (139, 31005), (145, 31020), (147, 31023),

Gene: Taptic\_44 Start: 40128, Stop: 40529, Start Num: 41

Candidate Starts for Taptic\_44:

(Start: 41 @40128 has 11 MA's), (Start: 52 @40143 has 47 MA's), (109, 40359), (110, 40365), (112, 40380), (126, 40440), (131, 40458), (132, 40461), (133, 40476), (145, 40515), (147, 40518),

Gene: Taraxa\_57 Start: 48105, Stop: 47734, Start Num: 62

Candidate Starts for Taraxa\_57:

(14, 48306), (16, 48261), (18, 48231), (38, 48144), (Start: 62 @48105 has 161 MA's), (Start: 64 @48102 has 125 MA's), (81, 48063), (96, 47991), (119, 47820), (120, 47817), (133, 47766),

Gene: TarsusIV\_35 Start: 27299, Stop: 27697, Start Num: 52

Candidate Starts for TarsusIV\_35:

(Start: 52 @27299 has 47 MA's), (112, 27521), (116, 27557), (119, 27587), (127, 27611), (132, 27626), (147, 27683),

Gene: Teardrop\_25 Start: 7615, Stop: 7971, Start Num: 67

Candidate Starts for Teardrop\_25:

(Start: 67 @7615 has 189 MA's), (112, 7822), (133, 7918),

Gene: TelAviv\_72 Start: 47505, Stop: 47128, Start Num: 55

Candidate Starts for TelAviv\_72:

(Start: 55 @47505 has 26 MA's), (82, 47445), (86, 47433), (98, 47370), (112, 47277), (114, 47271), (117, 47226), (130, 47181), (137, 47142), (138, 47139),

Gene: Telesworld\_54 Start: 48431, Stop: 48060, Start Num: 62

Candidate Starts for Telesworld\_54:

(14, 48632), (16, 48587), (18, 48557), (38, 48470), (Start: 62 @48431 has 161 MA's), (Start: 64 @48428 has 125 MA's), (81, 48389), (96, 48317), (119, 48146), (120, 48143), (133, 48092),

Gene: Terrific\_39 Start: 27717, Stop: 28112, Start Num: 52

Candidate Starts for Terrific\_39:

(Start: 52 @27717 has 47 MA's), (77, 27762), (116, 27975), (119, 28005), (132, 28041),

Gene: Tessdabest\_43 Start: 30667, Stop: 31065, Start Num: 44

Candidate Starts for Tessdabest\_43:

(Start: 44 @30667 has 32 MA's), (75, 30718), (81, 30733), (112, 30916), (114, 30922), (125, 30973), (131, 30994), (132, 30997), (133, 31012), (139, 31036), (145, 31051), (147, 31054),

Gene: Thora\_56 Start: 48650, Stop: 48279, Start Num: 62

Candidate Starts for Thora\_56:

(14, 48851), (16, 48806), (18, 48776), (Start: 62 @48650 has 161 MA's), (Start: 64 @48647 has 125 MA's), (81, 48608), (97, 48527), (119, 48365), (120, 48362), (133, 48311),

Gene: Thoth\_56 Start: 42721, Stop: 43101, Start Num: 57

Candidate Starts for Thoth\_56:

(Start: 57 @42721 has 22 MA's), (76, 42754), (77, 42757), (78, 42760), (93, 42814), (94, 42817), (111, 42937), (133, 43048), (134, 43051),

Gene: ThreeOh3D2\_57 Start: 48870, Stop: 48499, Start Num: 62

Candidate Starts for ThreeOh3D2\_57:

(14, 49071), (16, 49026), (18, 48996), (Start: 62 @48870 has 161 MA's), (Start: 64 @48867 has 125 MA's), (81, 48828), (97, 48747), (119, 48585), (120, 48582), (133, 48531),

Gene: Thumb\_72 Start: 52173, Stop: 52541, Start Num: 67

Candidate Starts for Thumb\_72:

(Start: 67 @52173 has 189 MA's), (77, 52200), (82, 52212), (94, 52260), (95, 52275), (118, 52437), (132, 52473), (134, 52491),

Gene: Thunderbird\_55 Start: 48353, Stop: 47985, Start Num: 64

Candidate Starts for Thunderbird\_55:

(8, 48716), (14, 48557), (16, 48512), (18, 48482), (Start: 62 @48356 has 161 MA's), (Start: 64 @48353 has 125 MA's), (81, 48314), (87, 48296), (96, 48242), (119, 48071), (120, 48068), (133, 48017),

Gene: Tigress9\_78 Start: 50174, Stop: 50557, Start Num: 40

Candidate Starts for Tigress9\_78:

(Start: 40 @50174 has 18 MA's), (Start: 56 @50195 has 3 MA's), (77, 50234), (83, 50249), (101, 50321), (106, 50360), (112, 50396), (116, 50432), (132, 50498),

Gene: Timmi\_55 Start: 48350, Stop: 47982, Start Num: 64

Candidate Starts for Timmi\_55:

(14, 48554), (16, 48509), (18, 48479), (Start: 62 @48353 has 161 MA's), (Start: 64 @48350 has 125 MA's), (81, 48311), (96, 48239), (119, 48068), (120, 48065), (133, 48014),

Gene: TinyTim\_26 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for TinyTim\_26:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: TomBombadil\_56 Start: 48638, Stop: 48267, Start Num: 62

Candidate Starts for TomBombadil\_56:

(14, 48839), (16, 48794), (18, 48764), (38, 48677), (Start: 62 @48638 has 161 MA's), (Start: 64 @48635 has 125 MA's), (81, 48596), (96, 48524), (119, 48353), (120, 48350), (133, 48299),

Gene: Tomlarah\_57 Start: 49162, Stop: 48794, Start Num: 64

Candidate Starts for Tomlarah\_57:

(14, 49366), (16, 49321), (18, 49291), (Start: 62 @49165 has 161 MA's), (Start: 64 @49162 has 125 MA's), (81, 49123), (97, 49042), (119, 48880), (120, 48877), (133, 48826),

Gene: Toni\_55 Start: 48315, Stop: 47944, Start Num: 62

Candidate Starts for Toni\_55:

(14, 48516), (16, 48471), (18, 48441), (Start: 62 @48315 has 161 MA's), (Start: 64 @48312 has 125 MA's), (81, 48273), (97, 48192), (119, 48030), (120, 48027), (133, 47976),

Gene: TooFast2Furius\_56 Start: 48574, Stop: 48206, Start Num: 64

Candidate Starts for TooFast2Furius\_56:

(14, 48778), (16, 48733), (18, 48703), (Start: 62 @48577 has 161 MA's), (Start: 64 @48574 has 125 MA's), (81, 48535), (97, 48454), (119, 48292), (120, 48289), (133, 48238),

Gene: Tooj\_54 Start: 47781, Stop: 47410, Start Num: 62

Candidate Starts for Tooj\_54:

(14, 47982), (16, 47937), (18, 47907), (38, 47820), (Start: 62 @47781 has 161 MA's), (Start: 64 @47778 has 125 MA's), (81, 47739), (96, 47667), (97, 47658), (119, 47496), (120, 47493), (133, 47442),

Gene: Tortoise12\_41 Start: 29353, Stop: 29751, Start Num: 44

Candidate Starts for Tortoise12\_41:

(Start: 44 @29353 has 32 MA's), (75, 29404), (81, 29419), (112, 29602), (114, 29608), (125, 29659), (131, 29680), (132, 29683), (133, 29698), (139, 29722), (145, 29737), (147, 29740),

Gene: Tortoise16\_25 Start: 8150, Stop: 8506, Start Num: 67

Candidate Starts for Tortoise16\_25:

(Start: 67 @8150 has 189 MA's), (98, 8264), (112, 8357), (133, 8453),

Gene: Triad\_56 Start: 47565, Stop: 47194, Start Num: 62

Candidate Starts for Triad\_56:

(14, 47766), (16, 47721), (18, 47691), (38, 47604), (Start: 62 @47565 has 161 MA's), (Start: 64 @47562 has 125 MA's), (81, 47523), (96, 47451), (97, 47442), (119, 47280), (120, 47277), (133, 47226),

Gene: Trinitium\_25 Start: 7591, Stop: 7947, Start Num: 67

Candidate Starts for Trinitium\_25:

(Start: 67 @7591 has 189 MA's), (112, 7798), (133, 7894),

Gene: Troll4\_56 Start: 42852, Stop: 43232, Start Num: 57

Candidate Starts for Troll4\_56:

(Start: 57 @42852 has 22 MA's), (76, 42885), (77, 42888), (78, 42891), (93, 42945), (94, 42948), (111, 43068), (133, 43179), (134, 43182),

Gene: Trooper\_37 Start: 27533, Stop: 27931, Start Num: 52

Candidate Starts for Trooper\_37:

(Start: 52 @27533 has 47 MA's), (69, 27560), (78, 27581), (102, 27683), (112, 27755), (116, 27791), (119, 27821), (123, 27833), (127, 27845), (147, 27917),

Gene: True\_55 Start: 48318, Stop: 47950, Start Num: 64

Candidate Starts for True\_55:

(14, 48522), (16, 48477), (18, 48447), (Start: 62 @48321 has 161 MA's), (Start: 64 @48318 has 125 MA's), (81, 48279), (97, 48198), (119, 48036), (120, 48033), (133, 47982),

Gene: Trypo\_58 Start: 48787, Stop: 48416, Start Num: 62

Candidate Starts for Trypo\_58:

(8, 49147), (14, 48988), (16, 48943), (18, 48913), (Start: 62 @48787 has 161 MA's), (Start: 64 @48784 has 125 MA's), (81, 48745), (87, 48727), (96, 48673), (97, 48664), (119, 48502), (120, 48499), (133,

48448),

Gene: Turbido\_36 Start: 27512, Stop: 27892, Start Num: 52

Candidate Starts for Turbido\_36:

(Start: 52 @27512 has 47 MA's), (94, 27593), (110, 27701), (119, 27782), (143, 27869),

Gene: Turret\_24 Start: 7330, Stop: 7686, Start Num: 67

Candidate Starts for Turret\_24:

(Start: 67 @7330 has 189 MA's), (112, 7537), (133, 7633),

Gene: Tyke\_28 Start: 9562, Stop: 9918, Start Num: 67

Candidate Starts for Tyke\_28:

(Start: 67 @9562 has 189 MA's), (98, 9676), (112, 9769), (133, 9865),

Gene: Typha\_103 Start: 64758, Stop: 65096, Start Num: 54

Candidate Starts for Typha\_103:

(Start: 54 @64758 has 3 MA's), (61, 64770), (82, 64809), (83, 64812), (114, 64968),

Gene: TyrionL\_56 Start: 48209, Stop: 47841, Start Num: 64

Candidate Starts for TyrionL\_56:

(8, 48572), (14, 48413), (16, 48368), (18, 48338), (Start: 62 @48212 has 161 MA's), (Start: 64 @48209 has 125 MA's), (81, 48170), (87, 48152), (96, 48098), (97, 48089), (119, 47927), (120, 47924), (133, 47873),

Gene: UAch1\_55 Start: 48387, Stop: 48019, Start Num: 64

Candidate Starts for UAch1\_55:

(14, 48591), (16, 48546), (18, 48516), (38, 48429), (Start: 62 @48390 has 161 MA's), (Start: 64 @48387 has 125 MA's), (81, 48348), (96, 48276), (119, 48105), (120, 48102), (133, 48051),

Gene: Ubuntu\_43 Start: 33316, Stop: 32891, Start Num: 32

Candidate Starts for Ubuntu\_43:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: UncleHowie\_55 Start: 48065, Stop: 47694, Start Num: 62

Candidate Starts for UncleHowie\_55:

(14, 48266), (16, 48221), (18, 48191), (Start: 62 @48065 has 161 MA's), (Start: 64 @48062 has 125 MA's), (81, 48023), (97, 47942), (119, 47780), (120, 47777), (133, 47726),

Gene: Updawg\_37 Start: 27705, Stop: 28100, Start Num: 52

Candidate Starts for Updawg\_37:

(Start: 52 @27705 has 47 MA's), (116, 27963), (119, 27993), (132, 28029),

Gene: Usavi\_56 Start: 48730, Stop: 48362, Start Num: 64

Candidate Starts for Usavi\_56:

(14, 48934), (16, 48889), (18, 48859), (Start: 62 @48733 has 161 MA's), (Start: 64 @48730 has 125 MA's), (81, 48691), (97, 48610), (119, 48448), (120, 48445), (133, 48394),

Gene: Vagabond\_76 Start: 47417, Stop: 47040, Start Num: 55

Candidate Starts for Vagabond\_76:

(Start: 55 @47417 has 26 MA's), (82, 47357), (86, 47345), (98, 47282), (112, 47189), (114, 47183), (117, 47138), (130, 47093), (137, 47054), (138, 47051),

Gene: Vaishali24\_54 Start: 48025, Stop: 47654, Start Num: 62

Candidate Starts for Vaishali24\_54:

(14, 48226), (16, 48181), (18, 48151), (38, 48064), (Start: 62 @48025 has 161 MA's), (Start: 64 @48022 has 125 MA's), (81, 47983), (96, 47911), (97, 47902), (119, 47740), (120, 47737), (133, 47686),

Gene: Valjean\_55 Start: 48346, Stop: 47975, Start Num: 62

Candidate Starts for Valjean\_55:

(9, 48691), (14, 48547), (16, 48502), (18, 48472), (38, 48385), (Start: 62 @48346 has 161 MA's), (Start: 64 @48343 has 125 MA's), (97, 48223), (119, 48061), (120, 48058), (133, 48007),

Gene: ValleyTerrace\_26 Start: 8154, Stop: 8510, Start Num: 67

Candidate Starts for ValleyTerrace\_26:

(Start: 67 @8154 has 189 MA's), (98, 8268), (112, 8361), (133, 8457),

Gene: Vaticameos\_53 Start: 46856, Stop: 46485, Start Num: 62

Candidate Starts for Vaticameos\_53:

(14, 47057), (16, 47012), (18, 46982), (Start: 62 @46856 has 161 MA's), (Start: 64 @46853 has 125 MA's), (81, 46814), (97, 46733), (119, 46571), (120, 46568), (133, 46517),

Gene: Veritas\_57 Start: 48481, Stop: 48110, Start Num: 62

Candidate Starts for Veritas\_57:

(14, 48682), (16, 48637), (18, 48607), (38, 48520), (Start: 62 @48481 has 161 MA's), (Start: 64 @48478 has 125 MA's), (81, 48439), (96, 48367), (119, 48196), (120, 48193), (133, 48142),

Gene: Vincenzo\_51 Start: 48916, Stop: 48518, Start Num: 45

Candidate Starts for Vincenzo\_51:

(Start: 45 @48916 has 19 MA's), (73, 48871), (74, 48868), (91, 48826), (120, 48619),

Gene: VioletZ\_51 Start: 48276, Stop: 47878, Start Num: 45

Candidate Starts for VioletZ\_51:

(Start: 45 @48276 has 19 MA's), (74, 48228), (75, 48225), (85, 48204), (120, 47979), (127, 47958), (135, 47922),

Gene: Virapocalypse\_57 Start: 48643, Stop: 48275, Start Num: 64

Candidate Starts for Virapocalypse\_57:

(8, 49006), (14, 48847), (16, 48802), (18, 48772), (Start: 62 @48646 has 161 MA's), (Start: 64 @48643 has 125 MA's), (81, 48604), (87, 48586), (96, 48532), (97, 48523), (119, 48361), (120, 48358), (133, 48307),

Gene: Virgeve\_55 Start: 48083, Stop: 47712, Start Num: 62

Candidate Starts for Virgeve\_55:

(8, 48443), (14, 48284), (16, 48239), (18, 48209), (38, 48122), (Start: 62 @48083 has 161 MA's), (Start: 64 @48080 has 125 MA's), (97, 47960), (119, 47798), (120, 47795), (133, 47744),

Gene: Visconti\_57 Start: 42732, Stop: 43112, Start Num: 57

Candidate Starts for Visconti\_57:

(Start: 57 @42732 has 22 MA's), (76, 42765), (77, 42768), (78, 42771), (93, 42825), (94, 42828), (111, 42948), (133, 43059), (134, 43062),

Gene: Vista\_55 Start: 48366, Stop: 47995, Start Num: 62

Candidate Starts for Vista\_55:

(14, 48567), (16, 48522), (18, 48492), (Start: 62 @48366 has 161 MA's), (Start: 64 @48363 has 125 MA's), (81, 48324), (97, 48243), (119, 48081), (120, 48078), (133, 48027),

Gene: Vivaldi\_57 Start: 48512, Stop: 48144, Start Num: 64

Candidate Starts for Vivaldi\_57:

(14, 48716), (16, 48671), (18, 48641), (38, 48554), (Start: 62 @48515 has 161 MA's), (Start: 64 @48512 has 125 MA's), (81, 48473), (96, 48401), (97, 48392), (119, 48230), (120, 48227), (133, 48176),

Gene: Vorrps\_76 Start: 47629, Stop: 47252, Start Num: 55

Candidate Starts for Vorrps\_76:

(Start: 55 @47629 has 26 MA's), (82, 47569), (86, 47557), (98, 47494), (112, 47401), (114, 47395), (117, 47350), (130, 47305), (137, 47266), (138, 47263),

Gene: Vortex\_56 Start: 48348, Stop: 47977, Start Num: 62

Candidate Starts for Vortex\_56:

(14, 48549), (16, 48504), (18, 48474), (Start: 62 @48348 has 161 MA's), (Start: 64 @48345 has 125 MA's), (81, 48306), (96, 48234), (119, 48063), (120, 48060), (133, 48009),

Gene: WST1\_41 Start: 28367, Stop: 28759, Start Num: 44

Candidate Starts for WST1\_41:

(Start: 44 @28367 has 32 MA's), (Start: 53 @28376 has 1 MA's), (75, 28412), (114, 28616), (125, 28667), (132, 28691), (134, 28709), (145, 28745),

Gene: WaldoWhy\_58 Start: 42785, Stop: 43165, Start Num: 57

Candidate Starts for WaldoWhy\_58:

(Start: 57 @42785 has 22 MA's), (76, 42818), (77, 42821), (78, 42824), (93, 42878), (94, 42881), (111, 43001), (133, 43112), (134, 43115),

Gene: Wallhey\_56 Start: 48216, Stop: 47845, Start Num: 62

Candidate Starts for Wallhey\_56:

(8, 48576), (14, 48417), (16, 48372), (18, 48342), (Start: 62 @48216 has 161 MA's), (Start: 64 @48213 has 125 MA's), (81, 48174), (87, 48156), (96, 48102), (97, 48093), (119, 47931), (120, 47928), (133, 47877),

Gene: Wally\_25 Start: 7577, Stop: 7933, Start Num: 67

Candidate Starts for Wally\_25:

(Start: 67 @7577 has 189 MA's), (98, 7691), (112, 7784), (133, 7880),

Gene: Waterdiva\_56 Start: 48724, Stop: 48356, Start Num: 64

Candidate Starts for Waterdiva\_56:

(14, 48928), (16, 48883), (18, 48853), (Start: 62 @48727 has 161 MA's), (Start: 64 @48724 has 125 MA's), (81, 48685), (97, 48604), (119, 48442), (120, 48439), (133, 48388),

Gene: Webster2\_43 Start: 33292, Stop: 32891, Start Num: 50

Candidate Starts for Webster2\_43:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: Weher20\_56 Start: 49168, Stop: 48800, Start Num: 64

Candidate Starts for Weher20\_56:

(14, 49372), (16, 49327), (18, 49297), (Start: 62 @49171 has 161 MA's), (Start: 64 @49168 has 125 MA's), (81, 49129), (97, 49048), (119, 48886), (120, 48883), (133, 48832),

Gene: WeiHuaDA\_41 Start: 28941, Stop: 29318, Start Num: 52

Candidate Starts for WeiHuaDA\_41:

(Start: 52 @28941 has 47 MA's), (72, 28974), (116, 29181), (119, 29211), (121, 29217), (132, 29247),

Gene: Weirido19\_40 Start: 31397, Stop: 31011, Start Num: 30

Candidate Starts for Weirido19\_40:

(30, 31397), (60, 31340), (76, 31313), (77, 31310), (95, 31256), (96, 31253), (105, 31202), (106, 31184), (112, 31148), (114, 31142), (132, 31064), (134, 31046), (141, 31022), (142, 31016),

Gene: Weiss13\_55 Start: 42405, Stop: 42806, Start Num: 43

Candidate Starts for Weiss13\_55:

(Start: 43 @42405 has 1 MA's), (Start: 51 @42417 has 3 MA's), (58, 42429), (66, 42441), (73, 42450), (90, 42501), (107, 42615), (112, 42645), (131, 42735), (132, 42738),

Gene: Whabigail7\_36 Start: 27500, Stop: 27880, Start Num: 52

Candidate Starts for Whabigail7\_36:

(Start: 52 @27500 has 47 MA's), (94, 27581), (110, 27689), (116, 27740), (119, 27770), (143, 27857),

Gene: WideWale\_37 Start: 27705, Stop: 28100, Start Num: 52

Candidate Starts for WideWale\_37:

(Start: 52 @27705 has 47 MA's), (116, 27963), (119, 27993), (132, 28029),

Gene: Wildflower\_76 Start: 47353, Stop: 46976, Start Num: 55

Candidate Starts for Wildflower\_76:

(Start: 29 @47401 has 4 MA's), (Start: 55 @47353 has 26 MA's), (82, 47293), (86, 47281), (98, 47218), (112, 47125), (114, 47119), (117, 47074), (130, 47029), (137, 46990), (138, 46987),

Gene: Willis\_26 Start: 8594, Stop: 8950, Start Num: 67

Candidate Starts for Willis\_26:

(Start: 67 @8594 has 189 MA's), (112, 8801), (133, 8897),

Gene: Windsor\_56 Start: 48871, Stop: 48500, Start Num: 62

Candidate Starts for Windsor\_56:

(14, 49072), (16, 49027), (18, 48997), (Start: 62 @48871 has 161 MA's), (Start: 64 @48868 has 125 MA's), (81, 48829), (97, 48748), (119, 48586), (120, 48583), (133, 48532),

Gene: Winget\_76 Start: 47798, Stop: 47421, Start Num: 55

Candidate Starts for Winget\_76:

(Start: 55 @47798 has 26 MA's), (82, 47738), (86, 47726), (98, 47663), (112, 47570), (114, 47564), (117, 47519), (130, 47474), (137, 47435), (138, 47432),

Gene: Wishmaker\_41 Start: 33409, Stop: 32891, Start Num: 17

Candidate Starts for Wishmaker\_41:

(Start: 17 @33409 has 4 MA's), (Start: 32 @33316 has 17 MA's), (Start: 50 @33292 has 4 MA's), (73, 33250), (74, 33247), (82, 33226), (88, 33205), (94, 33175), (109, 33073), (132, 32959), (133, 32944), (134, 32941), (139, 32920), (148, 32899),

Gene: Wogge42\_75 Start: 47288, Stop: 46911, Start Num: 55

Candidate Starts for Wogge42\_75:

(Start: 55 @47288 has 26 MA's), (82, 47228), (86, 47216), (98, 47153), (112, 47060), (114, 47054), (117, 47009), (130, 46964), (137, 46925), (138, 46922),

Gene: Xavier\_55 Start: 48355, Stop: 47984, Start Num: 62

Candidate Starts for Xavier\_55:

(14, 48556), (16, 48511), (18, 48481), (Start: 62 @48355 has 161 MA's), (Start: 64 @48352 has 125 MA's), (81, 48313), (96, 48241), (119, 48070), (120, 48067), (133, 48016),

Gene: Xerxes\_42 Start: 30667, Stop: 31065, Start Num: 44

Candidate Starts for Xerxes\_42:

(Start: 44 @30667 has 32 MA's), (75, 30718), (81, 30733), (112, 30916), (114, 30922), (125, 30973), (131, 30994), (132, 30997), (133, 31012), (139, 31036), (145, 31051), (147, 31054),

Gene: Ximenita\_79 Start: 50183, Stop: 50566, Start Num: 40

Candidate Starts for Ximenita\_79:

(Start: 40 @50183 has 18 MA's), (Start: 45 @50189 has 19 MA's), (Start: 56 @50204 has 3 MA's), (59, 50210), (77, 50243), (83, 50258), (101, 50330), (106, 50369), (112, 50405), (116, 50441), (129, 50498), (132, 50507), (146, 50561),

Gene: Xincheng\_50 Start: 49257, Stop: 48859, Start Num: 45

Candidate Starts for Xincheng\_50:

(Start: 45 @49257 has 19 MA's), (72, 49215), (74, 49209), (75, 49206), (120, 48960), (127, 48939), (135, 48903),

Gene: Yassified\_23 Start: 7354, Stop: 7710, Start Num: 67

Candidate Starts for Yassified\_23:

(Start: 67 @7354 has 189 MA's), (112, 7561), (133, 7657),

Gene: Yelo\_55 Start: 42754, Stop: 43185, Start Num: 28

Candidate Starts for Yelo\_55:

(Start: 20 @42715 has 6 MA's), (Start: 28 @42754 has 2 MA's), (Start: 43 @42784 has 1 MA's), (Start: 51 @42796 has 3 MA's), (58, 42808), (68, 42823), (73, 42829), (90, 42880), (107, 42994), (112, 43024), (131, 43114), (132, 43117), (133, 43132),

Gene: YemiJoy2021\_27 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for YemiJoy2021\_27:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),

Gene: Yoshand\_57 Start: 48332, Stop: 47961, Start Num: 62

Candidate Starts for Yoshand\_57:

(14, 48533), (16, 48488), (18, 48458), (Start: 62 @48332 has 161 MA's), (Start: 64 @48329 has 125 MA's), (81, 48290), (97, 48209), (119, 48047), (120, 48044), (133, 47993),

Gene: YouGoGlencoco\_57 Start: 48650, Stop: 48279, Start Num: 62

Candidate Starts for YouGoGlencoco\_57:

(14, 48851), (16, 48806), (18, 48776), (Start: 62 @48650 has 161 MA's), (Start: 64 @48647 has 125 MA's), (81, 48608), (87, 48590), (96, 48536), (97, 48527), (119, 48365), (120, 48362), (133, 48311),

Gene: YoungMoneyMata\_26 Start: 7905, Stop: 8261, Start Num: 67

Candidate Starts for YoungMoneyMata\_26:

(Start: 67 @7905 has 189 MA's), (98, 8019), (112, 8112), (133, 8208),

Gene: YoyoKar\_73 Start: 47082, Stop: 46705, Start Num: 55

Candidate Starts for YoyoKar\_73:

(Start: 55 @47082 has 26 MA's), (82, 47022), (86, 47010), (98, 46947), (112, 46854), (114, 46848), (117, 46803), (130, 46758), (137, 46719), (138, 46716),

Gene: Yucca\_26 Start: 8621, Stop: 8977, Start Num: 67

Candidate Starts for Yucca\_26:

(Start: 67 @8621 has 189 MA's), (112, 8828), (133, 8924),

Gene: YungJamal\_80 Start: 48976, Stop: 48599, Start Num: 55

Candidate Starts for YungJamal\_80:

(Start: 29 @49024 has 4 MA's), (Start: 55 @48976 has 26 MA's), (82, 48916), (86, 48904), (98, 48841), (112, 48748), (114, 48742), (117, 48697), (130, 48652), (137, 48613), (138, 48610),

Gene: Zaider\_56 Start: 48590, Stop: 48219, Start Num: 62

Candidate Starts for Zaider\_56:

(9, 48935), (14, 48791), (16, 48746), (18, 48716), (38, 48629), (Start: 62 @48590 has 161 MA's), (Start: 64 @48587 has 125 MA's), (97, 48467), (119, 48305), (120, 48302), (133, 48251),

Gene: Zakhe101\_75 Start: 47767, Stop: 47390, Start Num: 55

Candidate Starts for Zakhe101\_75:

(Start: 29 @47815 has 4 MA's), (Start: 55 @47767 has 26 MA's), (82, 47707), (86, 47695), (98, 47632), (112, 47539), (114, 47533), (117, 47488), (130, 47443), (137, 47404), (138, 47401),

Gene: Zalkecks\_28 Start: 8703, Stop: 9059, Start Num: 67

Candidate Starts for Zalkecks\_28:

(13, 8466), (Start: 67 @8703 has 189 MA's), (112, 8910), (133, 9006),

Gene: Zebo\_75 Start: 47529, Stop: 47152, Start Num: 55

Candidate Starts for Zebo\_75:

(Start: 55 @47529 has 26 MA's), (82, 47469), (86, 47457), (98, 47394), (112, 47301), (114, 47295), (117, 47250), (130, 47205), (137, 47166), (138, 47163),

Gene: Zeenon\_28 Start: 8691, Stop: 9047, Start Num: 67

Candidate Starts for Zeenon\_28:

(Start: 67 @8691 has 189 MA's), (98, 8805), (112, 8898), (133, 8994),

Gene: Zelda\_56 Start: 48692, Stop: 48321, Start Num: 62

Candidate Starts for Zelda\_56:

(14, 48893), (16, 48848), (18, 48818), (Start: 62 @48692 has 161 MA's), (Start: 64 @48689 has 125 MA's), (81, 48650), (97, 48569), (119, 48407), (120, 48404), (133, 48353),

Gene: ZenTime222\_39 Start: 31045, Stop: 31446, Start Num: 39

Candidate Starts for ZenTime222\_39:

(12, 30802), (Start: 39 @31045 has 5 MA's), (Start: 53 @31063 has 1 MA's), (101, 31219), (108, 31270), (112, 31294), (133, 31414), (134, 31417),

Gene: Zenon\_56 Start: 42661, Stop: 43131, Start Num: 20

Candidate Starts for Zenon\_56:

(Start: 20 @42661 has 6 MA's), (Start: 28 @42700 has 2 MA's), (Start: 43 @42730 has 1 MA's), (Start: 51 @42742 has 3 MA's), (58, 42754), (68, 42769), (73, 42775), (90, 42826), (107, 42940), (112, 42970), (131, 43060), (132, 43063), (133, 43078),

Gene: ZoeJ\_39 Start: 31158, Stop: 30775, Start Num: 36

Candidate Starts for ZoeJ\_39:

(35, 31161), (Start: 36 @31158 has 11 MA's), (77, 31098), (84, 31080), (95, 31035), (109, 30948),  
(112, 30927), (121, 30855), (133, 30810),

Gene: Zonia\_57 Start: 48664, Stop: 48296, Start Num: 64

Candidate Starts for Zonia\_57:

(8, 49027), (14, 48868), (16, 48823), (18, 48793), (Start: 62 @48667 has 161 MA's), (Start: 64 @48664  
has 125 MA's), (81, 48625), (87, 48607), (96, 48553), (97, 48544), (119, 48382), (120, 48379), (133,  
48328),

Gene: ZygoTaiga\_26 Start: 8699, Stop: 9055, Start Num: 67

Candidate Starts for ZygoTaiga\_26:

(Start: 67 @8699 has 189 MA's), (112, 8906), (133, 9002),