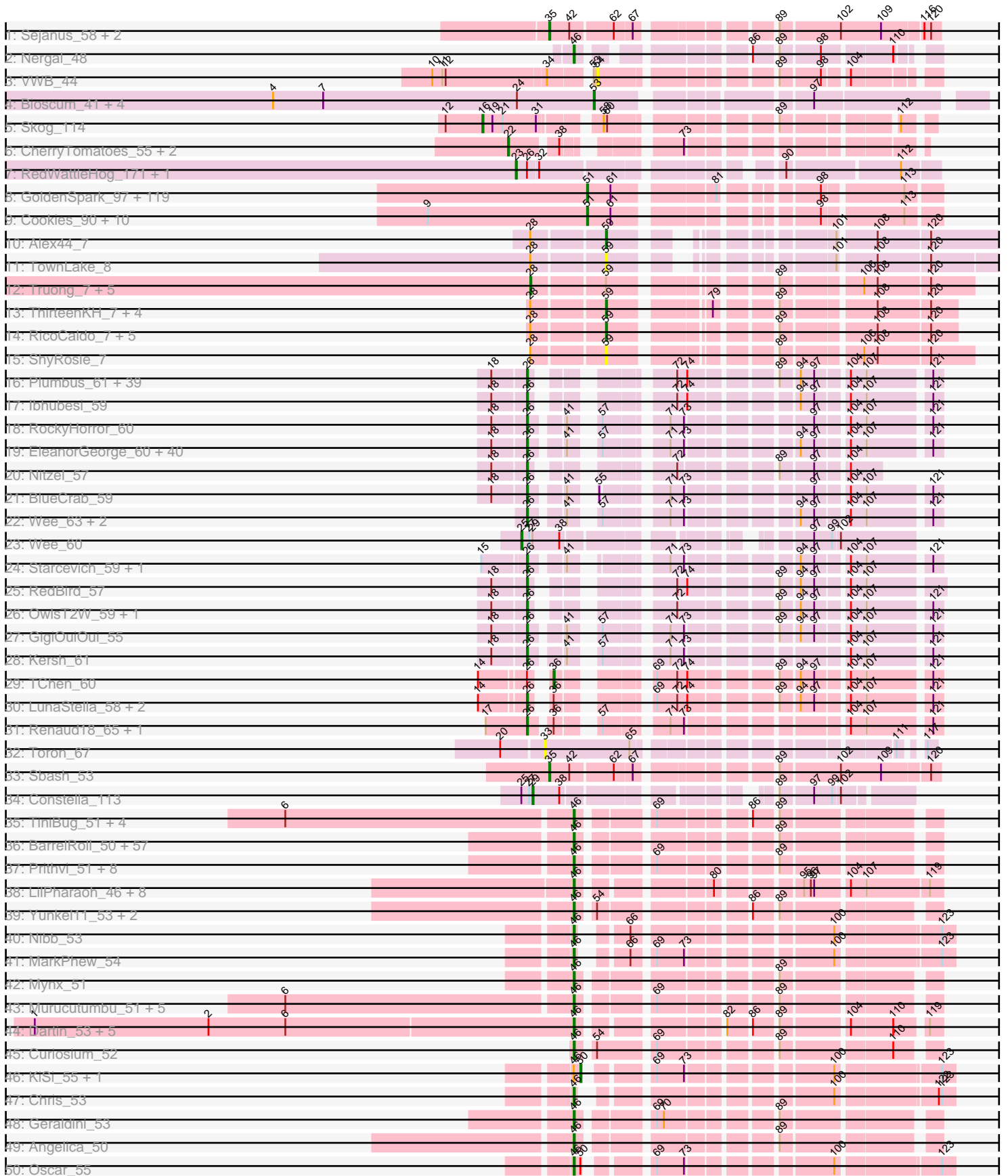
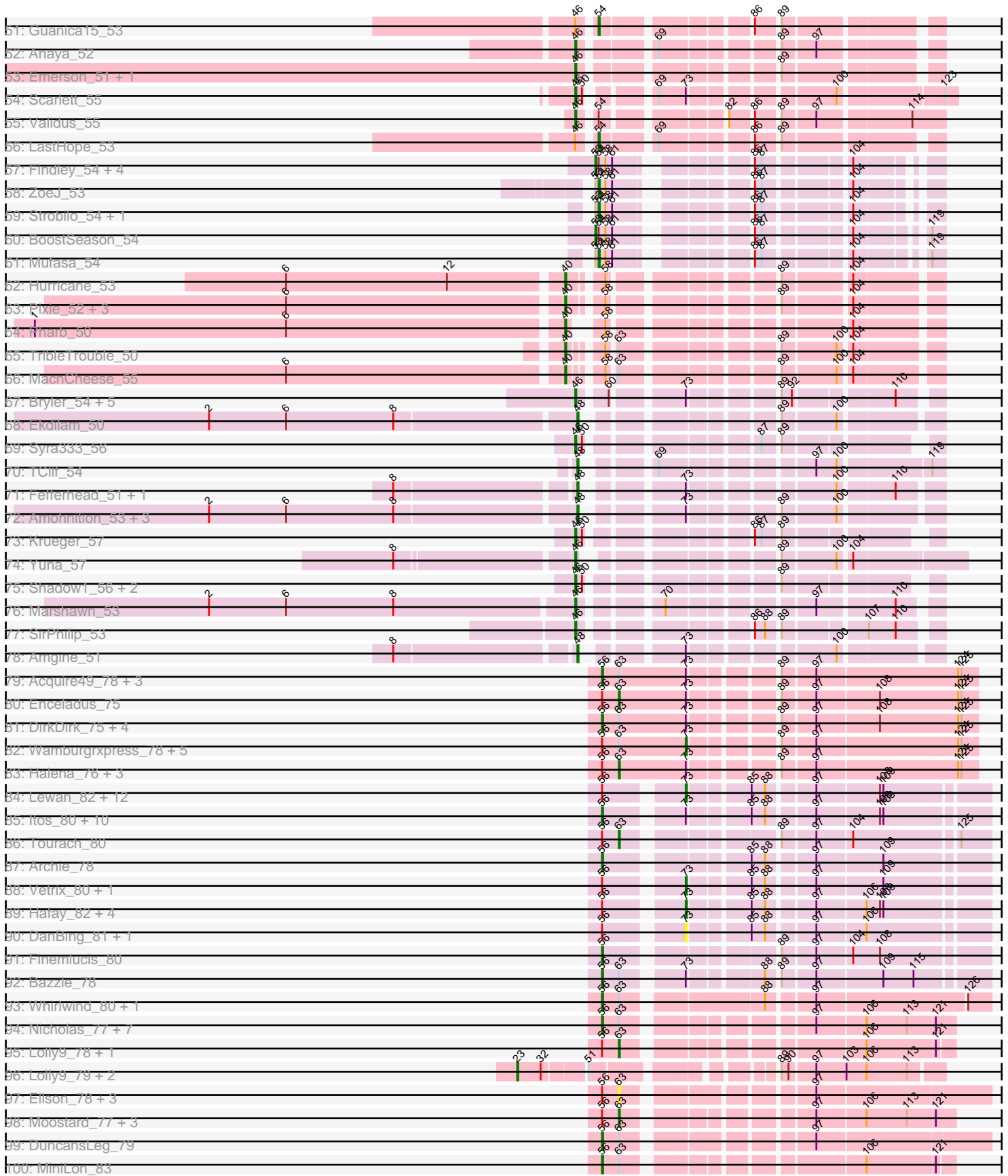


Pham 202555



Pham 202555





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 202555 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202555 has 543 members, 55 are drafts.

Phages represented in each track:

- Track 1 : Sejanus\_58, Charlie\_44, Journey\_43
- Track 2 : Nergal\_48
- Track 3 : VWB\_44
- Track 4 : Bioscum\_41, Lishka\_37, PapayaSalad\_40, Ididsumtinwong\_41, Austintatious\_37
- Track 5 : Skog\_114
- Track 6 : CherryTomatoes\_55, SCentae\_53, Pupper\_53
- Track 7 : RedWattleHog\_171, Stormageddon\_172
- Track 8 : GoldenSpark\_97, HanKaySha\_94, Lilpickle\_92, BigBubba\_93, Terminus\_96, Highbury\_92, CrystalP\_92, Cjw1\_94, YassJohnny\_90, ShamWow\_93, Cactus\_96, ChosenOne\_93, TeardropMSU\_89, Inca\_90, Youngblood\_96, Policronamos\_97, Henry\_91, Simpliphy\_92, GooberAzure\_96, Xandras\_92, BilboSwaggins\_92, Holt\_98, Contagion\_89, MadamMonkfish\_93, Murica\_96, Paperbeatsrock\_92, NoSleep\_94, Nala\_95, Flypotenuse\_89, JeTaime\_94, OrionPax\_92, Lilizi\_94, Porky\_92, Icee\_94, Gemini\_98, Kimchi\_97, Tarkin\_92, Gage\_95, ShereKhan\_91, Willez\_88, Hopey\_94, FireRed\_97, Dusk\_90, Harella\_93, Quallification\_94, Palpatine\_95, FairyPath\_93, Stark\_95, Easy2Say\_94, NelitzaMV\_91, Eureka\_92, Kanye\_90, Hoonter\_96, SirDuracell\_93, BaboJay\_93, Sotrice96\_94, Murphy\_93, Lilac\_96, Goldilocks\_96, StolenFromERC\_96, Tuco\_94, Miniwave\_88, Amao\_93, MISSy\_94, Phrux\_91, Glexan\_92, Bruin\_90, Thresher\_96, Bench\_96, Command613\_95, Rakim\_94, Mosby\_89, Marshmallow\_91, Misfit\_94, 244\_94, AmericanBeauty\_97, Myrale\_93, Manda\_95, Teaspoon\_94, Nimrod\_94, Pumpkin\_97, Tomaszewski\_88, ABCat\_90, Sassay\_88, Phaja\_91, Goku\_92, Argent26\_97, Maxxinista\_96, BadStone\_90, Saints25\_92, Asriel\_91, SophKB\_90, Elph10\_94, DrDrey\_93, TBrady12\_96, Dumbo\_93, Toto\_91, HufflyPuff\_95, xkcd\_96, MPhalcon\_94, Adnama\_97, Traaww1\_89, IHOP\_91, Pharsalus\_90, BugsBunny\_93, Filch\_95, StellaBean\_91, Wiggin\_95, Ukulele\_88, Czyszczon1\_94, PhatBacter\_97, Mindy\_92, Kostya\_93, Moldemort\_96, Stank\_95, Emmina\_93, RiverMonster\_94, Elite2014\_92, Barbarian\_92, Phaux\_96
- Track 9 : Cookies\_90, Buck\_94, Balomoji\_93, Rimmer\_91, DoctorDiddles\_92, Gator\_91, Bask21\_93, Daikon\_94, Petra64142\_98, Pat3\_90, ChotaBhai\_93
- Track 10 : Alex44\_7
- Track 11 : TownLake\_8
- Track 12 : Truong\_7, Barroma\_7, Ashton\_7, JordanFarm\_7, Akoni\_7, AloeVera\_7
- Track 13 : ThirteenKH\_7, Atraxi\_7, Yafa\_7, TrippleS\_7, Morrill\_7
- Track 14 : RicoCaldo\_7, StagePhright\_7, Astartes\_7, PhriedRice\_7, Fullmetal\_7, Moleficent\_7

- Track 15 : ShyRosie\_7
- Track 16 : Plumbus\_61, Daenerys\_53, AlpineSix\_64, Pacc40\_53, LunaBlu\_61, Dorothy\_57, KingMidas\_58, Avani\_67, Seabastian\_64, Jinglebell\_64, Ochi17\_62, Leozinho\_58, SimranZ1\_59, DosHalletts\_61, Stap\_57, Modragons\_63, Phasih\_57, Leperchaun\_51, Girr\_57, JoeyJr\_54, PHappiness\_54, Ruby\_55, Cornucopia\_61, Inventum\_54, Doomphist\_59, Empress\_57, Fastidio\_59, Poenanya\_59, Estave1\_62, Sassafras\_57, OfUltron\_64, Oksu\_63, Spoonbill\_56, Llama\_64, RitaG\_54, DillTech15\_56, MisterCuddles\_57, Galactic\_58, Polka14\_57, BodEinwohner17\_59
- Track 17 : lbhubesi\_59
- Track 18 : RockyHorror\_60
- Track 19 : EleanorGeorge\_60, Mahavrat\_57, Mozy\_68, Maravista\_60, Radiance\_58, James\_63, Pippy\_57, VRedHorse\_59, Byougenkin\_57, LastJedi\_53, ShowerHandel\_62, Mandlovu\_55, Blexus\_57, Strokeseat\_55, Sabbb\_63, GUmbie\_57, Whouxphf\_56, Vivum\_62, Hlubikazi\_55, Mattes\_63, Hades\_60, Spikelee\_66, SwagPigglett\_64, IrishSherpFalk\_60, Saal\_61, BuzzLyseyear\_65, OlympiaSaint\_61, ShroomBoi\_61, Yorick\_58, WillSterrel\_60, Latretium\_61, Eradicator\_52, Martik\_59, KristaRAM\_62, Spartacus\_61, Gandalph\_62, Brocalys\_54, Gorge\_63, Clifton\_54, FreddyB\_60, Lizziana\_65
- Track 20 : Nitzel\_57
- Track 21 : BlueCrab\_59
- Track 22 : Wee\_63, Hegedechwinu\_59, MinionDave\_58
- Track 23 : Wee\_60
- Track 24 : Starcevich\_59, Cornie\_55
- Track 25 : RedBird\_57
- Track 26 : OwlsT2W\_59, Grimmer\_69
- Track 27 : GigiOuiOui\_55
- Track 28 : Kersh\_61
- Track 29 : TChen\_60
- Track 30 : LunaStella\_58, Yoshi\_72, ThetaBob\_64
- Track 31 : Renaud18\_65, Demsculpinboyz\_70
- Track 32 : Toron\_67
- Track 33 : Sbash\_53
- Track 34 : Constella\_113
- Track 35 : TiniBug\_51, SamuelLPlaqsom\_51, DrHayes\_51, Bella96\_51, Urkel\_51
- Track 36 : BarrelRoll\_50, MacKat\_45, AlishaPH\_50, TruffulaTree\_50, BaghaKamala\_49, Bern\_51, Asayake\_50, Atiba\_51, Veliki\_51, Beezoo\_52, JAWS\_50, MeaningOfLife\_51, Ramen\_51, ActinUp\_50, Hyperbowlee\_50, Slimphazie\_50, Zavala\_52, Adonis\_50, CallaLilly\_52, Capricorn\_50, Spock\_50, QuincyRose\_49, Clipper\_54, Durfee\_50, Sulley\_50, Tachez\_50, Jayhawk\_51, Rapunzel97\_51, CaseJules\_52, Topper\_50, Dalmuri\_50, Rosmarinus\_50, Apocalypse\_53, Joy99\_50, CheetoDust\_49, Blizzard\_50, Belladonna\_50, Homura\_50, YoureAdopted\_49, Zabiza\_45, Lunahalos\_50, TaiwanKao\_52, HedwigODU\_50, Peel\_50, Llorens\_50, Padfoot\_50, Adephagia\_50, Jeckyll\_50, CREW\_50, Boiiii\_50, BGlluviae\_50, BEEST\_50, Inky\_50, Ganymede\_51, Piatt\_50, ShiaSurprise\_51, Jarvi\_50, Twitch\_50
- Track 37 : Prithvi\_51, CrimD\_50, LaterM\_51, Megsy\_52, LindNT\_49, TreyKay\_51, Deby\_50, Tiri\_51, Pokerus\_49
- Track 38 : LilPharaoh\_46, Mdavu\_47, SgtBeansprout\_46, Nikao\_49, Enkosi\_48, Nutello\_46, Amelie\_46, Torres\_48, Binglebops\_46
- Track 39 : Yunkel11\_53, Efra2\_53, TingHuaYa\_51
- Track 40 : Nibb\_53
- Track 41 : MarkPhew\_54
- Track 42 : Mynx\_51

- Track 43 : Murucutumbu\_51, Illumine\_53, Dole\_53, Ageofdapage\_52, Devera\_55, Stinson\_51
- Track 44 : Dartin\_53, Shaobing\_53, Peanam\_53, Richo\_53, McMater\_53, Niklas\_53
- Track 45 : Curiosium\_52
- Track 46 : KiSi\_55, LeMond\_55
- Track 47 : Chris\_53
- Track 48 : Geraldini\_53
- Track 49 : Angelica\_50
- Track 50 : Oscar\_55
- Track 51 : Guanica15\_53
- Track 52 : Anaya\_52
- Track 53 : Emerson\_51, Padpat\_52
- Track 54 : Scarlett\_55
- Track 55 : Validus\_55
- Track 56 : LastHope\_53
- Track 57 : Findley\_54, DismalFunk\_54, Milly\_54, Marcoliusprime\_54, DismalStressor\_54
- Track 58 : ZoeJ\_53
- Track 59 : Strobilo\_54, TM4\_49
- Track 60 : BoostSeason\_54
- Track 61 : Mufasa\_54
- Track 62 : Hurricane\_53
- Track 63 : Pixie\_52, ShedlockHolmes\_54, Keshu\_55, TBond007\_51
- Track 64 : Pharb\_50
- Track 65 : TribbleTrouble\_50
- Track 66 : MacnCheese\_55
- Track 67 : Bryler\_54, Cain\_54, Tierra\_54, PhelpsODU\_53, Phrank\_54, Unicorn\_53
- Track 68 : Ekdilam\_50
- Track 69 : Syra333\_56
- Track 70 : TClif\_54
- Track 71 : Fefferhead\_51, Ellie\_49
- Track 72 : Amohnition\_53, Hammy\_53, November\_53, DarthP\_53
- Track 73 : Krueger\_57
- Track 74 : Yuna\_57
- Track 75 : Shadow1\_56, Sunflower1121\_57, Ximenita\_57
- Track 76 : Marshawn\_53
- Track 77 : SirPhilip\_53
- Track 78 : Amgine\_51
- Track 79 : Acquire49\_78, MAckerman\_76, Zaria\_79, Wyatt2\_79
- Track 80 : Enceladus\_75
- Track 81 : DirkDirk\_75, OhShagHennessy\_75, JoeDirt\_78, Appletree2\_77, Poochiewood\_76
- Track 82 : Wamburgrxpress\_78, LeBron\_77, CicholasNage\_75, UPIE\_77, AvadaKedavra\_78, Rose5\_78
- Track 83 : Halena\_76, Calm\_80, Tyson\_79, Silverleaf\_78
- Track 84 : Lewan\_82, Crossroads\_81, Soap141\_81, Gabriela\_80, Underpass\_72, Loadrie\_80, Nicholasp3\_81, Netyap\_82, BobsGarage\_81, DrSeegs\_81, GuuelaD\_79, BigCheese\_81, Sarshaun\_82
- Track 85 : Itos\_80, Breezona\_81, Gardann\_81, MkaliMitinis3\_82, Winky\_81, Miley16\_81, Faith1\_81, Zakai\_82, Wilder\_82, Rumpelstiltskin\_78, Kahlid\_81
- Track 86 : Tourach\_80
- Track 87 : Archie\_78
- Track 88 : Vetrix\_80, LilDestine\_80

- Track 89 : Hafay\_82, ZhongYanYuan\_78, Wigglewiggle\_80, DHan\_84, Claus\_81
- Track 90 : DanBing\_81, Baoshan\_78
- Track 91 : Finemlucis\_80
- Track 92 : Bazzle\_78
- Track 93 : Whirlwind\_80, Krypton555\_80
- Track 94 : Nicholas\_77, Clautastrophe\_77, Kingsolomon\_77, Snenia\_78, Finnry\_79, Jobypre\_80, MsGreen\_79, Jubie\_78
- Track 95 : Lolly9\_78, MiniMac\_83
- Track 96 : Lolly9\_79, MiniMac\_84, MiniLon\_84
- Track 97 : Ellson\_78, KirDoubleO7\_77, BourbonZero\_80, LiyuLake\_78
- Track 98 : Moostard\_77, TriFive\_79, Bellis\_77, Samty\_78
- Track 99 : DuncansLeg\_79
- Track 100 : MiniLon\_83
- Track 101 : Quby\_79
- Track 102 : Kropertea\_75, DyoEdafos\_83
- Track 103 : FarmResident\_80
- Track 104 : Douge\_78
- Track 105 : PYPDinur\_78, BrainDrainer\_79
- Track 106 : Sheng711\_80
- Track 107 : Chaser\_77
- Track 108 : Douzhi\_79
- Track 109 : Bromden\_79
- Track 110 : Aegeus\_88, Baudelaire\_88
- Track 111 : Shweta\_42
- Track 112 : SkinnyPete\_42
- Track 113 : Ibrahim\_41, Nairb\_40, ZenTime222\_40, Bernal13\_41, RonRayGun\_41
- Track 114 : Mendokysei\_39
- Track 115 : GodPhather\_56, Taptic\_55, PR\_55, Megabear\_55, Jeon\_55, Cepens\_55, D12\_54, Argie\_56
- Track 116 : IdentityCrisis\_42
- Track 117 : TinyDot\_55
- Track 118 : Chymera\_48
- Track 119 : E3\_gp75
- Track 120 : Footloose\_55
- Track 121 : TPA4\_72

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

The start number called the most often in the published annotations is 51, it was called in 123 of the 488 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_94, ABCat\_90, Adnama\_97, Amao\_93, AmericanBeauty\_97, Argent26\_97, Asriel\_91, BaboJay\_93, BadStone\_90, Balomoji\_93, Barbarian\_92, Bask21\_93, Bench\_96, BigBubba\_93, BilboSwaggins\_92, Bruin\_90, Buck\_94, BugsBunny\_93, Cactus\_96, ChosenOne\_93, ChotaBhai\_93, Cjw1\_94, Command613\_95, Contagion\_89, Cookies\_90, CrystalP\_92, Czyszczonek\_94, Daikon\_94, DoctorDiddles\_92, DrDrey\_93, Dumbo\_93, Dusk\_90, Easy2Say\_94, Elite2014\_92, Elph10\_94, Emmina\_93, Eureka\_92, FairyPath\_93, Filch\_95, FireRed\_97, Flypotenuse\_89, Gage\_95, Gator\_91, Gemini\_98, Glexan\_92, Goku\_92,

GoldenSpark\_97, Goldilocks\_96, GooberAzure\_96, HanKaySha\_94, Harella\_93, Henry\_91, Highbury\_92, Holt\_98, Hoonter\_96, Hopey\_94, HufflyPuff\_95, IHOP\_91, Icee\_94, Inca\_90, JeTaime\_94, Kanye\_90, Kimchi\_97, Kostya\_93, Lilac\_96, Lilizi\_94, Lilpickle\_92, MISSy\_94, MPhalcon\_94, MadamMonkfish\_93, Manda\_95, Marshmallow\_91, Maxxinista\_96, Mindy\_92, Miniwave\_88, Misfit\_94, Moldemort\_96, Mosby\_89, Murica\_96, Murphy\_93, Myrale\_93, Nala\_95, NelitzaMV\_91, Nimrod\_94, NoSleep\_94, OrionPax\_92, Palpatine\_95, Paperbeatsrock\_92, Pat3\_90, Petra64142\_98, Phaja\_91, Pharsalus\_90, PhatBacter\_97, Phaux\_96, Phrux\_91, Policronamos\_97, Porky\_92, Pumpkin\_97, Qualification\_94, Rakim\_94, Rimmer\_91, RiverMonster\_94, Saints25\_92, Sassay\_88, ShamWow\_93, ShereKhan\_91, Simpliphy\_92, SirDuracell\_93, SophKB\_90, Sotrice96\_94, Stank\_95, Stark\_95, StellaBean\_91, StolenFromERC\_96, TBrady12\_96, Tarkin\_92, TeardropMSU\_89, Teaspoon\_94, Terminus\_96, Thresher\_96, Tomaszewski\_88, Toto\_91, Traaww1\_89, Tuco\_94, Ukulele\_88, Wiggin\_95, Willez\_88, Xandras\_92, YassJohnny\_90, Youngblood\_96, xkcd\_96,

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

- Lolly9\_79, MiniLon\_84, MiniMac\_84,

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

- Acquire49\_78, ActinUp\_50, Adephegia\_50, Adonis\_50, Aegeus\_88, Ageofdapage\_52, Akoni\_7, Alex44\_7, AlishaPH\_50, AloeVera\_7, AlpineSix\_64, Amelie\_46, Amgine\_51, Amohnition\_53, Anaya\_52, Angelica\_50, Apocalypse\_53, Appletree2\_77, Archie\_78, Argie\_56, Asayake\_50, Ashton\_7, Astartes\_7, Atiba\_51, Atraxi\_7, Austintatious\_37, AvadaKedavra\_78, Avani\_67, BEEST\_50, BGlluviae\_50, BaghaKamala\_49, Baoshan\_78, BarrelRoll\_50, Barroma\_7, Baudelaire\_88, Bazzle\_78, Beezoo\_52, Bella96\_51, Belladonna\_50, Bellis\_77, Bern\_51, Bernal13\_41, BigCheese\_81, Biglebops\_46, Bioscum\_41, Blexus\_57, Blizzard\_50, BlueCrab\_59, BobsGarage\_81, BodEinwohner17\_59, Boiiii\_50, BoostSeason\_54, BourbonZero\_80, BrainDrainer\_79, Breezona\_81, Brocalys\_54, Bromden\_79, Bryler\_54, BuzzLyseyear\_65, Byougenkin\_57, CREW\_50, Cain\_54, CallaLilly\_52, Calm\_80, Capricorn\_50, CaseJules\_52, Cepens\_55, Charlie\_44, Chaser\_77, CheetoDust\_49, CherryTomatoes\_55, Chris\_53, Chymera\_48, CicholasNage\_75, Claus\_81, Clautastrophe\_77, Clifton\_54, Clipper\_54, Constella\_113, Cornie\_55, Cornucopia\_61, CrimD\_50, Crossroads\_81, Curiosium\_52, D12\_54, DHan\_84, Daenerys\_53, Dalmuri\_50, DanBing\_81, DarthP\_53, Dartin\_53, Deby\_50, Demsculpinboyz\_70, Devera\_55, DillTech15\_56, DirkDirk\_75, DismalFunk\_54, DismalStressor\_54, Dole\_53, Doomphist\_59, Dorothy\_57, DosHalletts\_61, Douge\_78, Douzhi\_79, DrHayes\_51, DrSeegs\_81, DuncansLeg\_79, Durfee\_50, DyoEdafos\_83, E3\_gp75, Efra2\_53, Ekdilam\_50, EleanorGeorge\_60, Ellie\_49, Ellson\_78, Emerson\_51, Empress\_57, Enceladus\_75, Enkosi\_48, Eradicator\_52, Estave1\_62, Faith1\_81, FarmResident\_80, Fastidio\_59, Fefferhead\_51, Findley\_54, Finemlucis\_80, Finnry\_79, Footloose\_55, FreddyB\_60, Fullmetal\_7, GUmbie\_57, Gabriela\_80, Galactic\_58, Gandalph\_62, Ganymede\_51, Gardann\_81, Geraldini\_53, GigiOuiOui\_55, Girr\_57, GodPhather\_56, Gorge\_63, Grimmer\_69, Guanica15\_53, GuuelaD\_79, Hades\_60, Hafay\_82, Halena\_76, Hammy\_53, HedwigODU\_50, Hegedechwinu\_59, Hlubikazi\_55, Homura\_50, Hurricane\_53, Hyperbowlee\_50, Ibhubesi\_59, Ibrahim\_41, IdentityCrisis\_42, Ididsuntinwong\_41, Illumine\_53, Inky\_50, Inventum\_54, IrishSherpFalk\_60, Itos\_80, JAWS\_50, James\_63, Jarvi\_50, Jayhawk\_51, Jeckyll\_50, Jeon\_55, Jinglebell\_64, Jobypre\_80, JoeDirt\_78, JoeyJr\_54, JordanFarm\_7, Journey\_43, Joy99\_50, Jubie\_78, Kahlid\_81, Kersh\_61, Keshu\_55, KiSi\_55, KingMidas\_58, Kingsolomon\_77, KirDoubleO7\_77, KristaRAM\_62, Kropertea\_75, Krueger\_57, Krypton555\_80, LastHope\_53,



LastJedi\_53, LaterM\_51, Latretium\_61, LeBron\_77, LeMond\_55, Leozinho\_58, Leperchaun\_51, Lewan\_82, LilDestine\_80, LilPharaoh\_46, LindNT\_49, Lishka\_37, LiyuLake\_78, Lizziana\_65, Llama\_64, Llorens\_50, Loadrie\_80, Lolly9\_78, LunaBlu\_61, LunaStella\_58, Lunahalos\_50, MAckerman\_76, MacKat\_45, MacnCheese\_55, Mahavrat\_57, Mandlovu\_55, Maravista\_60, Marcoliusprime\_54, MarkPhew\_54, Marshawn\_53, Martik\_59, Mattes\_63, McMater\_53, Mdavu\_47, MeaningOfLife\_51, Megabear\_55, Megsy\_52, Mendokysei\_39, Miley16\_81, Milly\_54, MiniLon\_83, MiniMac\_83, MinionDave\_58, MisterCuddles\_57, MkaliMitinis3\_82, Modragons\_63, Moleficent\_7, Moostard\_77, Morrill\_7, Mozy\_68, MsGreen\_79, Mufasa\_54, Murucutumbu\_51, Mynx\_51, Nairb\_40, Nergal\_48, Netyap\_82, Nibb\_53, Nicholas\_77, Nicholasp3\_81, Nikao\_49, Niklas\_53, Nitzel\_57, November\_53, Nutello\_46, Ochi17\_62, OfUltron\_64, OhShagHennessy\_75, Oksu\_63, OlympiaSaint\_61, Oscar\_55, OwlsT2W\_59, PHappiness\_54, PR\_55, PYPDinur\_78, Pacc40\_53, Padfoot\_50, Padpat\_52, PapayaSalad\_40, Peanam\_53, Peel\_50, Pharb\_50, Phasih\_57, PhelpsODU\_53, Phrank\_54, PhriedRice\_7, Piatt\_50, Pippy\_57, Pixie\_52, Plumbus\_61, Poenanya\_59, Pokerus\_49, Polka14\_57, Poochiewood\_76, Prithvi\_51, Pupper\_53, Quby\_79, QuincyRose\_49, Radiance\_58, Ramen\_51, Rapunzel97\_51, RedBird\_57, RedWattleHog\_171, Renaud18\_65, Richo\_53, RicoCaldo\_7, RitaG\_54, RockyHorror\_60, RonRayGun\_41, Rose5\_78, Rosmarinus\_50, Ruby\_55, Rumpelstiltskin\_78, SCentae\_53, Saal\_61, Sabbb\_63, Samty\_78, SamuelLPlaqson\_51, Sarshaun\_82, Sassafras\_57, Sbash\_53, Scarlett\_55, Seabastian\_64, Sejanus\_58, SgtBeansprout\_46, Shadow1\_56, Shaobing\_53, ShedlockHolmes\_54, Sheng711\_80, ShiaSurprise\_51, ShowerHandel\_62, ShroomBoi\_61, Shweta\_42, ShyRosie\_7, Silverleaf\_78, SimranZ1\_59, SirPhilip\_53, SkinnyPete\_42, Skog\_114, Slimphazie\_50, Snenia\_78, Soap141\_81, Spartacus\_61, Spikelee\_66, Spock\_50, Spoonbill\_56, StagePhright\_7, Stap\_57, Starcevich\_59, Stinson\_51, Stormageddon\_172, Strobilo\_54, Strokeseat\_55, Sulley\_50, Sunflower1121\_57, SwagPiggett\_64, Syra333\_56, TBond007\_51, TChen\_60, TClif\_54, TM4\_49, TPA4\_72, Tachez\_50, TaiwanKao\_52, Taptic\_55, ThetaBob\_64, ThirteenKH\_7, Tierra\_54, TingHuaYa\_51, TiniBug\_51, TinyDot\_55, Tiri\_51, Topper\_50, Toron\_67, Torres\_48, Tourach\_80, TownLake\_8, TreyKay\_51, TriFive\_79, TribbleTrouble\_50, TrippleS\_7, TruffulaTree\_50, Truong\_7, Twitch\_50, Tyson\_79, UPIE\_77, Underpass\_72, Unicorn\_53, Urkel\_51, VRedHorse\_59, VWB\_44, Validus\_55, Veliki\_51, Vetrix\_80, Vivum\_62, Wamburggrxpress\_78, Wee\_60, Wee\_63, Whirlwind\_80, Whouxphf\_56, Wigglewiggles\_80, Wilder\_82, WillSterrel\_60, Winky\_81, Wyatt2\_79, Ximenita\_57, Yafa\_7, Yorick\_58, Yoshi\_72, YoureAdopted\_49, Yuna\_57, Yunkel11\_53, Zabiza\_45, Zakai\_82, Zaria\_79, Zavala\_52, ZenTime222\_40, ZhongYanYuan\_78, ZoeJ\_53,

### Summary by start number:

#### Start 13:

- Found in 1 of 543 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA4\_72 (singleton),

#### Start 16:

- Found in 1 of 543 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 488
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Skog\_114 (DO),

Start 22:

- Found in 3 of 543 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 3 of 488
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes\_55 (DO), Pupper\_53 (DO), SCentae\_53 (DO),

Start 23:

- Found in 5 of 543 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 5 of 488
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lolly9\_79 (L3), MiniLon\_84 (L3), MiniMac\_84 (L3), RedWattleHog\_171 (DX), Stormageddon\_172 (DX),

Start 25:

- Found in 2 of 543 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 488
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Wee\_60 (F1),

Start 26:

- Found in 103 of 543 ( 19.0% ) of genes in pham
- Manual Annotations of this start: 97 of 488
- Called 97.1% of time when present
- Phage (with cluster) where this start called: AlpineSix\_64 (F1), Avani\_67 (F2), Blexus\_57 (F1), BlueCrab\_59 (F1), BodEinwohner17\_59 (F1), Brocalys\_54 (F1), BuzzLyseyear\_65 (F1), Byougenkin\_57 (F1), Clifton\_54 (F1), Cornie\_55 (F5), Cornucopia\_61 (F1), Daenerys\_53 (F1), Demsculpinboyz\_70 (F2), DillTech15\_56 (F1), Doomphist\_59 (F1), Dorothy\_57 (F1), DosHalletts\_61 (F1), EleanorGeorge\_60 (F1), Empress\_57 (F1), Eradicator\_52 (F1), Estave1\_62 (F1), Fastidio\_59 (F1), FreddyB\_60 (F1), GUmbie\_57 (F1), Galactic\_58 (F1), Gandalph\_62 (F1), GigiOuiOui\_55 (F1), Girr\_57 (F1), Gorge\_63 (F1), Grimmer\_69 (F1), Hades\_60 (F1), Hegedechwinu\_59 (F1), Hlubikazi\_55 (F1), Ibhubesi\_59 (F1), Inventum\_54 (F1), IrishSherpFalk\_60 (F1), James\_63 (F1), Jinglebell\_64 (F1), JoeyJr\_54 (F1), Kersh\_61 (F1), KingMidas\_58 (F1), KristaRAM\_62 (F1), LastJedi\_53 (F1), Latretium\_61 (F1), Leozinho\_58 (F1), Leperchaun\_51 (F1), Lizziana\_65 (F1), Llama\_64 (F1), LunaBlu\_61 (F1), LunaStella\_58 (F4), Mahavrat\_57 (F1), Mandlovu\_55 (F1), Maravista\_60 (F1), Martik\_59 (F1), Mattes\_63 (F1), MinionDave\_58 (F1), MisterCuddles\_57 (F1), Modragons\_63 (F1), Mozy\_68 (F1), Nitzel\_57 (F1), Ochi17\_62 (F1), OfUltron\_64 (F1), Oksu\_63 (F1), OlympiaSaint\_61 (F1), OwlsT2W\_59 (F1), PHappiness\_54 (F1), Pacc40\_53 (F1), Phasih\_57 (F1), Pippy\_57 (F1), Plumbus\_61 (F1), Poenanya\_59 (F1), Polka14\_57 (F1), Radiance\_58 (F1), RedBird\_57 (F1), Renaud18\_65 (F4), RitaG\_54 (F1), RockyHorror\_60 (F1), Ruby\_55 (F1), Saal\_61 (F1), Sabbb\_63 (F1), Sassafra\_57 (F1), Seabastian\_64 (F1), ShowerHandel\_62 (F1), ShroomBoi\_61 (F1), SimranZ1\_59 (F1), Spartacus\_61 (F1), Spikelee\_66 (F1), Spoonbill\_56 (F1), Stap\_57 (F1), Starcevich\_59 (F1), Strokeseat\_55 (F1), SwagPigglett\_64 (F1), ThetaBob\_64 (F4), VRedHorse\_59 (F1), Vivum\_62 (F1), Wee\_63 (F1), Whouxphf\_56 (F1), WillSterrel\_60 (F1), Yorick\_58 (F1), Yoshi\_72 (F2),

Start 28:

- Found in 20 of 543 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 6 of 488

- Called 30.0% of time when present
- Phage (with cluster) where this start called: Akoni\_7 (EK2), AloeVera\_7 (EK2), Ashton\_7 (EK2), Barroma\_7 (EK2), JordanFarm\_7 (EK2), Truong\_7 (EK2),

#### Start 29:

- Found in 2 of 543 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 488
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Constella\_113 (J),

#### Start 33:

- Found in 1 of 543 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Toron\_67 (F6),

#### Start 35:

- Found in 6 of 543 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 5 of 488
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Charlie\_44 (N), Journey\_43 (N), Sbash\_53 (I2), Sejanus\_58 (AD), Shweta\_42 (N),

#### Start 36:

- Found in 6 of 543 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 488
- Called 16.7% of time when present
- Phage (with cluster) where this start called: TChen\_60 (F4),

#### Start 37:

- Found in 1 of 543 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 488
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chymera\_48 (singleton),

#### Start 38:

- Found in 14 of 543 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 9 of 488
- Called 64.3% of time when present
- Phage (with cluster) where this start called: Argie\_56 (W), Cepens\_55 (W), D12\_54 (W), Footloose\_55 (singleton), GodPhather\_56 (W), Jeon\_55 (W), Megabear\_55 (W), PR\_55 (W), Taptic\_55 (W),

#### Start 40:

- Found in 8 of 543 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 8 of 488
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hurricane\_53 (K3), Keshu\_55 (K3), MacnCheese\_55 (K3), Pharb\_50 (K3), Pixie\_52 (K3), ShedlockHolmes\_54 (K3), TBond007\_51 (K3), TripleTrouble\_50 (K3),

#### Start 44:

- Found in 1 of 543 ( 0.2% ) of genes in pham

- Manual Annotations of this start: 1 of 488
- Called 100.0% of time when present
- Phage (with cluster) where this start called: IdentityCrisis\_42 (singleton),

#### Start 46:

- Found in 134 of 543 ( 24.7% ) of genes in pham
- Manual Annotations of this start: 120 of 488
- Called 97.0% of time when present
- Phage (with cluster) where this start called: ActinUp\_50 (K1), Adephagia\_50 (K1), Adonis\_50 (K1), Ageofdapage\_52 (K1), AlishaPH\_50 (K1), Amelie\_46 (K1), Anaya\_52 (K1), Angelica\_50 (K1), Apocalypse\_53 (K1), Asayake\_50 (K1), Atiba\_51 (K1), BEEST\_50 (K1), BGlluviae\_50 (K1), BaghaKamala\_49 (K1), BarrelRoll\_50 (K1), Beezoo\_52 (K1), Bella96\_51 (K1), Belladonna\_50 (K1), Bern\_51 (K1), Bernal13\_41 (T), Binglebops\_46 (K1), Blizzard\_50 (K1), Boiiii\_50 (K1), Bryler\_54 (K6), CREW\_50 (K1), Cain\_54 (K6), CallaLilly\_52 (K1), Capricorn\_50 (K1), CaseJules\_52 (K1), CheetoDust\_49 (K1), Chris\_53 (K1), Clipper\_54 (K1), CrimD\_50 (K1), Curiosium\_52 (K1), Dalmuri\_50 (K1), Dartin\_53 (K1), Deby\_50 (K1), Devera\_55 (K1), Dole\_53 (K1), DrHayes\_51 (K1), Durfee\_50 (K1), Efra2\_53 (K1), Emerson\_51 (K1), Enkosi\_48 (K1), Ganymede\_51 (K1), Geraldini\_53 (K1), HedwigODU\_50 (K1), Homura\_50 (K1), Hyperbowlee\_50 (K1), Ibrahim\_41 (T), Illumine\_53 (K1), Inky\_50 (K1), JAWS\_50 (K1), Jarvi\_50 (K1), Jayhawk\_51 (K1), Jeckyll\_50 (K1), Joy99\_50 (K1), Krueger\_57 (K6), LaterM\_51 (K1), LilPharaoh\_46 (K1), LindNT\_49 (K1), Llorens\_50 (K1), Lunahalos\_50 (K1), MacKat\_45 (K1), MarkPhew\_54 (K1), Marshawn\_53 (K6), McMater\_53 (K1), Mdavu\_47 (K1), MeaningOfLife\_51 (K1), Megsy\_52 (K1), Mendokyse\_39 (T), Murucutumbu\_51 (K1), Mynx\_51 (K1), Nairb\_40 (T), Nergal\_48 (AG), Nibb\_53 (K1), Nikao\_49 (K1), Niklas\_53 (K1), Nutello\_46 (K1), Oscar\_55 (K1), Padfoot\_50 (K1), Padpat\_52 (K1), Peanam\_53 (K1), Peel\_50 (K1), PhelpsODU\_53 (K6), Phrank\_54 (K6), Piatt\_50 (K1), Pokerus\_49 (K1), Prithvi\_51 (K1), QuincyRose\_49 (K1), Ramen\_51 (K1), Rapunzel97\_51 (K1), Richo\_53 (K1), RonRayGun\_41 (T), Rosmarinus\_50 (K1), SamuelLPlaqson\_51 (K1), Scarlett\_55 (K1), SgtBeansprout\_46 (K1), Shadow1\_56 (K6), Shaobing\_53 (K1), ShiaSurprise\_51 (K1), SirPhilip\_53 (K6), Slimphazie\_50 (K1), Spock\_50 (K1), Stinson\_51 (K1), Sulley\_50 (K1), Sunflower1121\_57 (K6), Syra333\_56 (K6), Tachez\_50 (K1), TaiwanKao\_52 (K1), Tierra\_54 (K6), TingHuaYa\_51 (K1), TiniBug\_51 (K1), Tiri\_51 (K1), Topper\_50 (K1), Torres\_48 (K1), TreyKay\_51 (K1), TruffulaTree\_50 (K1), Twitch\_50 (K1), Unicorn\_53 (K6), Urkel\_51 (K1), Validus\_55 (K1), Veliki\_51 (K1), Ximenita\_57 (K6), YoureAdopted\_49 (K1), Yuna\_57 (K6), Yunkel11\_53 (K1), Zabiza\_45 (K1), Zavala\_52 (K1), ZenTime222\_40 (T),

#### Start 48:

- Found in 9 of 543 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 8 of 488
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amgine\_51 (K6), Amohnition\_53 (K6), DarthP\_53 (K6), Ekdilam\_50 (K6), Ellie\_49 (K6), Fefferhead\_51 (K6), Hammy\_53 (K6), November\_53 (K6), TClif\_54 (K6),

#### Start 49:

- Found in 1 of 543 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 488
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TinyDot\_55 (singleton),

Start 50:

- Found in 9 of 543 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 2 of 488
- Called 22.2% of time when present
- Phage (with cluster) where this start called: KiSi\_55 (K1), LeMond\_55 (K1),

Start 51:

- Found in 134 of 543 ( 24.7% ) of genes in pham
- Manual Annotations of this start: 123 of 488
- Called 97.8% of time when present
- Phage (with cluster) where this start called: 244\_94 (E), ABCat\_90 (E), Adnama\_97 (E), Amao\_93 (E), AmericanBeauty\_97 (E), Argent26\_97 (E), Asriel\_91 (E), BaboJay\_93 (E), BadStone\_90 (E), Balomoji\_93 (E), Barbarian\_92 (E), Bask21\_93 (E), Bench\_96 (E), BigBubba\_93 (E), BilboSwaggins\_92 (E), Bruin\_90 (E), Buck\_94 (E), BugsBunny\_93 (E), Cactus\_96 (E), ChosenOne\_93 (E), ChotaBhai\_93 (E), Cjw1\_94 (E), Command613\_95 (E), Contagion\_89 (E), Cookies\_90 (E), CrystalP\_92 (E), Czyszczonek\_94 (E), Daikon\_94 (E), DoctorDiddles\_92 (E), DrDrey\_93 (E), Dumbo\_93 (E), Dusk\_90 (E), Easy2Say\_94 (E), Elite2014\_92 (E), Elph10\_94 (E), Emmina\_93 (E), Eureka\_92 (E), FairyPath\_93 (E), Filch\_95 (E), FireRed\_97 (E), Flypotenuse\_89 (E), Gage\_95 (E), Gator\_91 (E), Gemini\_98 (E), Glexan\_92 (E), Goku\_92 (E), GoldenSpark\_97 (E), Goldilocks\_96 (E), GooberAzure\_96 (E), HanKaySha\_94 (E), Harella\_93 (E), Henry\_91 (E), Highbury\_92 (E), Holt\_98 (E), Hoonter\_96 (E), Hopey\_94 (E), HufflyPuff\_95 (E), IHOP\_91 (E), Icee\_94 (E), Inca\_90 (E), JeTaime\_94 (E), Kanye\_90 (E), Kimchi\_97 (E), Kostya\_93 (E), Lilac\_96 (E), Lilizi\_94 (E), Lilpickle\_92 (E), MISSy\_94 (E), MPhalcon\_94 (E), MadamMonkfish\_93 (E), Manda\_95 (E), Marshmallow\_91 (E), Maxxinista\_96 (E), Mindy\_92 (E), Miniwave\_88 (E), Misfit\_94 (E), Moldemort\_96 (E), Mosby\_89 (E), Murica\_96 (E), Murphy\_93 (E), Myrale\_93 (E), Nala\_95 (E), NelitzaMV\_91 (E), Nimrod\_94 (E), NoSleep\_94 (E), OrionPax\_92 (E), Palpatine\_95 (E), Paperbeatsrock\_92 (E), Pat3\_90 (E), Petra64142\_98 (E), Phaja\_91 (E), Pharsalus\_90 (E), PhatBacter\_97 (E), Phaux\_96 (E), Phrux\_91 (E), Policronamos\_97 (E), Porky\_92 (E), Pumpkin\_97 (E), Quallification\_94 (E), Rakim\_94 (E), Rimmer\_91 (E), RiverMonster\_94 (E), Saints25\_92 (E), Sassay\_88 (E), ShamWow\_93 (E), ShereKhan\_91 (E), Simpliphy\_92 (E), SirDuracell\_93 (E), SophKB\_90 (E), Sotrice96\_94 (E), Stank\_95 (E), Stark\_95 (E), StellaBean\_91 (E), StolenFromERC\_96 (E), TBrady12\_96 (E), Tarkin\_92 (E), TeardropMSU\_89 (E), Teaspoon\_94 (E), Terminus\_96 (E), Thresher\_96 (E), Tomaszewski\_88 (E), Toto\_91 (E), Traaww1\_89 (E), Tuco\_94 (E), Ukulele\_88 (E), Wiggin\_95 (E), Willez\_88 (E), Xandras\_92 (E), YassJohnny\_90 (E), Youngblood\_96 (E), xkcd\_96 (E),

Start 53:

- Found in 17 of 543 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 10 of 488
- Called 64.7% of time when present
- Phage (with cluster) where this start called: Austintatious\_37 (BC3), Bioscum\_41 (BC3), BoostSeason\_54 (K2), DismalFunk\_54 (K2), DismalStressor\_54 (K2), Findley\_54 (K2), Ididsumtinwong\_41 (BC3), Lishka\_37 (BC3), Marcoliusprime\_54 (K2), Milly\_54 (K2), PapayaSalad\_40 (BC3),

Start 54:

- Found in 19 of 543 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 6 of 488
- Called 36.8% of time when present

- Phage (with cluster) where this start called: Guanica15\_53 (K1), LastHope\_53 (K1), Mufasa\_54 (K2), Strobilo\_54 (K2), TM4\_49 (K2), VWB\_44 (BA), ZoeJ\_53 (K2),

#### Start 56:

- Found in 79 of 543 ( 14.5% ) of genes in pham
- Manual Annotations of this start: 33 of 488
- Called 44.3% of time when present
- Phage (with cluster) where this start called: Acquire49\_78 (L1), Appletree2\_77 (L1), Archie\_78 (L2), Bazzle\_78 (L2), Breezona\_81 (L2), Clautastrophe\_77 (L3), DirkDirk\_75 (L1), DuncansLeg\_79 (L3), Faith1\_81 (L2), Finemlucis\_80 (L2), Finnry\_79 (L3), Gardann\_81 (L2), Itos\_80 (L2), Jobypre\_80 (L3), JoeDirt\_78 (L1), Jubie\_78 (L3), Kahlid\_81 (L2), Kingsolomon\_77 (L3), Krypton555\_80 (L3), MAckerman\_76 (L1), Miley16\_81 (L2), MiniLon\_83 (L3), MkaliMitinis3\_82 (L2), MsGreen\_79 (L3), Nicholas\_77 (L3), OhShagHennessy\_75 (L1), Poochiewood\_76 (L1), Rumpelstiltskin\_78 (L2), Snenia\_78 (L3), Whirlwind\_80 (L3), Wilder\_82 (L2), Winky\_81 (L2), Wyatt2\_79 (L1), Zakai\_82 (L2), Zaria\_79 (L1),

#### Start 58:

- Found in 30 of 543 ( 5.5% ) of genes in pham
- Manual Annotations of this start: 4 of 488
- Called 36.7% of time when present
- Phage (with cluster) where this start called: BrainDrainer\_79 (L4), Bromden\_79 (L4), Chaser\_77 (L4), Douge\_78 (L4), Douzhi\_79 (L4), DyoEdafos\_83 (L4), FarmResident\_80 (L4), Kropertea\_75 (L4), PYPDinur\_78 (L4), Quby\_79 (L4), Sheng711\_80 (L4),

#### Start 59:

- Found in 20 of 543 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 10 of 488
- Called 70.0% of time when present
- Phage (with cluster) where this start called: Alex44\_7 (EK1), Astartes\_7 (EK2), Atraxi\_7 (EK2), Fullmetal\_7 (EK2), Moleficent\_7 (EK2), Morrill\_7 (EK2), PhriedRice\_7 (EK2), RicoCaldo\_7 (EK2), ShyRosie\_7 (EK2), StagePhright\_7 (EK2), ThirteenKH\_7 (EK2), TownLake\_8 (EK1), TrippleS\_7 (EK2), Yafa\_7 (EK2),

#### Start 63:

- Found in 49 of 543 ( 9.0% ) of genes in pham
- Manual Annotations of this start: 12 of 488
- Called 36.7% of time when present
- Phage (with cluster) where this start called: Aegeus\_88 (L5), Baudelaire\_88 (L5), Bellis\_77 (L3), BourbonZero\_80 (L3), Calm\_80 (L1), Ellson\_78 (L3), Enceladus\_75 (L1), Halena\_76 (L1), KirDoubleO7\_77 (L3), LiyuLake\_78 (L3), Lolly9\_78 (L3), MiniMac\_83 (L3), Moostard\_77 (L3), Samty\_78 (L3), Silverleaf\_78 (L1), Tourach\_80 (L2), TriFive\_79 (L3), Tyson\_79 (L1),

#### Start 64:

- Found in 1 of 543 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: E3\_gp75 (singleton),

#### Start 67:

- Found in 6 of 543 ( 1.1% ) of genes in pham

- Manual Annotations of this start: 1 of 488
- Called 16.7% of time when present
- Phage (with cluster) where this start called: SkinnyPete\_42 (N),

Start 73:

- Found in 140 of 543 ( 25.8% ) of genes in pham
- Manual Annotations of this start: 19 of 488
- Called 20.0% of time when present
- Phage (with cluster) where this start called: AvadaKedavra\_78 (L1), Baoshan\_78 (L2), BigCheese\_81 (L2), BobsGarage\_81 (L2), CicholasNage\_75 (L1), Claus\_81 (L2), Crossroads\_81 (L2), DHan\_84 (L2), DanBing\_81 (L2), DrSeegs\_81 (L2), Gabriela\_80 (L2), GuuelaD\_79 (L2), Hafay\_82 (L2), LeBron\_77 (L1), Lewan\_82 (L2), LilDestine\_80 (L2), Loadrie\_80 (L2), Netyap\_82 (L2), Nicholasp3\_81 (L2), Rose5\_78 (L1), Sarshaun\_82 (L2), Soap141\_81 (L2), UPIE\_77 (L1), Underpass\_72 (L2), Vetrix\_80 (L2), Wamburgrxpress\_78 (L1), Wigglewiggles\_80 (L2), ZhongYanYuan\_78 (L2),

### Summary by clusters:

There are 29 clusters represented in this pham: DO, singleton, BA, K3, K2, K1, K6, DX, I2, E, AD, AG, J, N, L4, L5, L2, L3, W, L1, F1, F2, F4, F5, F6, T, EK2, EK1, BC3,

Info for manual annotations of cluster AD:

- Start number 35 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster AG:

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

Info for manual annotations of cluster BC3:

- Start number 53 was manually annotated 4 times for cluster BC3.

Info for manual annotations of cluster DO:

- Start number 16 was manually annotated 1 time for cluster DO.
- Start number 22 was manually annotated 3 times for cluster DO.

Info for manual annotations of cluster DX:

- Start number 23 was manually annotated 2 times for cluster DX.

Info for manual annotations of cluster E:

- Start number 51 was manually annotated 123 times for cluster E.

Info for manual annotations of cluster EK1:

- Start number 59 was manually annotated 1 time for cluster EK1.

Info for manual annotations of cluster EK2:

- Start number 28 was manually annotated 6 times for cluster EK2.
- Start number 59 was manually annotated 9 times for cluster EK2.

Info for manual annotations of cluster F1:

- Start number 25 was manually annotated 1 time for cluster F1.
- Start number 26 was manually annotated 90 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 26 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 26 was manually annotated 3 times for cluster F4.
- Start number 36 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster F5:

- Start number 26 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster I2:

- Start number 35 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster J:

- Start number 29 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K1:

- Start number 46 was manually annotated 99 times for cluster K1.
- Start number 50 was manually annotated 2 times for cluster K1.
- Start number 54 was manually annotated 2 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 53 was manually annotated 6 times for cluster K2.
- Start number 54 was manually annotated 4 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 40 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K6:

- Start number 46 was manually annotated 14 times for cluster K6.
- Start number 48 was manually annotated 8 times for cluster K6.

Info for manual annotations of cluster L1:

- Start number 56 was manually annotated 8 times for cluster L1.
- Start number 63 was manually annotated 5 times for cluster L1.
- Start number 73 was manually annotated 6 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 56 was manually annotated 14 times for cluster L2.
- Start number 63 was manually annotated 1 time for cluster L2.
- Start number 73 was manually annotated 13 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 23 was manually annotated 3 times for cluster L3.
- Start number 56 was manually annotated 11 times for cluster L3.
- Start number 63 was manually annotated 4 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 58 was manually annotated 4 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 63 was manually annotated 2 times for cluster L5.



Info for manual annotations of cluster N:

- Start number 35 was manually annotated 3 times for cluster N.
- Start number 67 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster T:

- Start number 46 was manually annotated 6 times for cluster T.

Info for manual annotations of cluster W:

- Start number 38 was manually annotated 8 times for cluster W.

### **Gene Information:**

Gene: 244\_94 Start: 56440, Stop: 56700, Start Num: 51

Candidate Starts for 244\_94:

(Start: 51 @56440 has 123 MA's), (61, 56461), (81, 56536), (98, 56605), (113, 56671),

Gene: ABCat\_90 Start: 57128, Stop: 57388, Start Num: 51

Candidate Starts for ABCat\_90:

(Start: 51 @57128 has 123 MA's), (61, 57149), (81, 57224), (98, 57293), (113, 57359),

Gene: Acquire49\_78 Start: 52009, Stop: 52314, Start Num: 56

Candidate Starts for Acquire49\_78:

(Start: 56 @52009 has 33 MA's), (Start: 63 @52024 has 12 MA's), (Start: 73 @52084 has 19 MA's), (89, 52147), (97, 52174), (124, 52297), (125, 52300),

Gene: ActinUp\_50 Start: 37356, Stop: 37619, Start Num: 46

Candidate Starts for ActinUp\_50:

(Start: 46 @37356 has 120 MA's), (89, 37497),

Gene: Adephagia\_50 Start: 37353, Stop: 37616, Start Num: 46

Candidate Starts for Adephagia\_50:

(Start: 46 @37353 has 120 MA's), (89, 37494),

Gene: Adnama\_97 Start: 56736, Stop: 56996, Start Num: 51

Candidate Starts for Adnama\_97:

(Start: 51 @56736 has 123 MA's), (61, 56757), (81, 56832), (98, 56901), (113, 56967),

Gene: Adonis\_50 Start: 37651, Stop: 37914, Start Num: 46

Candidate Starts for Adonis\_50:

(Start: 46 @37651 has 120 MA's), (89, 37792),

Gene: Aegeus\_88 Start: 54840, Stop: 55091, Start Num: 63

Candidate Starts for Aegeus\_88:

(Start: 63 @54840 has 12 MA's), (Start: 73 @54885 has 19 MA's), (97, 54978), (108, 55032),

Gene: Ageofdapage\_52 Start: 38336, Stop: 38599, Start Num: 46

Candidate Starts for Ageofdapage\_52:

(6, 38084), (Start: 46 @38336 has 120 MA's), (69, 38390), (89, 38477),

Gene: Akoni\_7 Start: 5255, Stop: 4923, Start Num: 28

Candidate Starts for Akoni\_7:

(Start: 28 @5255 has 6 MA's), (Start: 59 @5195 has 10 MA's), (89, 5081), (106, 5018), (108, 5006), (120, 4961),

Gene: Alex44\_7 Start: 5465, Stop: 5193, Start Num: 59

Candidate Starts for Alex44\_7:

(Start: 28 @5525 has 6 MA's), (Start: 59 @5465 has 10 MA's), (101, 5327), (108, 5297), (120, 5252),

Gene: AlishaPH\_50 Start: 37626, Stop: 37889, Start Num: 46

Candidate Starts for AlishaPH\_50:

(Start: 46 @37626 has 120 MA's), (89, 37767),

Gene: AloeVera\_7 Start: 5255, Stop: 4923, Start Num: 28

Candidate Starts for AloeVera\_7:

(Start: 28 @5255 has 6 MA's), (Start: 59 @5195 has 10 MA's), (89, 5081), (106, 5018), (108, 5006), (120, 4961),

Gene: AlpineSix\_64 Start: 42541, Stop: 42819, Start Num: 26

Candidate Starts for AlpineSix\_64:

(18, 42514), (Start: 26 @42541 has 97 MA's), (72, 42625), (74, 42634), (89, 42697), (94, 42712), (97, 42724), (104, 42748), (107, 42760), (121, 42811),

Gene: Amao\_93 Start: 56248, Stop: 56508, Start Num: 51

Candidate Starts for Amao\_93:

(Start: 51 @56248 has 123 MA's), (61, 56269), (81, 56344), (98, 56413), (113, 56479),

Gene: Amelie\_46 Start: 37040, Stop: 37309, Start Num: 46

Candidate Starts for Amelie\_46:

(Start: 46 @37040 has 120 MA's), (80, 37136), (95, 37196), (96, 37202), (97, 37205), (104, 37232), (107, 37244), (119, 37298),

Gene: AmericanBeauty\_97 Start: 57297, Stop: 57557, Start Num: 51

Candidate Starts for AmericanBeauty\_97:

(Start: 51 @57297 has 123 MA's), (61, 57318), (81, 57393), (98, 57462), (113, 57528),

Gene: Amgine\_51 Start: 38553, Stop: 38807, Start Num: 48

Candidate Starts for Amgine\_51:

(8, 38403), (Start: 48 @38553 has 8 MA's), (Start: 73 @38619 has 19 MA's), (100, 38727),

Gene: Amohnition\_53 Start: 38560, Stop: 38814, Start Num: 48

Candidate Starts for Amohnition\_53:

(2, 38242), (6, 38311), (8, 38407), (Start: 48 @38560 has 8 MA's), (Start: 73 @38626 has 19 MA's), (89, 38689), (100, 38734),

Gene: Anaya\_52 Start: 37953, Stop: 38216, Start Num: 46

Candidate Starts for Anaya\_52:

(Start: 46 @37953 has 120 MA's), (69, 38007), (89, 38094), (97, 38121),

Gene: Angelica\_50 Start: 37583, Stop: 37846, Start Num: 46

Candidate Starts for Angelica\_50:

(Start: 46 @37583 has 120 MA's), (89, 37724),

Gene: Apocalypse\_53 Start: 38362, Stop: 38625, Start Num: 46

Candidate Starts for Apocalypse\_53:  
(Start: 46 @38362 has 120 MA's), (89, 38503),

Gene: Appletree2\_77 Start: 51620, Stop: 51925, Start Num: 56  
Candidate Starts for Appletree2\_77:  
(Start: 56 @51620 has 33 MA's), (Start: 63 @51635 has 12 MA's), (Start: 73 @51695 has 19 MA's),  
(89, 51758), (97, 51785), (108, 51839), (124, 51908), (125, 51911),

Gene: Archie\_78 Start: 53502, Stop: 53798, Start Num: 56  
Candidate Starts for Archie\_78:  
(Start: 56 @53502 has 33 MA's), (85, 53607), (88, 53619), (97, 53655), (109, 53712),

Gene: Argent26\_97 Start: 56657, Stop: 56917, Start Num: 51  
Candidate Starts for Argent26\_97:  
(Start: 51 @56657 has 123 MA's), (61, 56678), (81, 56753), (98, 56822), (113, 56888),

Gene: Argie\_56 Start: 45292, Stop: 45573, Start Num: 38  
Candidate Starts for Argie\_56:  
(Start: 38 @45292 has 9 MA's), (68, 45352), (84, 45409), (102, 45481), (118, 45553),

Gene: Asayake\_50 Start: 37668, Stop: 37931, Start Num: 46  
Candidate Starts for Asayake\_50:  
(Start: 46 @37668 has 120 MA's), (89, 37809),

Gene: Ashton\_7 Start: 5259, Stop: 4927, Start Num: 28  
Candidate Starts for Ashton\_7:  
(Start: 28 @5259 has 6 MA's), (Start: 59 @5199 has 10 MA's), (89, 5085), (106, 5022), (108, 5010),  
(120, 4965),

Gene: Asriel\_91 Start: 55073, Stop: 55333, Start Num: 51  
Candidate Starts for Asriel\_91:  
(Start: 51 @55073 has 123 MA's), (61, 55094), (81, 55169), (98, 55238), (113, 55304),

Gene: Astartes\_7 Start: 5219, Stop: 4962, Start Num: 59  
Candidate Starts for Astartes\_7:  
(Start: 28 @5279 has 6 MA's), (Start: 59 @5219 has 10 MA's), (89, 5105), (108, 5030), (120, 4985),

Gene: Atiba\_51 Start: 37316, Stop: 37579, Start Num: 46  
Candidate Starts for Atiba\_51:  
(Start: 46 @37316 has 120 MA's), (89, 37457),

Gene: Atraxi\_7 Start: 5184, Stop: 4927, Start Num: 59  
Candidate Starts for Atraxi\_7:  
(Start: 28 @5244 has 6 MA's), (Start: 59 @5184 has 10 MA's), (79, 5112), (89, 5070), (108, 4995),  
(120, 4950),

Gene: Austintatious\_37 Start: 25254, Stop: 25553, Start Num: 53  
Candidate Starts for Austintatious\_37:  
(4, 24966), (7, 25011), (24, 25185), (Start: 53 @25254 has 10 MA's), (97, 25416),

Gene: AvadaKedavra\_78 Start: 52163, Stop: 52393, Start Num: 73  
Candidate Starts for AvadaKedavra\_78:

(Start: 56 @52088 has 33 MA's), (Start: 63 @52103 has 12 MA's), (Start: 73 @52163 has 19 MA's), (89, 52226), (97, 52253), (124, 52376), (125, 52379),

Gene: Avani\_67 Start: 40740, Stop: 41018, Start Num: 26

Candidate Starts for Avani\_67:

(18, 40713), (Start: 26 @40740 has 97 MA's), (72, 40824), (74, 40833), (89, 40896), (94, 40911), (97, 40923), (104, 40947), (107, 40959), (121, 41010),

Gene: BEEST\_50 Start: 37668, Stop: 37931, Start Num: 46

Candidate Starts for BEEST\_50:

(Start: 46 @37668 has 120 MA's), (89, 37809),

Gene: BGlluviae\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for BGlluviae\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: BaboJay\_93 Start: 57319, Stop: 57579, Start Num: 51

Candidate Starts for BaboJay\_93:

(Start: 51 @57319 has 123 MA's), (61, 57340), (81, 57415), (98, 57484), (113, 57550),

Gene: BadStone\_90 Start: 56697, Stop: 56957, Start Num: 51

Candidate Starts for BadStone\_90:

(Start: 51 @56697 has 123 MA's), (61, 56718), (81, 56793), (98, 56862), (113, 56928),

Gene: BaghaKamala\_49 Start: 36791, Stop: 37054, Start Num: 46

Candidate Starts for BaghaKamala\_49:

(Start: 46 @36791 has 120 MA's), (89, 36932),

Gene: Balomoji\_93 Start: 56855, Stop: 57115, Start Num: 51

Candidate Starts for Balomoji\_93:

(9, 56717), (Start: 51 @56855 has 123 MA's), (61, 56876), (98, 57020), (113, 57086),

Gene: Baoshan\_78 Start: 53848, Stop: 54084, Start Num: 73

Candidate Starts for Baoshan\_78:

(Start: 56 @53788 has 33 MA's), (Start: 73 @53848 has 19 MA's), (85, 53893), (88, 53905), (97, 53941), (106, 53983),

Gene: Barbarian\_92 Start: 55073, Stop: 55333, Start Num: 51

Candidate Starts for Barbarian\_92:

(Start: 51 @55073 has 123 MA's), (61, 55094), (81, 55169), (98, 55238), (113, 55304),

Gene: BarrelRoll\_50 Start: 37339, Stop: 37602, Start Num: 46

Candidate Starts for BarrelRoll\_50:

(Start: 46 @37339 has 120 MA's), (89, 37480),

Gene: Barroma\_7 Start: 5255, Stop: 4923, Start Num: 28

Candidate Starts for Barroma\_7:

(Start: 28 @5255 has 6 MA's), (Start: 59 @5195 has 10 MA's), (89, 5081), (106, 5018), (108, 5006), (120, 4961),

Gene: Bask21\_93 Start: 55708, Stop: 55968, Start Num: 51

Candidate Starts for Bask21\_93:

(9, 55570), (Start: 51 @55708 has 123 MA's), (61, 55729), (98, 55873), (113, 55939),

Gene: Baudelaire\_88 Start: 54840, Stop: 55091, Start Num: 63  
Candidate Starts for Baudelaire\_88:  
(Start: 63 @54840 has 12 MA's), (Start: 73 @54885 has 19 MA's), (97, 54978), (108, 55032),

Gene: Bazzle\_78 Start: 53691, Stop: 53987, Start Num: 56  
Candidate Starts for Bazzle\_78:  
(Start: 56 @53691 has 33 MA's), (Start: 63 @53706 has 12 MA's), (Start: 73 @53751 has 19 MA's),  
(88, 53808), (89, 53817), (97, 53844), (109, 53901), (115, 53928),

Gene: Beezoo\_52 Start: 38314, Stop: 38577, Start Num: 46  
Candidate Starts for Beezoo\_52:  
(Start: 46 @38314 has 120 MA's), (89, 38455),

Gene: Bella96\_51 Start: 38180, Stop: 38443, Start Num: 46  
Candidate Starts for Bella96\_51:  
(6, 37928), (Start: 46 @38180 has 120 MA's), (69, 38234), (86, 38303), (89, 38321),

Gene: Belladonna\_50 Start: 37471, Stop: 37734, Start Num: 46  
Candidate Starts for Belladonna\_50:  
(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: Bellis\_77 Start: 53811, Stop: 54065, Start Num: 63  
Candidate Starts for Bellis\_77:  
(Start: 56 @53796 has 33 MA's), (Start: 63 @53811 has 12 MA's), (97, 53946), (106, 53988), (113,  
54024), (121, 54048),

Gene: Bench\_96 Start: 56792, Stop: 57052, Start Num: 51  
Candidate Starts for Bench\_96:  
(Start: 51 @56792 has 123 MA's), (61, 56813), (81, 56888), (98, 56957), (113, 57023),

Gene: Bern\_51 Start: 36386, Stop: 36649, Start Num: 46  
Candidate Starts for Bern\_51:  
(Start: 46 @36386 has 120 MA's), (89, 36527),

Gene: Bernal13\_41 Start: 31446, Stop: 31703, Start Num: 46  
Candidate Starts for Bernal13\_41:  
(3, 31170), (5, 31191), (Start: 46 @31446 has 120 MA's), (Start: 73 @31530 has 19 MA's), (97, 31620),

Gene: BigBubba\_93 Start: 56089, Stop: 56349, Start Num: 51  
Candidate Starts for BigBubba\_93:  
(Start: 51 @56089 has 123 MA's), (61, 56110), (81, 56185), (98, 56254), (113, 56320),

Gene: BigCheese\_81 Start: 53978, Stop: 54214, Start Num: 73  
Candidate Starts for BigCheese\_81:  
(Start: 56 @53918 has 33 MA's), (Start: 73 @53978 has 19 MA's), (85, 54023), (88, 54035), (97,  
54071), (108, 54125), (109, 54128),

Gene: Biglebops\_46 Start: 37040, Stop: 37309, Start Num: 46  
Candidate Starts for Biglebops\_46:  
(Start: 46 @37040 has 120 MA's), (80, 37136), (95, 37196), (96, 37202), (97, 37205), (104, 37232),  
(107, 37244), (119, 37298),

Gene: BilboSwaggins\_92 Start: 57094, Stop: 57354, Start Num: 51  
Candidate Starts for BilboSwaggins\_92:  
(Start: 51 @57094 has 123 MA's), (61, 57115), (81, 57190), (98, 57259), (113, 57325),

Gene: Bioscum\_41 Start: 27555, Stop: 27854, Start Num: 53  
Candidate Starts for Bioscum\_41:  
(4, 27267), (7, 27312), (24, 27486), (Start: 53 @27555 has 10 MA's), (97, 27717),

Gene: Blexus\_57 Start: 40392, Stop: 40673, Start Num: 26  
Candidate Starts for Blexus\_57:  
(18, 40365), (Start: 26 @40392 has 97 MA's), (41, 40416), (57, 40431), (71, 40476), (Start: 73 @40488 has 19 MA's), (94, 40566), (97, 40578), (104, 40602), (107, 40614), (121, 40665),

Gene: Blizzard\_50 Start: 37668, Stop: 37931, Start Num: 46  
Candidate Starts for Blizzard\_50:  
(Start: 46 @37668 has 120 MA's), (89, 37809),

Gene: BlueCrab\_59 Start: 40700, Stop: 40978, Start Num: 26  
Candidate Starts for BlueCrab\_59:  
(18, 40673), (Start: 26 @40700 has 97 MA's), (41, 40724), (55, 40736), (71, 40781), (Start: 73 @40793 has 19 MA's), (97, 40883), (104, 40907), (107, 40919), (121, 40970),

Gene: BobsGarage\_81 Start: 53978, Stop: 54214, Start Num: 73  
Candidate Starts for BobsGarage\_81:  
(Start: 56 @53918 has 33 MA's), (Start: 73 @53978 has 19 MA's), (85, 54023), (88, 54035), (97, 54071), (108, 54125), (109, 54128),

Gene: BodEinwohner17\_59 Start: 39462, Stop: 39740, Start Num: 26  
Candidate Starts for BodEinwohner17\_59:  
(18, 39435), (Start: 26 @39462 has 97 MA's), (72, 39546), (74, 39555), (89, 39618), (94, 39633), (97, 39645), (104, 39669), (107, 39681), (121, 39732),

Gene: Boiiii\_50 Start: 37670, Stop: 37933, Start Num: 46  
Candidate Starts for Boiiii\_50:  
(Start: 46 @37670 has 120 MA's), (89, 37811),

Gene: BoostSeason\_54 Start: 39128, Stop: 39364, Start Num: 53  
Candidate Starts for BoostSeason\_54:  
(Start: 53 @39128 has 10 MA's), (Start: 54 @39131 has 6 MA's), (Start: 58 @39137 has 4 MA's), (61, 39143), (86, 39233), (87, 39239), (104, 39302), (119, 39353),

Gene: BourbonZero\_80 Start: 53807, Stop: 54094, Start Num: 63  
Candidate Starts for BourbonZero\_80:  
(Start: 56 @53792 has 33 MA's), (Start: 63 @53807 has 12 MA's), (97, 53945),

Gene: BrainDrainer\_79 Start: 52733, Stop: 53023, Start Num: 58  
Candidate Starts for BrainDrainer\_79:  
(Start: 58 @52733 has 4 MA's), (83, 52817), (85, 52832), (88, 52844), (97, 52880), (100, 52898), (104, 52910), (109, 52937),

Gene: Breezona\_81 Start: 53918, Stop: 54214, Start Num: 56  
Candidate Starts for Breezona\_81:

(Start: 56 @53918 has 33 MA's), (Start: 73 @53978 has 19 MA's), (85, 54023), (88, 54035), (97, 54071), (108, 54125), (109, 54128),

Gene: Brocalys\_54 Start: 36836, Stop: 37117, Start Num: 26

Candidate Starts for Brocalys\_54:

(18, 36809), (Start: 26 @36836 has 97 MA's), (41, 36860), (57, 36875), (71, 36920), (Start: 73 @36932 has 19 MA's), (94, 37010), (97, 37022), (104, 37046), (107, 37058), (121, 37109),

Gene: Bromden\_79 Start: 53366, Stop: 53650, Start Num: 58

Candidate Starts for Bromden\_79:

(Start: 53 @53357 has 10 MA's), (Start: 58 @53366 has 4 MA's), (Start: 73 @53420 has 19 MA's), (88, 53477), (89, 53486), (97, 53513), (104, 53543), (109, 53570),

Gene: Bruin\_90 Start: 55671, Stop: 55931, Start Num: 51

Candidate Starts for Bruin\_90:

(Start: 51 @55671 has 123 MA's), (61, 55692), (81, 55767), (98, 55836), (113, 55902),

Gene: Bryler\_54 Start: 37154, Stop: 37411, Start Num: 46

Candidate Starts for Bryler\_54:

(Start: 46 @37154 has 120 MA's), (60, 37175), (Start: 73 @37229 has 19 MA's), (89, 37292), (92, 37301), (110, 37379),

Gene: Buck\_94 Start: 57360, Stop: 57620, Start Num: 51

Candidate Starts for Buck\_94:

(9, 57222), (Start: 51 @57360 has 123 MA's), (61, 57381), (98, 57525), (113, 57591),

Gene: BugsBunny\_93 Start: 57200, Stop: 57460, Start Num: 51

Candidate Starts for BugsBunny\_93:

(Start: 51 @57200 has 123 MA's), (61, 57221), (81, 57296), (98, 57365), (113, 57431),

Gene: BuzzLyseyear\_65 Start: 41358, Stop: 41639, Start Num: 26

Candidate Starts for BuzzLyseyear\_65:

(18, 41331), (Start: 26 @41358 has 97 MA's), (41, 41382), (57, 41397), (71, 41442), (Start: 73 @41454 has 19 MA's), (94, 41532), (97, 41544), (104, 41568), (107, 41580), (121, 41631),

Gene: Byougenkin\_57 Start: 39701, Stop: 39982, Start Num: 26

Candidate Starts for Byougenkin\_57:

(18, 39674), (Start: 26 @39701 has 97 MA's), (41, 39725), (57, 39740), (71, 39785), (Start: 73 @39797 has 19 MA's), (94, 39875), (97, 39887), (104, 39911), (107, 39923), (121, 39974),

Gene: CREW\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for CREW\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: Cactus\_96 Start: 55737, Stop: 55997, Start Num: 51

Candidate Starts for Cactus\_96:

(Start: 51 @55737 has 123 MA's), (61, 55758), (81, 55833), (98, 55902), (113, 55968),

Gene: Cain\_54 Start: 37142, Stop: 37399, Start Num: 46

Candidate Starts for Cain\_54:

(Start: 46 @37142 has 120 MA's), (60, 37163), (Start: 73 @37217 has 19 MA's), (89, 37280), (92, 37289), (110, 37367),

Gene: CallaLilly\_52 Start: 37394, Stop: 37657, Start Num: 46

Candidate Starts for CallaLilly\_52:

(Start: 46 @37394 has 120 MA's), (89, 37535),

Gene: Calm\_80 Start: 52346, Stop: 52636, Start Num: 63

Candidate Starts for Calm\_80:

(Start: 56 @52331 has 33 MA's), (Start: 63 @52346 has 12 MA's), (Start: 73 @52406 has 19 MA's), (89, 52469), (97, 52496), (124, 52619), (125, 52622),

Gene: Capricorn\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for Capricorn\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: CaseJules\_52 Start: 37668, Stop: 37931, Start Num: 46

Candidate Starts for CaseJules\_52:

(Start: 46 @37668 has 120 MA's), (89, 37809),

Gene: Cepens\_55 Start: 45007, Stop: 45288, Start Num: 38

Candidate Starts for Cepens\_55:

(Start: 38 @45007 has 9 MA's), (68, 45067), (84, 45124), (102, 45196), (118, 45268),

Gene: Charlie\_44 Start: 30217, Stop: 30516, Start Num: 35

Candidate Starts for Charlie\_44:

(Start: 35 @30217 has 5 MA's), (42, 30235), (62, 30271), (Start: 67 @30286 has 1 MA's), (89, 30382), (102, 30433), (109, 30469), (116, 30502), (120, 30508),

Gene: Chaser\_77 Start: 52365, Stop: 52655, Start Num: 58

Candidate Starts for Chaser\_77:

(Start: 58 @52365 has 4 MA's), (Start: 63 @52374 has 12 MA's), (Start: 73 @52419 has 19 MA's), (85, 52464), (88, 52476), (97, 52512), (100, 52530), (109, 52569),

Gene: CheetoDust\_49 Start: 36840, Stop: 37103, Start Num: 46

Candidate Starts for CheetoDust\_49:

(Start: 46 @36840 has 120 MA's), (89, 36981),

Gene: CherryTomatoes\_55 Start: 18497, Stop: 18778, Start Num: 22

Candidate Starts for CherryTomatoes\_55:

(Start: 22 @18497 has 3 MA's), (Start: 38 @18533 has 9 MA's), (Start: 73 @18608 has 19 MA's),

Gene: ChosenOne\_93 Start: 56152, Stop: 56412, Start Num: 51

Candidate Starts for ChosenOne\_93:

(Start: 51 @56152 has 123 MA's), (61, 56173), (81, 56248), (98, 56317), (113, 56383),

Gene: ChotaBhai\_93 Start: 56073, Stop: 56333, Start Num: 51

Candidate Starts for ChotaBhai\_93:

(9, 55935), (Start: 51 @56073 has 123 MA's), (61, 56094), (98, 56238), (113, 56304),

Gene: Chris\_53 Start: 38292, Stop: 38561, Start Num: 46

Candidate Starts for Chris\_53:

(Start: 46 @38292 has 120 MA's), (100, 38466), (122, 38547), (123, 38550),

Gene: Chymera\_48 Start: 30948, Stop: 31208, Start Num: 37

Candidate Starts for Chymera\_48:



(Start: 37 @30948 has 1 MA's), (39, 30954), (43, 30960), (104, 31149),

Gene: CicholasNage\_75 Start: 51748, Stop: 51978, Start Num: 73

Candidate Starts for CicholasNage\_75:

(Start: 56 @51673 has 33 MA's), (Start: 63 @51688 has 12 MA's), (Start: 73 @51748 has 19 MA's), (89, 51811), (97, 51838), (124, 51961), (125, 51964),

Gene: Cjw1\_94 Start: 58116, Stop: 58376, Start Num: 51

Candidate Starts for Cjw1\_94:

(Start: 51 @58116 has 123 MA's), (61, 58137), (81, 58212), (98, 58281), (113, 58347),

Gene: Claus\_81 Start: 53913, Stop: 54149, Start Num: 73

Candidate Starts for Claus\_81:

(Start: 56 @53853 has 33 MA's), (Start: 73 @53913 has 19 MA's), (85, 53958), (88, 53970), (97, 54006), (106, 54048), (108, 54060), (109, 54063),

Gene: Clautastrophe\_77 Start: 53794, Stop: 54063, Start Num: 56

Candidate Starts for Clautastrophe\_77:

(Start: 56 @53794 has 33 MA's), (Start: 63 @53809 has 12 MA's), (97, 53944), (106, 53986), (113, 54022), (121, 54046),

Gene: Clifton\_54 Start: 37187, Stop: 37468, Start Num: 26

Candidate Starts for Clifton\_54:

(18, 37160), (Start: 26 @37187 has 97 MA's), (41, 37211), (57, 37226), (71, 37271), (Start: 73 @37283 has 19 MA's), (94, 37361), (97, 37373), (104, 37397), (107, 37409), (121, 37460),

Gene: Clipper\_54 Start: 37987, Stop: 38250, Start Num: 46

Candidate Starts for Clipper\_54:

(Start: 46 @37987 has 120 MA's), (89, 38128),

Gene: Command613\_95 Start: 57191, Stop: 57451, Start Num: 51

Candidate Starts for Command613\_95:

(Start: 51 @57191 has 123 MA's), (61, 57212), (81, 57287), (98, 57356), (113, 57422),

Gene: Constella\_113 Start: 65296, Stop: 65556, Start Num: 29

Candidate Starts for Constella\_113:

(Start: 25 @65287 has 1 MA's), (27, 65293), (Start: 29 @65296 has 1 MA's), (Start: 38 @65320 has 9 MA's), (89, 65452), (97, 65479), (99, 65494), (102, 65500),

Gene: Contagion\_89 Start: 55952, Stop: 56212, Start Num: 51

Candidate Starts for Contagion\_89:

(Start: 51 @55952 has 123 MA's), (61, 55973), (81, 56048), (98, 56117), (113, 56183),

Gene: Cookies\_90 Start: 55930, Stop: 56190, Start Num: 51

Candidate Starts for Cookies\_90:

(9, 55792), (Start: 51 @55930 has 123 MA's), (61, 55951), (98, 56095), (113, 56161),

Gene: Cornie\_55 Start: 38439, Stop: 38717, Start Num: 26

Candidate Starts for Cornie\_55:

(15, 38403), (Start: 26 @38439 has 97 MA's), (41, 38463), (71, 38520), (Start: 73 @38532 has 19 MA's), (94, 38610), (97, 38622), (104, 38646), (107, 38658), (121, 38709),

Gene: Cornucopia\_61 Start: 40668, Stop: 40946, Start Num: 26

Candidate Starts for Cornucopia\_61:

(18, 40641), (Start: 26 @40668 has 97 MA's), (72, 40752), (74, 40761), (89, 40824), (94, 40839), (97, 40851), (104, 40875), (107, 40887), (121, 40938),

Gene: CrimD\_50 Start: 37577, Stop: 37840, Start Num: 46

Candidate Starts for CrimD\_50:

(Start: 46 @37577 has 120 MA's), (69, 37631), (89, 37718),

Gene: Crossroads\_81 Start: 54053, Stop: 54289, Start Num: 73

Candidate Starts for Crossroads\_81:

(Start: 56 @53993 has 33 MA's), (Start: 73 @54053 has 19 MA's), (85, 54098), (88, 54110), (97, 54146), (108, 54200), (109, 54203),

Gene: CrystalP\_92 Start: 57094, Stop: 57354, Start Num: 51

Candidate Starts for CrystalP\_92:

(Start: 51 @57094 has 123 MA's), (61, 57115), (81, 57190), (98, 57259), (113, 57325),

Gene: Curiosium\_52 Start: 36255, Stop: 36521, Start Num: 46

Candidate Starts for Curiosium\_52:

(Start: 46 @36255 has 120 MA's), (Start: 54 @36267 has 6 MA's), (69, 36312), (89, 36399), (110, 36489),

Gene: Czyszczone1\_94 Start: 56655, Stop: 56915, Start Num: 51

Candidate Starts for Czyszczone1\_94:

(Start: 51 @56655 has 123 MA's), (61, 56676), (81, 56751), (98, 56820), (113, 56886),

Gene: D12\_54 Start: 45555, Stop: 45836, Start Num: 38

Candidate Starts for D12\_54:

(Start: 38 @45555 has 9 MA's), (68, 45615), (84, 45672), (102, 45744), (118, 45816),

Gene: DHan\_84 Start: 54131, Stop: 54367, Start Num: 73

Candidate Starts for DHan\_84:

(Start: 56 @54071 has 33 MA's), (Start: 73 @54131 has 19 MA's), (85, 54176), (88, 54188), (97, 54224), (106, 54266), (108, 54278), (109, 54281),

Gene: Daenerys\_53 Start: 38267, Stop: 38545, Start Num: 26

Candidate Starts for Daenerys\_53:

(18, 38240), (Start: 26 @38267 has 97 MA's), (72, 38351), (74, 38360), (89, 38423), (94, 38438), (97, 38450), (104, 38474), (107, 38486), (121, 38537),

Gene: Daikon\_94 Start: 56682, Stop: 56942, Start Num: 51

Candidate Starts for Daikon\_94:

(9, 56544), (Start: 51 @56682 has 123 MA's), (61, 56703), (98, 56847), (113, 56913),

Gene: Dalmuri\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for Dalmuri\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: DanBing\_81 Start: 53783, Stop: 54019, Start Num: 73

Candidate Starts for DanBing\_81:

(Start: 56 @53723 has 33 MA's), (Start: 73 @53783 has 19 MA's), (85, 53828), (88, 53840), (97, 53876), (106, 53918),

Gene: DarthP\_53 Start: 38444, Stop: 38698, Start Num: 48

Candidate Starts for DarthP\_53:

(2, 38126), (6, 38195), (8, 38291), (Start: 48 @38444 has 8 MA's), (Start: 73 @38510 has 19 MA's), (89, 38573), (100, 38618),

Gene: Dartin\_53 Start: 38285, Stop: 38548, Start Num: 46

Candidate Starts for Dartin\_53:

(1, 37805), (2, 37961), (6, 38030), (Start: 46 @38285 has 120 MA's), (82, 38387), (86, 38405), (89, 38423), (104, 38477), (110, 38513), (119, 38537),

Gene: Deby\_50 Start: 37599, Stop: 37862, Start Num: 46

Candidate Starts for Deby\_50:

(Start: 46 @37599 has 120 MA's), (69, 37653), (89, 37740),

Gene: Demsculpinboyz\_70 Start: 39936, Stop: 40217, Start Num: 26

Candidate Starts for Demsculpinboyz\_70:

(17, 39900), (Start: 26 @39936 has 97 MA's), (Start: 36 @39951 has 1 MA's), (57, 39975), (71, 40020), (Start: 73 @40032 has 19 MA's), (104, 40146), (107, 40158), (121, 40209),

Gene: Devera\_55 Start: 38103, Stop: 38366, Start Num: 46

Candidate Starts for Devera\_55:

(6, 37851), (Start: 46 @38103 has 120 MA's), (69, 38157), (89, 38244),

Gene: DillTech15\_56 Start: 38601, Stop: 38879, Start Num: 26

Candidate Starts for DillTech15\_56:

(18, 38574), (Start: 26 @38601 has 97 MA's), (72, 38685), (74, 38694), (89, 38757), (94, 38772), (97, 38784), (104, 38808), (107, 38820), (121, 38871),

Gene: DirkDirk\_75 Start: 51200, Stop: 51505, Start Num: 56

Candidate Starts for DirkDirk\_75:

(Start: 56 @51200 has 33 MA's), (Start: 63 @51215 has 12 MA's), (Start: 73 @51275 has 19 MA's), (89, 51338), (97, 51365), (108, 51419), (124, 51488), (125, 51491),

Gene: DismalFunk\_54 Start: 39559, Stop: 39792, Start Num: 53

Candidate Starts for DismalFunk\_54:

(Start: 53 @39559 has 10 MA's), (Start: 54 @39562 has 6 MA's), (Start: 58 @39568 has 4 MA's), (61, 39574), (86, 39664), (87, 39670), (104, 39733),

Gene: DismalStressor\_54 Start: 39559, Stop: 39792, Start Num: 53

Candidate Starts for DismalStressor\_54:

(Start: 53 @39559 has 10 MA's), (Start: 54 @39562 has 6 MA's), (Start: 58 @39568 has 4 MA's), (61, 39574), (86, 39664), (87, 39670), (104, 39733),

Gene: DoctorDiddles\_92 Start: 56117, Stop: 56377, Start Num: 51

Candidate Starts for DoctorDiddles\_92:

(9, 55979), (Start: 51 @56117 has 123 MA's), (61, 56138), (98, 56282), (113, 56348),

Gene: Dole\_53 Start: 38105, Stop: 38368, Start Num: 46

Candidate Starts for Dole\_53:

(6, 37853), (Start: 46 @38105 has 120 MA's), (69, 38159), (89, 38246),

Gene: Doomphist\_59 Start: 41112, Stop: 41390, Start Num: 26

Candidate Starts for Doomphist\_59:

(18, 41085), (Start: 26 @41112 has 97 MA's), (72, 41196), (74, 41205), (89, 41268), (94, 41283), (97, 41295), (104, 41319), (107, 41331), (121, 41382),

Gene: Dorothy\_57 Start: 39331, Stop: 39609, Start Num: 26

Candidate Starts for Dorothy\_57:

(18, 39304), (Start: 26 @39331 has 97 MA's), (72, 39415), (74, 39424), (89, 39487), (94, 39502), (97, 39514), (104, 39538), (107, 39550), (121, 39601),

Gene: DosHalletts\_61 Start: 41467, Stop: 41745, Start Num: 26

Candidate Starts for DosHalletts\_61:

(18, 41440), (Start: 26 @41467 has 97 MA's), (72, 41551), (74, 41560), (89, 41623), (94, 41638), (97, 41650), (104, 41674), (107, 41686), (121, 41737),

Gene: Douge\_78 Start: 52288, Stop: 52587, Start Num: 58

Candidate Starts for Douge\_78:

(Start: 58 @52288 has 4 MA's), (69, 52318), (Start: 73 @52342 has 19 MA's), (88, 52399), (89, 52408), (97, 52435), (104, 52465),

Gene: Douzhi\_79 Start: 52550, Stop: 52840, Start Num: 58

Candidate Starts for Douzhi\_79:

(Start: 58 @52550 has 4 MA's), (83, 52634), (85, 52649), (88, 52661), (97, 52697), (104, 52727), (109, 52754),

Gene: DrDrey\_93 Start: 57574, Stop: 57834, Start Num: 51

Candidate Starts for DrDrey\_93:

(Start: 51 @57574 has 123 MA's), (61, 57595), (81, 57670), (98, 57739), (113, 57805),

Gene: DrHayes\_51 Start: 38242, Stop: 38505, Start Num: 46

Candidate Starts for DrHayes\_51:

(6, 37990), (Start: 46 @38242 has 120 MA's), (69, 38296), (86, 38365), (89, 38383),

Gene: DrSeegs\_81 Start: 53978, Stop: 54214, Start Num: 73

Candidate Starts for DrSeegs\_81:

(Start: 56 @53918 has 33 MA's), (Start: 73 @53978 has 19 MA's), (85, 54023), (88, 54035), (97, 54071), (108, 54125), (109, 54128),

Gene: Dumbo\_93 Start: 56054, Stop: 56314, Start Num: 51

Candidate Starts for Dumbo\_93:

(Start: 51 @56054 has 123 MA's), (61, 56075), (81, 56150), (98, 56219), (113, 56285),

Gene: DuncansLeg\_79 Start: 53780, Stop: 54082, Start Num: 56

Candidate Starts for DuncansLeg\_79:

(Start: 56 @53780 has 33 MA's), (Start: 63 @53795 has 12 MA's), (97, 53933),

Gene: Durfee\_50 Start: 37668, Stop: 37931, Start Num: 46

Candidate Starts for Durfee\_50:

(Start: 46 @37668 has 120 MA's), (89, 37809),

Gene: Dusk\_90 Start: 56357, Stop: 56617, Start Num: 51

Candidate Starts for Dusk\_90:

(Start: 51 @56357 has 123 MA's), (61, 56378), (81, 56453), (98, 56522), (113, 56588),

Gene: DyoEdafos\_83 Start: 53198, Stop: 53488, Start Num: 58

Candidate Starts for DyoEdafos\_83:

(Start: 58 @53198 has 4 MA's), (69, 53228), (Start: 73 @53252 has 19 MA's), (88, 53309), (89, 53318), (97, 53345), (104, 53375), (109, 53402),

Gene: E3\_gp75 Start: 36271, Stop: 36531, Start Num: 64

Candidate Starts for E3\_gp75:

(30, 36193), (64, 36271), (76, 36319), (77, 36325), (84, 36346), (91, 36388), (93, 36394), (105, 36454),

Gene: Easy2Say\_94 Start: 57556, Stop: 57816, Start Num: 51

Candidate Starts for Easy2Say\_94:

(Start: 51 @57556 has 123 MA's), (61, 57577), (81, 57652), (98, 57721), (113, 57787),

Gene: Efra2\_53 Start: 37187, Stop: 37450, Start Num: 46

Candidate Starts for Efra2\_53:

(Start: 46 @37187 has 120 MA's), (Start: 54 @37199 has 6 MA's), (86, 37310), (89, 37328),

Gene: Ekdilam\_50 Start: 37991, Stop: 38245, Start Num: 48

Candidate Starts for Ekdilam\_50:

(2, 37673), (6, 37742), (8, 37838), (Start: 48 @37991 has 8 MA's), (89, 38120), (100, 38165),

Gene: EleanorGeorge\_60 Start: 40795, Stop: 41076, Start Num: 26

Candidate Starts for EleanorGeorge\_60:

(18, 40768), (Start: 26 @40795 has 97 MA's), (41, 40819), (57, 40834), (71, 40879), (Start: 73 @40891 has 19 MA's), (94, 40969), (97, 40981), (104, 41005), (107, 41017), (121, 41068),

Gene: Elite2014\_92 Start: 56151, Stop: 56411, Start Num: 51

Candidate Starts for Elite2014\_92:

(Start: 51 @56151 has 123 MA's), (61, 56172), (81, 56247), (98, 56316), (113, 56382),

Gene: Ellie\_49 Start: 37741, Stop: 37995, Start Num: 48

Candidate Starts for Ellie\_49:

(8, 37591), (Start: 48 @37741 has 8 MA's), (Start: 73 @37807 has 19 MA's), (100, 37915), (110, 37960),

Gene: Ellson\_78 Start: 54110, Stop: 54397, Start Num: 63

Candidate Starts for Ellson\_78:

(Start: 56 @54095 has 33 MA's), (Start: 63 @54110 has 12 MA's), (97, 54248),

Gene: Elph10\_94 Start: 56144, Stop: 56404, Start Num: 51

Candidate Starts for Elph10\_94:

(Start: 51 @56144 has 123 MA's), (61, 56165), (81, 56240), (98, 56309), (113, 56375),

Gene: Emerson\_51 Start: 37347, Stop: 37610, Start Num: 46

Candidate Starts for Emerson\_51:

(Start: 46 @37347 has 120 MA's), (89, 37488),

Gene: Emmina\_93 Start: 55777, Stop: 56037, Start Num: 51

Candidate Starts for Emmina\_93:

(Start: 51 @55777 has 123 MA's), (61, 55798), (81, 55873), (98, 55942), (113, 56008),

Gene: Empress\_57 Start: 39681, Stop: 39959, Start Num: 26

Candidate Starts for Empress\_57:

(18, 39654), (Start: 26 @39681 has 97 MA's), (72, 39765), (74, 39774), (89, 39837), (94, 39852), (97, 39864), (104, 39888), (107, 39900), (121, 39951),

Gene: Enceladus\_75 Start: 51992, Stop: 52282, Start Num: 63

Candidate Starts for Enceladus\_75:

(Start: 56 @51977 has 33 MA's), (Start: 63 @51992 has 12 MA's), (Start: 73 @52052 has 19 MA's), (89, 52115), (97, 52142), (108, 52196), (124, 52265), (125, 52268),

Gene: Enkosi\_48 Start: 39653, Stop: 39922, Start Num: 46

Candidate Starts for Enkosi\_48:

(Start: 46 @39653 has 120 MA's), (80, 39749), (95, 39809), (96, 39815), (97, 39818), (104, 39845), (107, 39857), (119, 39911),

Gene: Eradicator\_52 Start: 38208, Stop: 38489, Start Num: 26

Candidate Starts for Eradicator\_52:

(18, 38181), (Start: 26 @38208 has 97 MA's), (41, 38232), (57, 38247), (71, 38292), (Start: 73 @38304 has 19 MA's), (94, 38382), (97, 38394), (104, 38418), (107, 38430), (121, 38481),

Gene: Estave1\_62 Start: 41132, Stop: 41410, Start Num: 26

Candidate Starts for Estave1\_62:

(18, 41105), (Start: 26 @41132 has 97 MA's), (72, 41216), (74, 41225), (89, 41288), (94, 41303), (97, 41315), (104, 41339), (107, 41351), (121, 41402),

Gene: Eureka\_92 Start: 57064, Stop: 57324, Start Num: 51

Candidate Starts for Eureka\_92:

(Start: 51 @57064 has 123 MA's), (61, 57085), (81, 57160), (98, 57229), (113, 57295),

Gene: FairyPath\_93 Start: 57270, Stop: 57530, Start Num: 51

Candidate Starts for FairyPath\_93:

(Start: 51 @57270 has 123 MA's), (61, 57291), (81, 57366), (98, 57435), (113, 57501),

Gene: Faith1\_81 Start: 53918, Stop: 54214, Start Num: 56

Candidate Starts for Faith1\_81:

(Start: 56 @53918 has 33 MA's), (Start: 73 @53978 has 19 MA's), (85, 54023), (88, 54035), (97, 54071), (108, 54125), (109, 54128),

Gene: FarmResident\_80 Start: 52292, Stop: 52576, Start Num: 58

Candidate Starts for FarmResident\_80:

(Start: 58 @52292 has 4 MA's), (Start: 73 @52346 has 19 MA's), (85, 52391), (88, 52403), (97, 52439), (100, 52457), (109, 52496),

Gene: Fastidio\_59 Start: 38748, Stop: 39026, Start Num: 26

Candidate Starts for Fastidio\_59:

(18, 38721), (Start: 26 @38748 has 97 MA's), (72, 38832), (74, 38841), (89, 38904), (94, 38919), (97, 38931), (104, 38955), (107, 38967), (121, 39018),

Gene: Fefferhead\_51 Start: 37691, Stop: 37945, Start Num: 48

Candidate Starts for Fefferhead\_51:

(8, 37541), (Start: 48 @37691 has 8 MA's), (Start: 73 @37757 has 19 MA's), (100, 37865), (110, 37910),

Gene: Filch\_95 Start: 56349, Stop: 56609, Start Num: 51

Candidate Starts for Filch\_95:

(Start: 51 @56349 has 123 MA's), (61, 56370), (81, 56445), (98, 56514), (113, 56580),

Gene: Findley\_54 Start: 39552, Stop: 39785, Start Num: 53

Candidate Starts for Findley\_54:

(Start: 53 @39552 has 10 MA's), (Start: 54 @39555 has 6 MA's), (Start: 58 @39561 has 4 MA's), (61, 39567), (86, 39657), (87, 39663), (104, 39726),

Gene: Finemlucis\_80 Start: 54386, Stop: 54682, Start Num: 56

Candidate Starts for Finemlucis\_80:

(Start: 56 @54386 has 33 MA's), (89, 54512), (97, 54539), (104, 54569), (108, 54593),

Gene: Finnry\_79 Start: 54045, Stop: 54314, Start Num: 56

Candidate Starts for Finnry\_79:

(Start: 56 @54045 has 33 MA's), (Start: 63 @54060 has 12 MA's), (97, 54195), (106, 54237), (113, 54273), (121, 54297),

Gene: FireRed\_97 Start: 57367, Stop: 57627, Start Num: 51

Candidate Starts for FireRed\_97:

(Start: 51 @57367 has 123 MA's), (61, 57388), (81, 57463), (98, 57532), (113, 57598),

Gene: Flypotenuse\_89 Start: 55727, Stop: 55987, Start Num: 51

Candidate Starts for Flypotenuse\_89:

(Start: 51 @55727 has 123 MA's), (61, 55748), (81, 55823), (98, 55892), (113, 55958),

Gene: Footloose\_55 Start: 31826, Stop: 32083, Start Num: 38

Candidate Starts for Footloose\_55:

(Start: 38 @31826 has 9 MA's), (45, 31838),

Gene: FreddyB\_60 Start: 38860, Stop: 39141, Start Num: 26

Candidate Starts for FreddyB\_60:

(18, 38833), (Start: 26 @38860 has 97 MA's), (41, 38884), (57, 38899), (71, 38944), (Start: 73 @38956 has 19 MA's), (94, 39034), (97, 39046), (104, 39070), (107, 39082), (121, 39133),

Gene: Fullmetal\_7 Start: 5216, Stop: 4959, Start Num: 59

Candidate Starts for Fullmetal\_7:

(Start: 28 @5276 has 6 MA's), (Start: 59 @5216 has 10 MA's), (89, 5102), (108, 5027), (120, 4982),

Gene: GUmbie\_57 Start: 39435, Stop: 39716, Start Num: 26

Candidate Starts for GUmbie\_57:

(18, 39408), (Start: 26 @39435 has 97 MA's), (41, 39459), (57, 39474), (71, 39519), (Start: 73 @39531 has 19 MA's), (94, 39609), (97, 39621), (104, 39645), (107, 39657), (121, 39708),

Gene: Gabriela\_80 Start: 53324, Stop: 53560, Start Num: 73

Candidate Starts for Gabriela\_80:

(Start: 56 @53264 has 33 MA's), (Start: 73 @53324 has 19 MA's), (85, 53369), (88, 53381), (97, 53417), (108, 53471), (109, 53474),

Gene: Gage\_95 Start: 56798, Stop: 57058, Start Num: 51

Candidate Starts for Gage\_95:

(Start: 51 @56798 has 123 MA's), (61, 56819), (81, 56894), (98, 56963), (113, 57029),

Gene: Galactic\_58 Start: 39901, Stop: 40179, Start Num: 26

Candidate Starts for Galactic\_58:

(18, 39874), (Start: 26 @39901 has 97 MA's), (72, 39985), (74, 39994), (89, 40057), (94, 40072), (97, 40084), (104, 40108), (107, 40120), (121, 40171),

Gene: Gandalph\_62 Start: 40257, Stop: 40538, Start Num: 26

Candidate Starts for Gandalph\_62:

(18, 40230), (Start: 26 @40257 has 97 MA's), (41, 40281), (57, 40296), (71, 40341), (Start: 73 @40353 has 19 MA's), (94, 40431), (97, 40443), (104, 40467), (107, 40479), (121, 40530),

Gene: Ganymede\_51 Start: 37786, Stop: 38049, Start Num: 46

Candidate Starts for Ganymede\_51:

(Start: 46 @37786 has 120 MA's), (89, 37927),

Gene: Gardann\_81 Start: 53753, Stop: 54049, Start Num: 56

Candidate Starts for Gardann\_81:

(Start: 56 @53753 has 33 MA's), (Start: 73 @53813 has 19 MA's), (85, 53858), (88, 53870), (97, 53906), (108, 53960), (109, 53963),

Gene: Gator\_91 Start: 56582, Stop: 56842, Start Num: 51

Candidate Starts for Gator\_91:

(9, 56444), (Start: 51 @56582 has 123 MA's), (61, 56603), (98, 56747), (113, 56813),

Gene: Gemini\_98 Start: 57174, Stop: 57434, Start Num: 51

Candidate Starts for Gemini\_98:

(Start: 51 @57174 has 123 MA's), (61, 57195), (81, 57270), (98, 57339), (113, 57405),

Gene: Geraldini\_53 Start: 38403, Stop: 38666, Start Num: 46

Candidate Starts for Geraldini\_53:

(Start: 46 @38403 has 120 MA's), (69, 38457), (70, 38463), (89, 38544),

Gene: GigiOuiOui\_55 Start: 38875, Stop: 39156, Start Num: 26

Candidate Starts for GigiOuiOui\_55:

(18, 38848), (Start: 26 @38875 has 97 MA's), (41, 38899), (57, 38914), (71, 38959), (Start: 73 @38971 has 19 MA's), (89, 39034), (94, 39049), (97, 39061), (104, 39085), (107, 39097), (121, 39148),

Gene: Girr\_57 Start: 39742, Stop: 40020, Start Num: 26

Candidate Starts for Girr\_57:

(18, 39715), (Start: 26 @39742 has 97 MA's), (72, 39826), (74, 39835), (89, 39898), (94, 39913), (97, 39925), (104, 39949), (107, 39961), (121, 40012),

Gene: Glexan\_92 Start: 56857, Stop: 57117, Start Num: 51

Candidate Starts for Glexan\_92:

(Start: 51 @56857 has 123 MA's), (61, 56878), (81, 56953), (98, 57022), (113, 57088),

Gene: GodPhather\_56 Start: 45795, Stop: 46076, Start Num: 38

Candidate Starts for GodPhather\_56:

(Start: 38 @45795 has 9 MA's), (68, 45855), (84, 45912), (102, 45984), (118, 46056),

Gene: Goku\_92 Start: 56793, Stop: 57053, Start Num: 51

Candidate Starts for Goku\_92:

(Start: 51 @56793 has 123 MA's), (61, 56814), (81, 56889), (98, 56958), (113, 57024),

Gene: GoldenSpark\_97 Start: 56657, Stop: 56917, Start Num: 51

Candidate Starts for GoldenSpark\_97:



(Start: 51 @56657 has 123 MA's), (61, 56678), (81, 56753), (98, 56822), (113, 56888),

Gene: Goldilocks\_96 Start: 56015, Stop: 56275, Start Num: 51

Candidate Starts for Goldilocks\_96:

(Start: 51 @56015 has 123 MA's), (61, 56036), (81, 56111), (98, 56180), (113, 56246),

Gene: GooberAzure\_96 Start: 56657, Stop: 56917, Start Num: 51

Candidate Starts for GooberAzure\_96:

(Start: 51 @56657 has 123 MA's), (61, 56678), (81, 56753), (98, 56822), (113, 56888),

Gene: Gorge\_63 Start: 41377, Stop: 41658, Start Num: 26

Candidate Starts for Gorge\_63:

(18, 41350), (Start: 26 @41377 has 97 MA's), (41, 41401), (57, 41416), (71, 41461), (Start: 73 @41473 has 19 MA's), (94, 41551), (97, 41563), (104, 41587), (107, 41599), (121, 41650),

Gene: Grimmer\_69 Start: 41537, Stop: 41815, Start Num: 26

Candidate Starts for Grimmer\_69:

(18, 41510), (Start: 26 @41537 has 97 MA's), (72, 41621), (89, 41693), (94, 41708), (97, 41720), (104, 41744), (107, 41756), (121, 41807),

Gene: Guanica15\_53 Start: 37156, Stop: 37407, Start Num: 54

Candidate Starts for Guanica15\_53:

(Start: 46 @37144 has 120 MA's), (Start: 54 @37156 has 6 MA's), (86, 37267), (89, 37285),

Gene: GuuelaD\_79 Start: 54093, Stop: 54329, Start Num: 73

Candidate Starts for GuuelaD\_79:

(Start: 56 @54033 has 33 MA's), (Start: 73 @54093 has 19 MA's), (85, 54138), (88, 54150), (97, 54186), (108, 54240), (109, 54243),

Gene: Hades\_60 Start: 40833, Stop: 41114, Start Num: 26

Candidate Starts for Hades\_60:

(18, 40806), (Start: 26 @40833 has 97 MA's), (41, 40857), (57, 40872), (71, 40917), (Start: 73 @40929 has 19 MA's), (94, 41007), (97, 41019), (104, 41043), (107, 41055), (121, 41106),

Gene: Hafay\_82 Start: 53908, Stop: 54144, Start Num: 73

Candidate Starts for Hafay\_82:

(Start: 56 @53848 has 33 MA's), (Start: 73 @53908 has 19 MA's), (85, 53953), (88, 53965), (97, 54001), (106, 54043), (108, 54055), (109, 54058),

Gene: Halena\_76 Start: 51262, Stop: 51552, Start Num: 63

Candidate Starts for Halena\_76:

(Start: 56 @51247 has 33 MA's), (Start: 63 @51262 has 12 MA's), (Start: 73 @51322 has 19 MA's), (89, 51385), (97, 51412), (124, 51535), (125, 51538),

Gene: Hammy\_53 Start: 38432, Stop: 38686, Start Num: 48

Candidate Starts for Hammy\_53:

(2, 38114), (6, 38183), (8, 38279), (Start: 48 @38432 has 8 MA's), (Start: 73 @38498 has 19 MA's), (89, 38561), (100, 38606),

Gene: HanKaySha\_94 Start: 56224, Stop: 56484, Start Num: 51

Candidate Starts for HanKaySha\_94:

(Start: 51 @56224 has 123 MA's), (61, 56245), (81, 56320), (98, 56389), (113, 56455),

Gene: Harella\_93 Start: 57373, Stop: 57633, Start Num: 51  
Candidate Starts for Harella\_93:  
(Start: 51 @57373 has 123 MA's), (61, 57394), (81, 57469), (98, 57538), (113, 57604),

Gene: HedwigODU\_50 Start: 37356, Stop: 37619, Start Num: 46  
Candidate Starts for HedwigODU\_50:  
(Start: 46 @37356 has 120 MA's), (89, 37497),

Gene: Hegedechwinu\_59 Start: 39047, Stop: 39328, Start Num: 26  
Candidate Starts for Hegedechwinu\_59:  
(Start: 26 @39047 has 97 MA's), (41, 39071), (57, 39086), (71, 39131), (Start: 73 @39143 has 19 MA's), (94, 39221), (97, 39233), (104, 39257), (107, 39269), (121, 39320),

Gene: Henry\_91 Start: 56534, Stop: 56794, Start Num: 51  
Candidate Starts for Henry\_91:  
(Start: 51 @56534 has 123 MA's), (61, 56555), (81, 56630), (98, 56699), (113, 56765),

Gene: Highbury\_92 Start: 56224, Stop: 56484, Start Num: 51  
Candidate Starts for Highbury\_92:  
(Start: 51 @56224 has 123 MA's), (61, 56245), (81, 56320), (98, 56389), (113, 56455),

Gene: Hlubikazi\_55 Start: 38053, Stop: 38334, Start Num: 26  
Candidate Starts for Hlubikazi\_55:  
(18, 38026), (Start: 26 @38053 has 97 MA's), (41, 38077), (57, 38092), (71, 38137), (Start: 73 @38149 has 19 MA's), (94, 38227), (97, 38239), (104, 38263), (107, 38275), (121, 38326),

Gene: Holt\_98 Start: 57071, Stop: 57331, Start Num: 51  
Candidate Starts for Holt\_98:  
(Start: 51 @57071 has 123 MA's), (61, 57092), (81, 57167), (98, 57236), (113, 57302),

Gene: Homura\_50 Start: 37471, Stop: 37734, Start Num: 46  
Candidate Starts for Homura\_50:  
(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: Hoonter\_96 Start: 56529, Stop: 56789, Start Num: 51  
Candidate Starts for Hoonter\_96:  
(Start: 51 @56529 has 123 MA's), (61, 56550), (81, 56625), (98, 56694), (113, 56760),

Gene: Hokey\_94 Start: 57035, Stop: 57295, Start Num: 51  
Candidate Starts for Hokey\_94:  
(Start: 51 @57035 has 123 MA's), (61, 57056), (81, 57131), (98, 57200), (113, 57266),

Gene: HufflyPuff\_95 Start: 57119, Stop: 57379, Start Num: 51  
Candidate Starts for HufflyPuff\_95:  
(Start: 51 @57119 has 123 MA's), (61, 57140), (81, 57215), (98, 57284), (113, 57350),

Gene: Hurricane\_53 Start: 37919, Stop: 38188, Start Num: 40  
Candidate Starts for Hurricane\_53:  
(6, 37679), (12, 37823), (Start: 40 @37919 has 8 MA's), (Start: 58 @37943 has 4 MA's), (89, 38063), (104, 38117),

Gene: Hyperbowlee\_50 Start: 37668, Stop: 37931, Start Num: 46  
Candidate Starts for Hyperbowlee\_50:

(Start: 46 @37668 has 120 MA's), (89, 37809),

Gene: IHOP\_91 Start: 56697, Stop: 56957, Start Num: 51

Candidate Starts for IHOP\_91:

(Start: 51 @56697 has 123 MA's), (61, 56718), (81, 56793), (98, 56862), (113, 56928),

Gene: Ibhubesi\_59 Start: 40025, Stop: 40303, Start Num: 26

Candidate Starts for Ibhubesi\_59:

(18, 39998), (Start: 26 @40025 has 97 MA's), (72, 40109), (74, 40118), (94, 40196), (97, 40208), (104, 40232), (107, 40244), (121, 40295),

Gene: Ibrahim\_41 Start: 31892, Stop: 32149, Start Num: 46

Candidate Starts for Ibrahim\_41:

(3, 31616), (5, 31637), (Start: 46 @31892 has 120 MA's), (Start: 73 @31976 has 19 MA's), (97, 32066),

Gene: Icee\_94 Start: 56184, Stop: 56444, Start Num: 51

Candidate Starts for Icee\_94:

(Start: 51 @56184 has 123 MA's), (61, 56205), (81, 56280), (98, 56349), (113, 56415),

Gene: IdentityCrisis\_42 Start: 29075, Stop: 29332, Start Num: 44

Candidate Starts for IdentityCrisis\_42:

(Start: 44 @29075 has 1 MA's), (52, 29090), (75, 29150), (78, 29168),

Gene: Ididsumtinwong\_41 Start: 27555, Stop: 27854, Start Num: 53

Candidate Starts for Ididsumtinwong\_41:

(4, 27267), (7, 27312), (24, 27486), (Start: 53 @27555 has 10 MA's), (97, 27717),

Gene: Illumine\_53 Start: 38105, Stop: 38368, Start Num: 46

Candidate Starts for Illumine\_53:

(6, 37853), (Start: 46 @38105 has 120 MA's), (69, 38159), (89, 38246),

Gene: Inca\_90 Start: 55186, Stop: 55446, Start Num: 51

Candidate Starts for Inca\_90:

(Start: 51 @55186 has 123 MA's), (61, 55207), (81, 55282), (98, 55351), (113, 55417),

Gene: Inky\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for Inky\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: Inventum\_54 Start: 39529, Stop: 39807, Start Num: 26

Candidate Starts for Inventum\_54:

(18, 39502), (Start: 26 @39529 has 97 MA's), (72, 39613), (74, 39622), (89, 39685), (94, 39700), (97, 39712), (104, 39736), (107, 39748), (121, 39799),

Gene: IrishSherpFalk\_60 Start: 41690, Stop: 41971, Start Num: 26

Candidate Starts for IrishSherpFalk\_60:

(18, 41663), (Start: 26 @41690 has 97 MA's), (41, 41714), (57, 41729), (71, 41774), (Start: 73 @41786 has 19 MA's), (94, 41864), (97, 41876), (104, 41900), (107, 41912), (121, 41963),

Gene: Itos\_80 Start: 52824, Stop: 53120, Start Num: 56

Candidate Starts for Itos\_80:

(Start: 56 @52824 has 33 MA's), (Start: 73 @52884 has 19 MA's), (85, 52929), (88, 52941), (97, 52977), (108, 53031), (109, 53034),

Gene: JAWS\_50 Start: 37345, Stop: 37608, Start Num: 46

Candidate Starts for JAWS\_50:

(Start: 46 @37345 has 120 MA's), (89, 37486),

Gene: James\_63 Start: 41502, Stop: 41783, Start Num: 26

Candidate Starts for James\_63:

(18, 41475), (Start: 26 @41502 has 97 MA's), (41, 41526), (57, 41541), (71, 41586), (Start: 73 @41598 has 19 MA's), (94, 41676), (97, 41688), (104, 41712), (107, 41724), (121, 41775),

Gene: Jarvi\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for Jarvi\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: Jayhawk\_51 Start: 37354, Stop: 37617, Start Num: 46

Candidate Starts for Jayhawk\_51:

(Start: 46 @37354 has 120 MA's), (89, 37495),

Gene: JeTaime\_94 Start: 57387, Stop: 57647, Start Num: 51

Candidate Starts for JeTaime\_94:

(Start: 51 @57387 has 123 MA's), (61, 57408), (81, 57483), (98, 57552), (113, 57618),

Gene: Jeckyll\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for Jeckyll\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: Jeon\_55 Start: 45537, Stop: 45818, Start Num: 38

Candidate Starts for Jeon\_55:

(Start: 38 @45537 has 9 MA's), (68, 45597), (84, 45654), (102, 45726), (118, 45798),

Gene: Jinglebell\_64 Start: 42540, Stop: 42818, Start Num: 26

Candidate Starts for Jinglebell\_64:

(18, 42513), (Start: 26 @42540 has 97 MA's), (72, 42624), (74, 42633), (89, 42696), (94, 42711), (97, 42723), (104, 42747), (107, 42759), (121, 42810),

Gene: Jobypre\_80 Start: 53794, Stop: 54063, Start Num: 56

Candidate Starts for Jobypre\_80:

(Start: 56 @53794 has 33 MA's), (Start: 63 @53809 has 12 MA's), (97, 53944), (106, 53986), (113, 54022), (121, 54046),

Gene: JoeDirt\_78 Start: 52575, Stop: 52880, Start Num: 56

Candidate Starts for JoeDirt\_78:

(Start: 56 @52575 has 33 MA's), (Start: 63 @52590 has 12 MA's), (Start: 73 @52650 has 19 MA's), (89, 52713), (97, 52740), (108, 52794), (124, 52863), (125, 52866),

Gene: JoeyJr\_54 Start: 38435, Stop: 38713, Start Num: 26

Candidate Starts for JoeyJr\_54:

(18, 38408), (Start: 26 @38435 has 97 MA's), (72, 38519), (74, 38528), (89, 38591), (94, 38606), (97, 38618), (104, 38642), (107, 38654), (121, 38705),

Gene: JordanFarm\_7 Start: 5255, Stop: 4923, Start Num: 28

Candidate Starts for JordanFarm\_7:

(Start: 28 @5255 has 6 MA's), (Start: 59 @5195 has 10 MA's), (89, 5081), (106, 5018), (108, 5006), (120, 4961),

Gene: Journey\_43 Start: 30217, Stop: 30516, Start Num: 35

Candidate Starts for Journey\_43:

(Start: 35 @30217 has 5 MA's), (42, 30235), (62, 30271), (Start: 67 @30286 has 1 MA's), (89, 30382), (102, 30433), (109, 30469), (116, 30502), (120, 30508),

Gene: Joy99\_50 Start: 37400, Stop: 37663, Start Num: 46

Candidate Starts for Joy99\_50:

(Start: 46 @37400 has 120 MA's), (89, 37541),

Gene: Jubie\_78 Start: 53929, Stop: 54198, Start Num: 56

Candidate Starts for Jubie\_78:

(Start: 56 @53929 has 33 MA's), (Start: 63 @53944 has 12 MA's), (97, 54079), (106, 54121), (113, 54157), (121, 54181),

Gene: Kahlid\_81 Start: 53924, Stop: 54220, Start Num: 56

Candidate Starts for Kahlid\_81:

(Start: 56 @53924 has 33 MA's), (Start: 73 @53984 has 19 MA's), (85, 54029), (88, 54041), (97, 54077), (108, 54131), (109, 54134),

Gene: Kanye\_90 Start: 56281, Stop: 56541, Start Num: 51

Candidate Starts for Kanye\_90:

(Start: 51 @56281 has 123 MA's), (61, 56302), (81, 56377), (98, 56446), (113, 56512),

Gene: Kersh\_61 Start: 42278, Stop: 42559, Start Num: 26

Candidate Starts for Kersh\_61:

(18, 42251), (Start: 26 @42278 has 97 MA's), (41, 42302), (57, 42317), (71, 42362), (Start: 73 @42374 has 19 MA's), (104, 42488), (107, 42500), (121, 42551),

Gene: Keshu\_55 Start: 37986, Stop: 38255, Start Num: 40

Candidate Starts for Keshu\_55:

(6, 37746), (Start: 40 @37986 has 8 MA's), (Start: 58 @38010 has 4 MA's), (89, 38130), (104, 38184),

Gene: KiSi\_55 Start: 38687, Stop: 38956, Start Num: 50

Candidate Starts for KiSi\_55:

(Start: 46 @38681 has 120 MA's), (Start: 50 @38687 has 2 MA's), (69, 38729), (Start: 73 @38753 has 19 MA's), (100, 38861), (123, 38945),

Gene: Kimchi\_97 Start: 56801, Stop: 57061, Start Num: 51

Candidate Starts for Kimchi\_97:

(Start: 51 @56801 has 123 MA's), (61, 56822), (81, 56897), (98, 56966), (113, 57032),

Gene: KingMidas\_58 Start: 40097, Stop: 40375, Start Num: 26

Candidate Starts for KingMidas\_58:

(18, 40070), (Start: 26 @40097 has 97 MA's), (72, 40181), (74, 40190), (89, 40253), (94, 40268), (97, 40280), (104, 40304), (107, 40316), (121, 40367),

Gene: Kingsolomon\_77 Start: 53801, Stop: 54070, Start Num: 56

Candidate Starts for Kingsolomon\_77:

(Start: 56 @53801 has 33 MA's), (Start: 63 @53816 has 12 MA's), (97, 53951), (106, 53993), (113, 54029), (121, 54053),

Gene: KirDoubleO7\_77 Start: 53797, Stop: 54084, Start Num: 63  
Candidate Starts for KirDoubleO7\_77:  
(Start: 56 @53782 has 33 MA's), (Start: 63 @53797 has 12 MA's), (97, 53935),

Gene: Kostya\_93 Start: 56799, Stop: 57059, Start Num: 51  
Candidate Starts for Kostya\_93:  
(Start: 51 @56799 has 123 MA's), (61, 56820), (81, 56895), (98, 56964), (113, 57030),

Gene: KristaRAM\_62 Start: 42482, Stop: 42763, Start Num: 26  
Candidate Starts for KristaRAM\_62:  
(18, 42455), (Start: 26 @42482 has 97 MA's), (41, 42506), (57, 42521), (71, 42566), (Start: 73 @42578 has 19 MA's), (94, 42656), (97, 42668), (104, 42692), (107, 42704), (121, 42755),

Gene: Kropertea\_75 Start: 52480, Stop: 52770, Start Num: 58  
Candidate Starts for Kropertea\_75:  
(Start: 58 @52480 has 4 MA's), (69, 52510), (Start: 73 @52534 has 19 MA's), (88, 52591), (89, 52600), (97, 52627), (104, 52657), (109, 52684),

Gene: Krueger\_57 Start: 38145, Stop: 38396, Start Num: 46  
Candidate Starts for Krueger\_57:  
(Start: 46 @38145 has 120 MA's), (Start: 50 @38151 has 2 MA's), (86, 38265), (87, 38271), (89, 38283),

Gene: Krypton555\_80 Start: 54028, Stop: 54342, Start Num: 56  
Candidate Starts for Krypton555\_80:  
(Start: 56 @54028 has 33 MA's), (Start: 63 @54043 has 12 MA's), (88, 54154), (97, 54190), (126, 54322),

Gene: LastHope\_53 Start: 36640, Stop: 36891, Start Num: 54  
Candidate Starts for LastHope\_53:  
(Start: 46 @36628 has 120 MA's), (Start: 54 @36640 has 6 MA's), (69, 36682), (86, 36751), (89, 36769),

Gene: LastJedi\_53 Start: 37230, Stop: 37511, Start Num: 26  
Candidate Starts for LastJedi\_53:  
(18, 37203), (Start: 26 @37230 has 97 MA's), (41, 37254), (57, 37269), (71, 37314), (Start: 73 @37326 has 19 MA's), (94, 37404), (97, 37416), (104, 37440), (107, 37452), (121, 37503),

Gene: LaterM\_51 Start: 38233, Stop: 38496, Start Num: 46  
Candidate Starts for LaterM\_51:  
(Start: 46 @38233 has 120 MA's), (69, 38287), (89, 38374),

Gene: Latretium\_61 Start: 40556, Stop: 40837, Start Num: 26  
Candidate Starts for Latretium\_61:  
(18, 40529), (Start: 26 @40556 has 97 MA's), (41, 40580), (57, 40595), (71, 40640), (Start: 73 @40652 has 19 MA's), (94, 40730), (97, 40742), (104, 40766), (107, 40778), (121, 40829),

Gene: LeBron\_77 Start: 51321, Stop: 51551, Start Num: 73  
Candidate Starts for LeBron\_77:  
(Start: 56 @51246 has 33 MA's), (Start: 63 @51261 has 12 MA's), (Start: 73 @51321 has 19 MA's), (89, 51384), (97, 51411), (124, 51534), (125, 51537),

Gene: LeMond\_55 Start: 38671, Stop: 38940, Start Num: 50

Candidate Starts for LeMond\_55:

(Start: 46 @38665 has 120 MA's), (Start: 50 @38671 has 2 MA's), (69, 38713), (Start: 73 @38737 has 19 MA's), (100, 38845), (123, 38929),

Gene: Leozinho\_58 Start: 39315, Stop: 39593, Start Num: 26

Candidate Starts for Leozinho\_58:

(18, 39288), (Start: 26 @39315 has 97 MA's), (72, 39399), (74, 39408), (89, 39471), (94, 39486), (97, 39498), (104, 39522), (107, 39534), (121, 39585),

Gene: Leperchaun\_51 Start: 37665, Stop: 37943, Start Num: 26

Candidate Starts for Leperchaun\_51:

(18, 37638), (Start: 26 @37665 has 97 MA's), (72, 37749), (74, 37758), (89, 37821), (94, 37836), (97, 37848), (104, 37872), (107, 37884), (121, 37935),

Gene: Lewan\_82 Start: 54036, Stop: 54272, Start Num: 73

Candidate Starts for Lewan\_82:

(Start: 56 @53976 has 33 MA's), (Start: 73 @54036 has 19 MA's), (85, 54081), (88, 54093), (97, 54129), (108, 54183), (109, 54186),

Gene: LilDestine\_80 Start: 53888, Stop: 54124, Start Num: 73

Candidate Starts for LilDestine\_80:

(Start: 56 @53828 has 33 MA's), (Start: 73 @53888 has 19 MA's), (85, 53933), (88, 53945), (97, 53981), (109, 54038),

Gene: LilPharaoh\_46 Start: 36768, Stop: 37037, Start Num: 46

Candidate Starts for LilPharaoh\_46:

(Start: 46 @36768 has 120 MA's), (80, 36864), (95, 36924), (96, 36930), (97, 36933), (104, 36960), (107, 36972), (119, 37026),

Gene: Lilac\_96 Start: 56626, Stop: 56886, Start Num: 51

Candidate Starts for Lilac\_96:

(Start: 51 @56626 has 123 MA's), (61, 56647), (81, 56722), (98, 56791), (113, 56857),

Gene: Lilizi\_94 Start: 56263, Stop: 56523, Start Num: 51

Candidate Starts for Lilizi\_94:

(Start: 51 @56263 has 123 MA's), (61, 56284), (81, 56359), (98, 56428), (113, 56494),

Gene: Lilpickle\_92 Start: 56151, Stop: 56411, Start Num: 51

Candidate Starts for Lilpickle\_92:

(Start: 51 @56151 has 123 MA's), (61, 56172), (81, 56247), (98, 56316), (113, 56382),

Gene: LindNT\_49 Start: 37556, Stop: 37819, Start Num: 46

Candidate Starts for LindNT\_49:

(Start: 46 @37556 has 120 MA's), (69, 37610), (89, 37697),

Gene: Lishka\_37 Start: 25254, Stop: 25553, Start Num: 53

Candidate Starts for Lishka\_37:

(4, 24966), (7, 25011), (24, 25185), (Start: 53 @25254 has 10 MA's), (97, 25416),

Gene: LiyuLake\_78 Start: 53870, Stop: 54157, Start Num: 63

Candidate Starts for LiyuLake\_78:

(Start: 56 @53855 has 33 MA's), (Start: 63 @53870 has 12 MA's), (97, 54008),

Gene: Lizziana\_65 Start: 40983, Stop: 41264, Start Num: 26

Candidate Starts for Lizziana\_65:

(18, 40956), (Start: 26 @40983 has 97 MA's), (41, 41007), (57, 41022), (71, 41067), (Start: 73 @41079 has 19 MA's), (94, 41157), (97, 41169), (104, 41193), (107, 41205), (121, 41256),

Gene: Llama\_64 Start: 42394, Stop: 42672, Start Num: 26

Candidate Starts for Llama\_64:

(18, 42367), (Start: 26 @42394 has 97 MA's), (72, 42478), (74, 42487), (89, 42550), (94, 42565), (97, 42577), (104, 42601), (107, 42613), (121, 42664),

Gene: Llorens\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for Llorens\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: Loadrie\_80 Start: 54063, Stop: 54299, Start Num: 73

Candidate Starts for Loadrie\_80:

(Start: 56 @54003 has 33 MA's), (Start: 73 @54063 has 19 MA's), (85, 54108), (88, 54120), (97, 54156), (108, 54210), (109, 54213),

Gene: Lolly9\_78 Start: 53913, Stop: 54164, Start Num: 63

Candidate Starts for Lolly9\_78:

(Start: 56 @53898 has 33 MA's), (Start: 63 @53913 has 12 MA's), (106, 54090), (121, 54150),

Gene: Lolly9\_79 Start: 54161, Stop: 54481, Start Num: 23

Candidate Starts for Lolly9\_79:

(Start: 23 @54161 has 5 MA's), (32, 54182), (Start: 51 @54215 has 123 MA's), (89, 54344), (90, 54350), (97, 54371), (103, 54398), (106, 54416), (113, 54452),

Gene: LunaBlu\_61 Start: 40560, Stop: 40838, Start Num: 26

Candidate Starts for LunaBlu\_61:

(18, 40533), (Start: 26 @40560 has 97 MA's), (72, 40644), (74, 40653), (89, 40716), (94, 40731), (97, 40743), (104, 40767), (107, 40779), (121, 40830),

Gene: LunaStella\_58 Start: 39407, Stop: 39685, Start Num: 26

Candidate Starts for LunaStella\_58:

(14, 39371), (Start: 26 @39407 has 97 MA's), (Start: 36 @39416 has 1 MA's), (69, 39473), (72, 39491), (74, 39500), (89, 39563), (94, 39578), (97, 39590), (104, 39614), (107, 39626), (121, 39677),

Gene: Lunahalos\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for Lunahalos\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: MAckerman\_76 Start: 51240, Stop: 51545, Start Num: 56

Candidate Starts for MAckerman\_76:

(Start: 56 @51240 has 33 MA's), (Start: 63 @51255 has 12 MA's), (Start: 73 @51315 has 19 MA's), (89, 51378), (97, 51405), (124, 51528), (125, 51531),

Gene: MISSy\_94 Start: 56379, Stop: 56639, Start Num: 51

Candidate Starts for MISSy\_94:

(Start: 51 @56379 has 123 MA's), (61, 56400), (81, 56475), (98, 56544), (113, 56610),

Gene: MPhalcon\_94 Start: 56372, Stop: 56632, Start Num: 51



Candidate Starts for MPhalcon\_94:

(Start: 51 @56372 has 123 MA's), (61, 56393), (81, 56468), (98, 56537), (113, 56603),

Gene: MacKat\_45 Start: 32871, Stop: 33134, Start Num: 46

Candidate Starts for MacKat\_45:

(Start: 46 @32871 has 120 MA's), (89, 33012),

Gene: MacnCheese\_55 Start: 38928, Stop: 39194, Start Num: 40

Candidate Starts for MacnCheese\_55:

(6, 38688), (Start: 40 @38928 has 8 MA's), (Start: 58 @38949 has 4 MA's), (Start: 63 @38955 has 12 MA's), (89, 39069), (100, 39114), (104, 39123),

Gene: MadamMonkfish\_93 Start: 55878, Stop: 56138, Start Num: 51

Candidate Starts for MadamMonkfish\_93:

(Start: 51 @55878 has 123 MA's), (61, 55899), (81, 55974), (98, 56043), (113, 56109),

Gene: Mahavrat\_57 Start: 39385, Stop: 39666, Start Num: 26

Candidate Starts for Mahavrat\_57:

(18, 39358), (Start: 26 @39385 has 97 MA's), (41, 39409), (57, 39424), (71, 39469), (Start: 73 @39481 has 19 MA's), (94, 39559), (97, 39571), (104, 39595), (107, 39607), (121, 39658),

Gene: Manda\_95 Start: 57955, Stop: 58215, Start Num: 51

Candidate Starts for Manda\_95:

(Start: 51 @57955 has 123 MA's), (61, 57976), (81, 58051), (98, 58120), (113, 58186),

Gene: Mandlovu\_55 Start: 37995, Stop: 38276, Start Num: 26

Candidate Starts for Mandlovu\_55:

(18, 37968), (Start: 26 @37995 has 97 MA's), (41, 38019), (57, 38034), (71, 38079), (Start: 73 @38091 has 19 MA's), (94, 38169), (97, 38181), (104, 38205), (107, 38217), (121, 38268),

Gene: Maravista\_60 Start: 41432, Stop: 41713, Start Num: 26

Candidate Starts for Maravista\_60:

(18, 41405), (Start: 26 @41432 has 97 MA's), (41, 41456), (57, 41471), (71, 41516), (Start: 73 @41528 has 19 MA's), (94, 41606), (97, 41618), (104, 41642), (107, 41654), (121, 41705),

Gene: Marcoliusprime\_54 Start: 39559, Stop: 39792, Start Num: 53

Candidate Starts for Marcoliusprime\_54:

(Start: 53 @39559 has 10 MA's), (Start: 54 @39562 has 6 MA's), (Start: 58 @39568 has 4 MA's), (61, 39574), (86, 39664), (87, 39670), (104, 39733),

Gene: MarkPhew\_54 Start: 38124, Stop: 38393, Start Num: 46

Candidate Starts for MarkPhew\_54:

(Start: 46 @38124 has 120 MA's), (66, 38151), (69, 38166), (Start: 73 @38190 has 19 MA's), (100, 38298), (123, 38382),

Gene: Marshawn\_53 Start: 38262, Stop: 38522, Start Num: 46

Candidate Starts for Marshawn\_53:

(2, 37941), (6, 38010), (8, 38106), (Start: 46 @38262 has 120 MA's), (70, 38319), (97, 38427), (110, 38490),

Gene: Marshmallow\_91 Start: 57427, Stop: 57687, Start Num: 51

Candidate Starts for Marshmallow\_91:

(Start: 51 @57427 has 123 MA's), (61, 57448), (81, 57523), (98, 57592), (113, 57658),

Gene: Martik\_59 Start: 39936, Stop: 40217, Start Num: 26

Candidate Starts for Martik\_59:

(18, 39909), (Start: 26 @39936 has 97 MA's), (41, 39960), (57, 39975), (71, 40020), (Start: 73 @40032 has 19 MA's), (94, 40110), (97, 40122), (104, 40146), (107, 40158), (121, 40209),

Gene: Mattes\_63 Start: 41502, Stop: 41783, Start Num: 26

Candidate Starts for Mattes\_63:

(18, 41475), (Start: 26 @41502 has 97 MA's), (41, 41526), (57, 41541), (71, 41586), (Start: 73 @41598 has 19 MA's), (94, 41676), (97, 41688), (104, 41712), (107, 41724), (121, 41775),

Gene: Maxxinista\_96 Start: 56793, Stop: 57053, Start Num: 51

Candidate Starts for Maxxinista\_96:

(Start: 51 @56793 has 123 MA's), (61, 56814), (81, 56889), (98, 56958), (113, 57024),

Gene: McMater\_53 Start: 38285, Stop: 38548, Start Num: 46

Candidate Starts for McMater\_53:

(1, 37805), (2, 37961), (6, 38030), (Start: 46 @38285 has 120 MA's), (82, 38387), (86, 38405), (89, 38423), (104, 38477), (110, 38513), (119, 38537),

Gene: Mdavu\_47 Start: 37029, Stop: 37298, Start Num: 46

Candidate Starts for Mdavu\_47:

(Start: 46 @37029 has 120 MA's), (80, 37125), (95, 37185), (96, 37191), (97, 37194), (104, 37221), (107, 37233), (119, 37287),

Gene: MeaningOfLife\_51 Start: 38280, Stop: 38543, Start Num: 46

Candidate Starts for MeaningOfLife\_51:

(Start: 46 @38280 has 120 MA's), (89, 38421),

Gene: Megabear\_55 Start: 44928, Stop: 45209, Start Num: 38

Candidate Starts for Megabear\_55:

(Start: 38 @44928 has 9 MA's), (68, 44988), (84, 45045), (102, 45117), (118, 45189),

Gene: Megsy\_52 Start: 37615, Stop: 37878, Start Num: 46

Candidate Starts for Megsy\_52:

(Start: 46 @37615 has 120 MA's), (69, 37669), (89, 37756),

Gene: Mendokysei\_39 Start: 30983, Stop: 31297, Start Num: 46

Candidate Starts for Mendokysei\_39:

(Start: 46 @30983 has 120 MA's), (Start: 54 @30998 has 6 MA's), (69, 31037),

Gene: Miley16\_81 Start: 53918, Stop: 54214, Start Num: 56

Candidate Starts for Miley16\_81:

(Start: 56 @53918 has 33 MA's), (Start: 73 @53978 has 19 MA's), (85, 54023), (88, 54035), (97, 54071), (108, 54125), (109, 54128),

Gene: Milly\_54 Start: 39532, Stop: 39765, Start Num: 53

Candidate Starts for Milly\_54:

(Start: 53 @39532 has 10 MA's), (Start: 54 @39535 has 6 MA's), (Start: 58 @39541 has 4 MA's), (61, 39547), (86, 39637), (87, 39643), (104, 39706),

Gene: Mindy\_92 Start: 55700, Stop: 55960, Start Num: 51

Candidate Starts for Mindy\_92:

(Start: 51 @55700 has 123 MA's), (61, 55721), (81, 55796), (98, 55865), (113, 55931),

Gene: MiniLon\_83 Start: 53899, Stop: 54165, Start Num: 56

Candidate Starts for MiniLon\_83:

(Start: 56 @53899 has 33 MA's), (Start: 63 @53914 has 12 MA's), (106, 54091), (121, 54151),

Gene: MiniLon\_84 Start: 54162, Stop: 54482, Start Num: 23

Candidate Starts for MiniLon\_84:

(Start: 23 @54162 has 5 MA's), (32, 54183), (Start: 51 @54216 has 123 MA's), (89, 54345), (90, 54351), (97, 54372), (103, 54399), (106, 54417), (113, 54453),

Gene: MiniMac\_83 Start: 53909, Stop: 54160, Start Num: 63

Candidate Starts for MiniMac\_83:

(Start: 56 @53894 has 33 MA's), (Start: 63 @53909 has 12 MA's), (106, 54086), (121, 54146),

Gene: MiniMac\_84 Start: 54157, Stop: 54477, Start Num: 23

Candidate Starts for MiniMac\_84:

(Start: 23 @54157 has 5 MA's), (32, 54178), (Start: 51 @54211 has 123 MA's), (89, 54340), (90, 54346), (97, 54367), (103, 54394), (106, 54412), (113, 54448),

Gene: MinionDave\_58 Start: 40283, Stop: 40564, Start Num: 26

Candidate Starts for MinionDave\_58:

(Start: 26 @40283 has 97 MA's), (41, 40307), (57, 40322), (71, 40367), (Start: 73 @40379 has 19 MA's), (94, 40457), (97, 40469), (104, 40493), (107, 40505), (121, 40556),

Gene: Miniwave\_88 Start: 56195, Stop: 56455, Start Num: 51

Candidate Starts for Miniwave\_88:

(Start: 51 @56195 has 123 MA's), (61, 56216), (81, 56291), (98, 56360), (113, 56426),

Gene: Misfit\_94 Start: 57669, Stop: 57929, Start Num: 51

Candidate Starts for Misfit\_94:

(Start: 51 @57669 has 123 MA's), (61, 57690), (81, 57765), (98, 57834), (113, 57900),

Gene: MisterCuddles\_57 Start: 39742, Stop: 40020, Start Num: 26

Candidate Starts for MisterCuddles\_57:

(18, 39715), (Start: 26 @39742 has 97 MA's), (72, 39826), (74, 39835), (89, 39898), (94, 39913), (97, 39925), (104, 39949), (107, 39961), (121, 40012),

Gene: MkaliMitinis3\_82 Start: 53987, Stop: 54283, Start Num: 56

Candidate Starts for MkaliMitinis3\_82:

(Start: 56 @53987 has 33 MA's), (Start: 73 @54047 has 19 MA's), (85, 54092), (88, 54104), (97, 54140), (108, 54194), (109, 54197),

Gene: Modragons\_63 Start: 42384, Stop: 42662, Start Num: 26

Candidate Starts for Modragons\_63:

(18, 42357), (Start: 26 @42384 has 97 MA's), (72, 42468), (74, 42477), (89, 42540), (94, 42555), (97, 42567), (104, 42591), (107, 42603), (121, 42654),

Gene: Moldemort\_96 Start: 56336, Stop: 56596, Start Num: 51

Candidate Starts for Moldemort\_96:

(Start: 51 @56336 has 123 MA's), (61, 56357), (81, 56432), (98, 56501), (113, 56567),

Gene: Moleficent\_7 Start: 5213, Stop: 4956, Start Num: 59

Candidate Starts for Moleficent\_7:

(Start: 28 @5273 has 6 MA's), (Start: 59 @5213 has 10 MA's), (89, 5099), (108, 5024), (120, 4979),

Gene: Moostard\_77 Start: 53811, Stop: 54065, Start Num: 63

Candidate Starts for Moostard\_77:

(Start: 56 @53796 has 33 MA's), (Start: 63 @53811 has 12 MA's), (97, 53946), (106, 53988), (113, 54024), (121, 54048),

Gene: Morrill\_7 Start: 5168, Stop: 4911, Start Num: 59

Candidate Starts for Morrill\_7:

(Start: 28 @5228 has 6 MA's), (Start: 59 @5168 has 10 MA's), (79, 5096), (89, 5054), (108, 4979), (120, 4934),

Gene: Mosby\_89 Start: 55952, Stop: 56212, Start Num: 51

Candidate Starts for Mosby\_89:

(Start: 51 @55952 has 123 MA's), (61, 55973), (81, 56048), (98, 56117), (113, 56183),

Gene: Mozy\_68 Start: 42517, Stop: 42798, Start Num: 26

Candidate Starts for Mozy\_68:

(18, 42490), (Start: 26 @42517 has 97 MA's), (41, 42541), (57, 42556), (71, 42601), (Start: 73 @42613 has 19 MA's), (94, 42691), (97, 42703), (104, 42727), (107, 42739), (121, 42790),

Gene: MsGreen\_79 Start: 53793, Stop: 54062, Start Num: 56

Candidate Starts for MsGreen\_79:

(Start: 56 @53793 has 33 MA's), (Start: 63 @53808 has 12 MA's), (97, 53943), (106, 53985), (113, 54021), (121, 54045),

Gene: Mufasa\_54 Start: 39116, Stop: 39349, Start Num: 54

Candidate Starts for Mufasa\_54:

(Start: 53 @39113 has 10 MA's), (Start: 54 @39116 has 6 MA's), (Start: 58 @39122 has 4 MA's), (61, 39128), (86, 39218), (87, 39224), (104, 39287), (119, 39338),

Gene: Murica\_96 Start: 57595, Stop: 57855, Start Num: 51

Candidate Starts for Murica\_96:

(Start: 51 @57595 has 123 MA's), (61, 57616), (81, 57691), (98, 57760), (113, 57826),

Gene: Murphy\_93 Start: 57036, Stop: 57296, Start Num: 51

Candidate Starts for Murphy\_93:

(Start: 51 @57036 has 123 MA's), (61, 57057), (81, 57132), (98, 57201), (113, 57267),

Gene: Murucutumbu\_51 Start: 38326, Stop: 38589, Start Num: 46

Candidate Starts for Murucutumbu\_51:

(6, 38074), (Start: 46 @38326 has 120 MA's), (69, 38380), (89, 38467),

Gene: Mynx\_51 Start: 37672, Stop: 37935, Start Num: 46

Candidate Starts for Mynx\_51:

(Start: 46 @37672 has 120 MA's), (89, 37813),

Gene: Myrale\_93 Start: 57158, Stop: 57418, Start Num: 51

Candidate Starts for Myrale\_93:

(Start: 51 @57158 has 123 MA's), (61, 57179), (81, 57254), (98, 57323), (113, 57389),

Gene: Nairb\_40 Start: 31446, Stop: 31703, Start Num: 46

Candidate Starts for Nairb\_40:

(3, 31170), (5, 31191), (Start: 46 @31446 has 120 MA's), (Start: 73 @31530 has 19 MA's), (97, 31620),

Gene: Nala\_95 Start: 56881, Stop: 57141, Start Num: 51

Candidate Starts for Nala\_95:

(Start: 51 @56881 has 123 MA's), (61, 56902), (81, 56977), (98, 57046), (113, 57112),

Gene: NelitzaMV\_91 Start: 56241, Stop: 56501, Start Num: 51

Candidate Starts for NelitzaMV\_91:

(Start: 51 @56241 has 123 MA's), (61, 56262), (81, 56337), (98, 56406), (113, 56472),

Gene: Nergal\_48 Start: 36024, Stop: 36272, Start Num: 46

Candidate Starts for Nergal\_48:

(Start: 46 @36024 has 120 MA's), (86, 36138), (89, 36156), (98, 36189), (110, 36246),

Gene: Netyap\_82 Start: 53979, Stop: 54215, Start Num: 73

Candidate Starts for Netyap\_82:

(Start: 56 @53919 has 33 MA's), (Start: 73 @53979 has 19 MA's), (85, 54024), (88, 54036), (97, 54072), (108, 54126), (109, 54129),

Gene: Nibb\_53 Start: 37813, Stop: 38082, Start Num: 46

Candidate Starts for Nibb\_53:

(Start: 46 @37813 has 120 MA's), (66, 37840), (100, 37987), (123, 38071),

Gene: Nicholas\_77 Start: 53801, Stop: 54070, Start Num: 56

Candidate Starts for Nicholas\_77:

(Start: 56 @53801 has 33 MA's), (Start: 63 @53816 has 12 MA's), (97, 53951), (106, 53993), (113, 54029), (121, 54053),

Gene: Nicholasp3\_81 Start: 53813, Stop: 54049, Start Num: 73

Candidate Starts for Nicholasp3\_81:

(Start: 56 @53753 has 33 MA's), (Start: 73 @53813 has 19 MA's), (85, 53858), (88, 53870), (97, 53906), (108, 53960), (109, 53963),

Gene: Nikao\_49 Start: 39653, Stop: 39922, Start Num: 46

Candidate Starts for Nikao\_49:

(Start: 46 @39653 has 120 MA's), (80, 39749), (95, 39809), (96, 39815), (97, 39818), (104, 39845), (107, 39857), (119, 39911),

Gene: Niklas\_53 Start: 38346, Stop: 38609, Start Num: 46

Candidate Starts for Niklas\_53:

(1, 37866), (2, 38022), (6, 38091), (Start: 46 @38346 has 120 MA's), (82, 38448), (86, 38466), (89, 38484), (104, 38538), (110, 38574), (119, 38598),

Gene: Nimrod\_94 Start: 57584, Stop: 57844, Start Num: 51

Candidate Starts for Nimrod\_94:

(Start: 51 @57584 has 123 MA's), (61, 57605), (81, 57680), (98, 57749), (113, 57815),

Gene: Nitzel\_57 Start: 39291, Stop: 39521, Start Num: 26

Candidate Starts for Nitzel\_57:

(18, 39264), (Start: 26 @39291 has 97 MA's), (72, 39375), (89, 39444), (97, 39471), (104, 39495),

Gene: NoSleep\_94 Start: 56218, Stop: 56478, Start Num: 51

Candidate Starts for NoSleep\_94:

(Start: 51 @56218 has 123 MA's), (61, 56239), (81, 56314), (98, 56383), (113, 56449),

Gene: November\_53 Start: 38195, Stop: 38449, Start Num: 48

Candidate Starts for November\_53:

(2, 37877), (6, 37946), (8, 38042), (Start: 48 @38195 has 8 MA's), (Start: 73 @38261 has 19 MA's), (89, 38324), (100, 38369),

Gene: Nutello\_46 Start: 37040, Stop: 37309, Start Num: 46

Candidate Starts for Nutello\_46:

(Start: 46 @37040 has 120 MA's), (80, 37136), (95, 37196), (96, 37202), (97, 37205), (104, 37232), (107, 37244), (119, 37298),

Gene: Ochi17\_62 Start: 41991, Stop: 42269, Start Num: 26

Candidate Starts for Ochi17\_62:

(18, 41964), (Start: 26 @41991 has 97 MA's), (72, 42075), (74, 42084), (89, 42147), (94, 42162), (97, 42174), (104, 42198), (107, 42210), (121, 42261),

Gene: OfUltron\_64 Start: 42540, Stop: 42818, Start Num: 26

Candidate Starts for OfUltron\_64:

(18, 42513), (Start: 26 @42540 has 97 MA's), (72, 42624), (74, 42633), (89, 42696), (94, 42711), (97, 42723), (104, 42747), (107, 42759), (121, 42810),

Gene: OhShagHennessy\_75 Start: 51278, Stop: 51583, Start Num: 56

Candidate Starts for OhShagHennessy\_75:

(Start: 56 @51278 has 33 MA's), (Start: 63 @51293 has 12 MA's), (Start: 73 @51353 has 19 MA's), (89, 51416), (97, 51443), (108, 51497), (124, 51566), (125, 51569),

Gene: Oksu\_63 Start: 42803, Stop: 43081, Start Num: 26

Candidate Starts for Oksu\_63:

(18, 42776), (Start: 26 @42803 has 97 MA's), (72, 42887), (74, 42896), (89, 42959), (94, 42974), (97, 42986), (104, 43010), (107, 43022), (121, 43073),

Gene: OlympiaSaint\_61 Start: 40444, Stop: 40725, Start Num: 26

Candidate Starts for OlympiaSaint\_61:

(18, 40417), (Start: 26 @40444 has 97 MA's), (41, 40468), (57, 40483), (71, 40528), (Start: 73 @40540 has 19 MA's), (94, 40618), (97, 40630), (104, 40654), (107, 40666), (121, 40717),

Gene: OrionPax\_92 Start: 55969, Stop: 56229, Start Num: 51

Candidate Starts for OrionPax\_92:

(Start: 51 @55969 has 123 MA's), (61, 55990), (81, 56065), (98, 56134), (113, 56200),

Gene: Oscar\_55 Start: 38567, Stop: 38842, Start Num: 46

Candidate Starts for Oscar\_55:

(Start: 46 @38567 has 120 MA's), (Start: 50 @38573 has 2 MA's), (69, 38615), (Start: 73 @38639 has 19 MA's), (100, 38747), (123, 38831),

Gene: OwlsT2W\_59 Start: 40166, Stop: 40444, Start Num: 26

Candidate Starts for OwlsT2W\_59:

(18, 40139), (Start: 26 @40166 has 97 MA's), (72, 40250), (89, 40322), (94, 40337), (97, 40349), (104, 40373), (107, 40385), (121, 40436),

Gene: PHappiness\_54 Start: 38211, Stop: 38489, Start Num: 26

Candidate Starts for PHappiness\_54:  
(18, 38184), (Start: 26 @38211 has 97 MA's), (72, 38295), (74, 38304), (89, 38367), (94, 38382), (97, 38394), (104, 38418), (107, 38430), (121, 38481),

Gene: PR\_55 Start: 45532, Stop: 45813, Start Num: 38  
Candidate Starts for PR\_55:  
(Start: 38 @45532 has 9 MA's), (68, 45592), (84, 45649), (102, 45721), (118, 45793),

Gene: PYPDinur\_78 Start: 52985, Stop: 53275, Start Num: 58  
Candidate Starts for PYPDinur\_78:  
(Start: 58 @52985 has 4 MA's), (83, 53069), (85, 53084), (88, 53096), (97, 53132), (100, 53150), (104, 53162), (109, 53189),

Gene: Pacc40\_53 Start: 38285, Stop: 38563, Start Num: 26  
Candidate Starts for Pacc40\_53:  
(18, 38258), (Start: 26 @38285 has 97 MA's), (72, 38369), (74, 38378), (89, 38441), (94, 38456), (97, 38468), (104, 38492), (107, 38504), (121, 38555),

Gene: Padfoot\_50 Start: 37668, Stop: 37931, Start Num: 46  
Candidate Starts for Padfoot\_50:  
(Start: 46 @37668 has 120 MA's), (89, 37809),

Gene: Padpat\_52 Start: 37347, Stop: 37610, Start Num: 46  
Candidate Starts for Padpat\_52:  
(Start: 46 @37347 has 120 MA's), (89, 37488),

Gene: Palpatine\_95 Start: 57622, Stop: 57882, Start Num: 51  
Candidate Starts for Palpatine\_95:  
(Start: 51 @57622 has 123 MA's), (61, 57643), (81, 57718), (98, 57787), (113, 57853),

Gene: PapayaSalad\_40 Start: 27840, Stop: 28139, Start Num: 53  
Candidate Starts for PapayaSalad\_40:  
(4, 27552), (7, 27597), (24, 27771), (Start: 53 @27840 has 10 MA's), (97, 28002),

Gene: Paperbeatsrock\_92 Start: 56873, Stop: 57133, Start Num: 51  
Candidate Starts for Paperbeatsrock\_92:  
(Start: 51 @56873 has 123 MA's), (61, 56894), (81, 56969), (98, 57038), (113, 57104),

Gene: Pat3\_90 Start: 55071, Stop: 55331, Start Num: 51  
Candidate Starts for Pat3\_90:  
(9, 54933), (Start: 51 @55071 has 123 MA's), (61, 55092), (98, 55236), (113, 55302),

Gene: Peanam\_53 Start: 38304, Stop: 38567, Start Num: 46  
Candidate Starts for Peanam\_53:  
(1, 37824), (2, 37980), (6, 38049), (Start: 46 @38304 has 120 MA's), (82, 38406), (86, 38424), (89, 38442), (104, 38496), (110, 38532), (119, 38556),

Gene: Peel\_50 Start: 37473, Stop: 37736, Start Num: 46  
Candidate Starts for Peel\_50:  
(Start: 46 @37473 has 120 MA's), (89, 37614),

Gene: Petra64142\_98 Start: 58076, Stop: 58336, Start Num: 51  
Candidate Starts for Petra64142\_98:

(9, 57938), (Start: 51 @58076 has 123 MA's), (61, 58097), (98, 58241), (113, 58307),

Gene: Phaja\_91 Start: 56699, Stop: 56959, Start Num: 51

Candidate Starts for Phaja\_91:

(Start: 51 @56699 has 123 MA's), (61, 56720), (81, 56795), (98, 56864), (113, 56930),

Gene: Pharb\_50 Start: 36682, Stop: 36942, Start Num: 40

Candidate Starts for Pharb\_50:

(1, 36217), (6, 36442), (Start: 40 @36682 has 8 MA's), (Start: 58 @36697 has 4 MA's), (104, 36871),

Gene: Pharsalus\_90 Start: 56673, Stop: 56933, Start Num: 51

Candidate Starts for Pharsalus\_90:

(Start: 51 @56673 has 123 MA's), (61, 56694), (81, 56769), (98, 56838), (113, 56904),

Gene: Phasih\_57 Start: 40355, Stop: 40633, Start Num: 26

Candidate Starts for Phasih\_57:

(18, 40328), (Start: 26 @40355 has 97 MA's), (72, 40439), (74, 40448), (89, 40511), (94, 40526), (97, 40538), (104, 40562), (107, 40574), (121, 40625),

Gene: PhatBacter\_97 Start: 57367, Stop: 57627, Start Num: 51

Candidate Starts for PhatBacter\_97:

(Start: 51 @57367 has 123 MA's), (61, 57388), (81, 57463), (98, 57532), (113, 57598),

Gene: Phaux\_96 Start: 57909, Stop: 58169, Start Num: 51

Candidate Starts for Phaux\_96:

(Start: 51 @57909 has 123 MA's), (61, 57930), (81, 58005), (98, 58074), (113, 58140),

Gene: PhelpsODU\_53 Start: 37175, Stop: 37432, Start Num: 46

Candidate Starts for PhelpsODU\_53:

(Start: 46 @37175 has 120 MA's), (60, 37196), (Start: 73 @37250 has 19 MA's), (89, 37313), (92, 37322), (110, 37400),

Gene: Phrank\_54 Start: 37132, Stop: 37389, Start Num: 46

Candidate Starts for Phrank\_54:

(Start: 46 @37132 has 120 MA's), (60, 37153), (Start: 73 @37207 has 19 MA's), (89, 37270), (92, 37279), (110, 37357),

Gene: PhriedRice\_7 Start: 5180, Stop: 4923, Start Num: 59

Candidate Starts for PhriedRice\_7:

(Start: 28 @5240 has 6 MA's), (Start: 59 @5180 has 10 MA's), (89, 5066), (108, 4991), (120, 4946),

Gene: Phrux\_91 Start: 56185, Stop: 56445, Start Num: 51

Candidate Starts for Phrux\_91:

(Start: 51 @56185 has 123 MA's), (61, 56206), (81, 56281), (98, 56350), (113, 56416),

Gene: Piatt\_50 Start: 37668, Stop: 37931, Start Num: 46

Candidate Starts for Piatt\_50:

(Start: 46 @37668 has 120 MA's), (89, 37809),

Gene: Pippy\_57 Start: 38794, Stop: 39075, Start Num: 26

Candidate Starts for Pippy\_57:

(18, 38767), (Start: 26 @38794 has 97 MA's), (41, 38818), (57, 38833), (71, 38878), (Start: 73 @38890 has 19 MA's), (94, 38968), (97, 38980), (104, 39004), (107, 39016), (121, 39067),



Gene: Pixie\_52 Start: 37451, Stop: 37720, Start Num: 40

Candidate Starts for Pixie\_52:

(6, 37211), (Start: 40 @37451 has 8 MA's), (Start: 58 @37475 has 4 MA's), (89, 37595), (104, 37649),

Gene: Plumbus\_61 Start: 40255, Stop: 40533, Start Num: 26

Candidate Starts for Plumbus\_61:

(18, 40228), (Start: 26 @40255 has 97 MA's), (72, 40339), (74, 40348), (89, 40411), (94, 40426), (97, 40438), (104, 40462), (107, 40474), (121, 40525),

Gene: Poenanya\_59 Start: 41112, Stop: 41390, Start Num: 26

Candidate Starts for Poenanya\_59:

(18, 41085), (Start: 26 @41112 has 97 MA's), (72, 41196), (74, 41205), (89, 41268), (94, 41283), (97, 41295), (104, 41319), (107, 41331), (121, 41382),

Gene: Pokerus\_49 Start: 37394, Stop: 37657, Start Num: 46

Candidate Starts for Pokerus\_49:

(Start: 46 @37394 has 120 MA's), (69, 37448), (89, 37535),

Gene: Policronamos\_97 Start: 57640, Stop: 57900, Start Num: 51

Candidate Starts for Policronamos\_97:

(Start: 51 @57640 has 123 MA's), (61, 57661), (81, 57736), (98, 57805), (113, 57871),

Gene: Polka14\_57 Start: 39308, Stop: 39586, Start Num: 26

Candidate Starts for Polka14\_57:

(18, 39281), (Start: 26 @39308 has 97 MA's), (72, 39392), (74, 39401), (89, 39464), (94, 39479), (97, 39491), (104, 39515), (107, 39527), (121, 39578),

Gene: Pochiewood\_76 Start: 52583, Stop: 52888, Start Num: 56

Candidate Starts for Pochiewood\_76:

(Start: 56 @52583 has 33 MA's), (Start: 63 @52598 has 12 MA's), (Start: 73 @52658 has 19 MA's), (89, 52721), (97, 52748), (108, 52802), (124, 52871), (125, 52874),

Gene: Porky\_92 Start: 55785, Stop: 56045, Start Num: 51

Candidate Starts for Porky\_92:

(Start: 51 @55785 has 123 MA's), (61, 55806), (81, 55881), (98, 55950), (113, 56016),

Gene: Prithvi\_51 Start: 37556, Stop: 37819, Start Num: 46

Candidate Starts for Prithvi\_51:

(Start: 46 @37556 has 120 MA's), (69, 37610), (89, 37697),

Gene: Pumpkin\_97 Start: 57561, Stop: 57821, Start Num: 51

Candidate Starts for Pumpkin\_97:

(Start: 51 @57561 has 123 MA's), (61, 57582), (81, 57657), (98, 57726), (113, 57792),

Gene: Pupper\_53 Start: 18336, Stop: 18617, Start Num: 22

Candidate Starts for Pupper\_53:

(Start: 22 @18336 has 3 MA's), (Start: 38 @18372 has 9 MA's), (Start: 73 @18447 has 19 MA's),

Gene: Quallification\_94 Start: 57281, Stop: 57541, Start Num: 51

Candidate Starts for Quallification\_94:

(Start: 51 @57281 has 123 MA's), (61, 57302), (81, 57377), (98, 57446), (113, 57512),

Gene: Quby\_79 Start: 52316, Stop: 52600, Start Num: 58  
Candidate Starts for Quby\_79:  
(Start: 58 @52316 has 4 MA's), (85, 52415), (88, 52427), (97, 52463), (100, 52481), (109, 52520),

Gene: QuincyRose\_49 Start: 37786, Stop: 38049, Start Num: 46  
Candidate Starts for QuincyRose\_49:  
(Start: 46 @37786 has 120 MA's), (89, 37927),

Gene: Radiance\_58 Start: 40047, Stop: 40328, Start Num: 26  
Candidate Starts for Radiance\_58:  
(18, 40020), (Start: 26 @40047 has 97 MA's), (41, 40071), (57, 40086), (71, 40131), (Start: 73 @40143 has 19 MA's), (94, 40221), (97, 40233), (104, 40257), (107, 40269), (121, 40320),

Gene: Rakim\_94 Start: 56610, Stop: 56870, Start Num: 51  
Candidate Starts for Rakim\_94:  
(Start: 51 @56610 has 123 MA's), (61, 56631), (81, 56706), (98, 56775), (113, 56841),

Gene: Ramen\_51 Start: 37358, Stop: 37621, Start Num: 46  
Candidate Starts for Ramen\_51:  
(Start: 46 @37358 has 120 MA's), (89, 37499),

Gene: Rapunzel97\_51 Start: 37354, Stop: 37617, Start Num: 46  
Candidate Starts for Rapunzel97\_51:  
(Start: 46 @37354 has 120 MA's), (89, 37495),

Gene: RedBird\_57 Start: 39343, Stop: 39624, Start Num: 26  
Candidate Starts for RedBird\_57:  
(18, 39316), (Start: 26 @39343 has 97 MA's), (72, 39427), (74, 39436), (89, 39499), (94, 39514), (97, 39526), (104, 39550), (107, 39562),

Gene: RedWattleHog\_171 Start: 110518, Stop: 110832, Start Num: 23  
Candidate Starts for RedWattleHog\_171:  
(Start: 23 @110518 has 5 MA's), (Start: 26 @110527 has 97 MA's), (32, 110536), (90, 110707), (112, 110800),

Gene: Renaud18\_65 Start: 40812, Stop: 41093, Start Num: 26  
Candidate Starts for Renaud18\_65:  
(17, 40776), (Start: 26 @40812 has 97 MA's), (Start: 36 @40827 has 1 MA's), (57, 40851), (71, 40896), (Start: 73 @40908 has 19 MA's), (104, 41022), (107, 41034), (121, 41085),

Gene: Richo\_53 Start: 38285, Stop: 38548, Start Num: 46  
Candidate Starts for Richo\_53:  
(1, 37805), (2, 37961), (6, 38030), (Start: 46 @38285 has 120 MA's), (82, 38387), (86, 38405), (89, 38423), (104, 38477), (110, 38513), (119, 38537),

Gene: RicoCaldo\_7 Start: 5210, Stop: 4953, Start Num: 59  
Candidate Starts for RicoCaldo\_7:  
(Start: 28 @5270 has 6 MA's), (Start: 59 @5210 has 10 MA's), (89, 5096), (108, 5021), (120, 4976),

Gene: Rimmer\_91 Start: 56182, Stop: 56442, Start Num: 51  
Candidate Starts for Rimmer\_91:  
(9, 56044), (Start: 51 @56182 has 123 MA's), (61, 56203), (98, 56347), (113, 56413),

Gene: RitaG\_54 Start: 38556, Stop: 38834, Start Num: 26

Candidate Starts for RitaG\_54:

(18, 38529), (Start: 26 @38556 has 97 MA's), (72, 38640), (74, 38649), (89, 38712), (94, 38727), (97, 38739), (104, 38763), (107, 38775), (121, 38826),

Gene: RiverMonster\_94 Start: 57081, Stop: 57341, Start Num: 51

Candidate Starts for RiverMonster\_94:

(Start: 51 @57081 has 123 MA's), (61, 57102), (81, 57177), (98, 57246), (113, 57312),

Gene: RockyHorror\_60 Start: 39611, Stop: 39892, Start Num: 26

Candidate Starts for RockyHorror\_60:

(18, 39584), (Start: 26 @39611 has 97 MA's), (41, 39635), (57, 39650), (71, 39695), (Start: 73 @39707 has 19 MA's), (97, 39797), (104, 39821), (107, 39833), (121, 39884),

Gene: RonRayGun\_41 Start: 31892, Stop: 32149, Start Num: 46

Candidate Starts for RonRayGun\_41:

(3, 31616), (5, 31637), (Start: 46 @31892 has 120 MA's), (Start: 73 @31976 has 19 MA's), (97, 32066),

Gene: Rose5\_78 Start: 52495, Stop: 52725, Start Num: 73

Candidate Starts for Rose5\_78:

(Start: 56 @52420 has 33 MA's), (Start: 63 @52435 has 12 MA's), (Start: 73 @52495 has 19 MA's), (89, 52558), (97, 52585), (124, 52708), (125, 52711),

Gene: Rosmarinus\_50 Start: 37459, Stop: 37722, Start Num: 46

Candidate Starts for Rosmarinus\_50:

(Start: 46 @37459 has 120 MA's), (89, 37600),

Gene: Ruby\_55 Start: 39743, Stop: 40021, Start Num: 26

Candidate Starts for Ruby\_55:

(18, 39716), (Start: 26 @39743 has 97 MA's), (72, 39827), (74, 39836), (89, 39899), (94, 39914), (97, 39926), (104, 39950), (107, 39962), (121, 40013),

Gene: Rumpelstiltskin\_78 Start: 53546, Stop: 53842, Start Num: 56

Candidate Starts for Rumpelstiltskin\_78:

(Start: 56 @53546 has 33 MA's), (Start: 73 @53606 has 19 MA's), (85, 53651), (88, 53663), (97, 53699), (108, 53753), (109, 53756),

Gene: SCentae\_53 Start: 18353, Stop: 18634, Start Num: 22

Candidate Starts for SCentae\_53:

(Start: 22 @18353 has 3 MA's), (Start: 38 @18389 has 9 MA's), (Start: 73 @18464 has 19 MA's),

Gene: Saal\_61 Start: 41196, Stop: 41477, Start Num: 26

Candidate Starts for Saal\_61:

(18, 41169), (Start: 26 @41196 has 97 MA's), (41, 41220), (57, 41235), (71, 41280), (Start: 73 @41292 has 19 MA's), (94, 41370), (97, 41382), (104, 41406), (107, 41418), (121, 41469),

Gene: Sabbb\_63 Start: 40884, Stop: 41165, Start Num: 26

Candidate Starts for Sabbb\_63:

(18, 40857), (Start: 26 @40884 has 97 MA's), (41, 40908), (57, 40923), (71, 40968), (Start: 73 @40980 has 19 MA's), (94, 41058), (97, 41070), (104, 41094), (107, 41106), (121, 41157),

Gene: Saints25\_92 Start: 56224, Stop: 56484, Start Num: 51

Candidate Starts for Saints25\_92:

(Start: 51 @56224 has 123 MA's), (61, 56245), (81, 56320), (98, 56389), (113, 56455),

Gene: Samty\_78 Start: 53804, Stop: 54058, Start Num: 63

Candidate Starts for Samty\_78:

(Start: 56 @53789 has 33 MA's), (Start: 63 @53804 has 12 MA's), (97, 53939), (106, 53981), (113, 54017), (121, 54041),

Gene: SamuelLPlaqson\_51 Start: 38242, Stop: 38505, Start Num: 46

Candidate Starts for SamuelLPlaqson\_51:

(6, 37990), (Start: 46 @38242 has 120 MA's), (69, 38296), (86, 38365), (89, 38383),

Gene: Sarshaun\_82 Start: 54071, Stop: 54307, Start Num: 73

Candidate Starts for Sarshaun\_82:

(Start: 56 @54011 has 33 MA's), (Start: 73 @54071 has 19 MA's), (85, 54116), (88, 54128), (97, 54164), (108, 54218), (109, 54221),

Gene: Sassafras\_57 Start: 39528, Stop: 39806, Start Num: 26

Candidate Starts for Sassafras\_57:

(18, 39501), (Start: 26 @39528 has 97 MA's), (72, 39612), (74, 39621), (89, 39684), (94, 39699), (97, 39711), (104, 39735), (107, 39747), (121, 39798),

Gene: Sassay\_88 Start: 54914, Stop: 55174, Start Num: 51

Candidate Starts for Sassay\_88:

(Start: 51 @54914 has 123 MA's), (61, 54935), (81, 55010), (98, 55079), (113, 55145),

Gene: Sbash\_53 Start: 39707, Stop: 40006, Start Num: 35

Candidate Starts for Sbash\_53:

(Start: 35 @39707 has 5 MA's), (42, 39725), (62, 39761), (Start: 67 @39776 has 1 MA's), (89, 39872), (102, 39923), (109, 39959), (120, 39998),

Gene: Scarlett\_55 Start: 38559, Stop: 38834, Start Num: 46

Candidate Starts for Scarlett\_55:

(Start: 46 @38559 has 120 MA's), (Start: 50 @38565 has 2 MA's), (69, 38607), (Start: 73 @38631 has 19 MA's), (100, 38739), (123, 38823),

Gene: Seabastian\_64 Start: 42541, Stop: 42819, Start Num: 26

Candidate Starts for Seabastian\_64:

(18, 42514), (Start: 26 @42541 has 97 MA's), (72, 42625), (74, 42634), (89, 42697), (94, 42712), (97, 42724), (104, 42748), (107, 42760), (121, 42811),

Gene: Sejanus\_58 Start: 47696, Stop: 47995, Start Num: 35

Candidate Starts for Sejanus\_58:

(Start: 35 @47696 has 5 MA's), (42, 47714), (62, 47750), (Start: 67 @47765 has 1 MA's), (89, 47861), (102, 47912), (109, 47948), (116, 47981), (120, 47987),

Gene: SgtBeansprout\_46 Start: 37040, Stop: 37309, Start Num: 46

Candidate Starts for SgtBeansprout\_46:

(Start: 46 @37040 has 120 MA's), (80, 37136), (95, 37196), (96, 37202), (97, 37205), (104, 37232), (107, 37244), (119, 37298),

Gene: Shadow1\_56 Start: 38290, Stop: 38541, Start Num: 46

Candidate Starts for Shadow1\_56:

(Start: 46 @38290 has 120 MA's), (Start: 50 @38296 has 2 MA's), (89, 38428),

Gene: ShamWow\_93 Start: 57094, Stop: 57354, Start Num: 51

Candidate Starts for ShamWow\_93:

(Start: 51 @57094 has 123 MA's), (61, 57115), (81, 57190), (98, 57259), (113, 57325),

Gene: Shaobing\_53 Start: 38322, Stop: 38585, Start Num: 46

Candidate Starts for Shaobing\_53:

(1, 37842), (2, 37998), (6, 38067), (Start: 46 @38322 has 120 MA's), (82, 38424), (86, 38442), (89, 38460), (104, 38514), (110, 38550), (119, 38574),

Gene: ShedlockHolmes\_54 Start: 37976, Stop: 38245, Start Num: 40

Candidate Starts for ShedlockHolmes\_54:

(6, 37736), (Start: 40 @37976 has 8 MA's), (Start: 58 @38000 has 4 MA's), (89, 38120), (104, 38174),

Gene: Sheng711\_80 Start: 52619, Stop: 52909, Start Num: 58

Candidate Starts for Sheng711\_80:

(Start: 58 @52619 has 4 MA's), (83, 52703), (88, 52730), (97, 52766), (100, 52784), (104, 52796), (109, 52823),

Gene: ShereKhan\_91 Start: 57206, Stop: 57466, Start Num: 51

Candidate Starts for ShereKhan\_91:

(Start: 51 @57206 has 123 MA's), (61, 57227), (81, 57302), (98, 57371), (113, 57437),

Gene: ShiaSurprise\_51 Start: 37668, Stop: 37931, Start Num: 46

Candidate Starts for ShiaSurprise\_51:

(Start: 46 @37668 has 120 MA's), (89, 37809),

Gene: ShowerHandel\_62 Start: 39936, Stop: 40217, Start Num: 26

Candidate Starts for ShowerHandel\_62:

(18, 39909), (Start: 26 @39936 has 97 MA's), (41, 39960), (57, 39975), (71, 40020), (Start: 73 @40032 has 19 MA's), (94, 40110), (97, 40122), (104, 40146), (107, 40158), (121, 40209),

Gene: ShroomBoi\_61 Start: 40896, Stop: 41177, Start Num: 26

Candidate Starts for ShroomBoi\_61:

(18, 40869), (Start: 26 @40896 has 97 MA's), (41, 40920), (57, 40935), (71, 40980), (Start: 73 @40992 has 19 MA's), (94, 41070), (97, 41082), (104, 41106), (107, 41118), (121, 41169),

Gene: Shweta\_42 Start: 30626, Stop: 30925, Start Num: 35

Candidate Starts for Shweta\_42:

(Start: 35 @30626 has 5 MA's), (42, 30644), (62, 30680), (Start: 67 @30695 has 1 MA's), (89, 30791), (102, 30842), (109, 30878), (116, 30911),

Gene: ShyRosie\_7 Start: 5195, Stop: 4923, Start Num: 59

Candidate Starts for ShyRosie\_7:

(Start: 28 @5255 has 6 MA's), (Start: 59 @5195 has 10 MA's), (89, 5081), (106, 5018), (108, 5006), (120, 4961),

Gene: Silverleaf\_78 Start: 51891, Stop: 52181, Start Num: 63

Candidate Starts for Silverleaf\_78:

(Start: 56 @51876 has 33 MA's), (Start: 63 @51891 has 12 MA's), (Start: 73 @51951 has 19 MA's), (89, 52014), (97, 52041), (124, 52164), (125, 52167),

Gene: Simpliphy\_92 Start: 56214, Stop: 56474, Start Num: 51

Candidate Starts for Simpliphy\_92:

(Start: 51 @56214 has 123 MA's), (61, 56235), (81, 56310), (98, 56379), (113, 56445),

Gene: SimranZ1\_59 Start: 40122, Stop: 40400, Start Num: 26

Candidate Starts for SimranZ1\_59:

(18, 40095), (Start: 26 @40122 has 97 MA's), (72, 40206), (74, 40215), (89, 40278), (94, 40293), (97, 40305), (104, 40329), (107, 40341), (121, 40392),

Gene: SirDuracell\_93 Start: 55587, Stop: 55847, Start Num: 51

Candidate Starts for SirDuracell\_93:

(Start: 51 @55587 has 123 MA's), (61, 55608), (81, 55683), (98, 55752), (113, 55818),

Gene: SirPhilip\_53 Start: 38679, Stop: 38936, Start Num: 46

Candidate Starts for SirPhilip\_53:

(Start: 46 @38679 has 120 MA's), (86, 38799), (88, 38808), (89, 38817), (107, 38880), (110, 38904),

Gene: SkinnyPete\_42 Start: 29948, Stop: 30178, Start Num: 67

Candidate Starts for SkinnyPete\_42:

(Start: 35 @29879 has 5 MA's), (42, 29897), (62, 29933), (Start: 67 @29948 has 1 MA's), (89, 30044), (102, 30095), (109, 30131), (116, 30164), (120, 30170),

Gene: Skog\_114 Start: 46503, Stop: 46823, Start Num: 16

Candidate Starts for Skog\_114:

(12, 46470), (Start: 16 @46503 has 1 MA's), (19, 46512), (21, 46521), (31, 46551), (Start: 58 @46593 has 4 MA's), (60, 46596), (89, 46713), (112, 46800),

Gene: Slimphazie\_50 Start: 37354, Stop: 37617, Start Num: 46

Candidate Starts for Slimphazie\_50:

(Start: 46 @37354 has 120 MA's), (89, 37495),

Gene: Snenia\_78 Start: 53795, Stop: 54064, Start Num: 56

Candidate Starts for Snenia\_78:

(Start: 56 @53795 has 33 MA's), (Start: 63 @53810 has 12 MA's), (97, 53945), (106, 53987), (113, 54023), (121, 54047),

Gene: Soap141\_81 Start: 54071, Stop: 54307, Start Num: 73

Candidate Starts for Soap141\_81:

(Start: 56 @54011 has 33 MA's), (Start: 73 @54071 has 19 MA's), (85, 54116), (88, 54128), (97, 54164), (108, 54218), (109, 54221),

Gene: SophKB\_90 Start: 55892, Stop: 56152, Start Num: 51

Candidate Starts for SophKB\_90:

(Start: 51 @55892 has 123 MA's), (61, 55913), (81, 55988), (98, 56057), (113, 56123),

Gene: Sotrice96\_94 Start: 56480, Stop: 56740, Start Num: 51

Candidate Starts for Sotrice96\_94:

(Start: 51 @56480 has 123 MA's), (61, 56501), (81, 56576), (98, 56645), (113, 56711),

Gene: Spartacus\_61 Start: 40606, Stop: 40887, Start Num: 26

Candidate Starts for Spartacus\_61:

(18, 40579), (Start: 26 @40606 has 97 MA's), (41, 40630), (57, 40645), (71, 40690), (Start: 73 @40702 has 19 MA's), (94, 40780), (97, 40792), (104, 40816), (107, 40828), (121, 40879),

Gene: Spikelee\_66 Start: 42226, Stop: 42507, Start Num: 26  
Candidate Starts for Spikelee\_66:  
(18, 42199), (Start: 26 @42226 has 97 MA's), (41, 42250), (57, 42265), (71, 42310), (Start: 73 @42322 has 19 MA's), (94, 42400), (97, 42412), (104, 42436), (107, 42448), (121, 42499),

Gene: Spock\_50 Start: 37472, Stop: 37735, Start Num: 46  
Candidate Starts for Spock\_50:  
(Start: 46 @37472 has 120 MA's), (89, 37613),

Gene: Spoonbill\_56 Start: 38516, Stop: 38794, Start Num: 26  
Candidate Starts for Spoonbill\_56:  
(18, 38489), (Start: 26 @38516 has 97 MA's), (72, 38600), (74, 38609), (89, 38672), (94, 38687), (97, 38699), (104, 38723), (107, 38735), (121, 38786),

Gene: StagePhright\_7 Start: 5180, Stop: 4923, Start Num: 59  
Candidate Starts for StagePhright\_7:  
(Start: 28 @5240 has 6 MA's), (Start: 59 @5180 has 10 MA's), (89, 5066), (108, 4991), (120, 4946),

Gene: Stank\_95 Start: 56873, Stop: 57133, Start Num: 51  
Candidate Starts for Stank\_95:  
(Start: 51 @56873 has 123 MA's), (61, 56894), (81, 56969), (98, 57038), (113, 57104),

Gene: Stap\_57 Start: 39317, Stop: 39595, Start Num: 26  
Candidate Starts for Stap\_57:  
(18, 39290), (Start: 26 @39317 has 97 MA's), (72, 39401), (74, 39410), (89, 39473), (94, 39488), (97, 39500), (104, 39524), (107, 39536), (121, 39587),

Gene: Starcevich\_59 Start: 40105, Stop: 40383, Start Num: 26  
Candidate Starts for Starcevich\_59:  
(15, 40069), (Start: 26 @40105 has 97 MA's), (41, 40129), (71, 40186), (Start: 73 @40198 has 19 MA's), (94, 40276), (97, 40288), (104, 40312), (107, 40324), (121, 40375),

Gene: Stark\_95 Start: 56964, Stop: 57224, Start Num: 51  
Candidate Starts for Stark\_95:  
(Start: 51 @56964 has 123 MA's), (61, 56985), (81, 57060), (98, 57129), (113, 57195),

Gene: StellaBean\_91 Start: 56418, Stop: 56678, Start Num: 51  
Candidate Starts for StellaBean\_91:  
(Start: 51 @56418 has 123 MA's), (61, 56439), (81, 56514), (98, 56583), (113, 56649),

Gene: Stinson\_51 Start: 37846, Stop: 38109, Start Num: 46  
Candidate Starts for Stinson\_51:  
(6, 37594), (Start: 46 @37846 has 120 MA's), (69, 37900), (89, 37987),

Gene: StolenFromERC\_96 Start: 56798, Stop: 57058, Start Num: 51  
Candidate Starts for StolenFromERC\_96:  
(Start: 51 @56798 has 123 MA's), (61, 56819), (81, 56894), (98, 56963), (113, 57029),

Gene: Stormageddon\_172 Start: 111483, Stop: 111797, Start Num: 23  
Candidate Starts for Stormageddon\_172:  
(Start: 23 @111483 has 5 MA's), (Start: 26 @111492 has 97 MA's), (32, 111501), (90, 111672), (112, 111765),

Gene: Strobilo\_54 Start: 39537, Stop: 39767, Start Num: 54

Candidate Starts for Strobilo\_54:

(Start: 53 @39534 has 10 MA's), (Start: 54 @39537 has 6 MA's), (Start: 58 @39543 has 4 MA's), (61, 39549), (86, 39639), (87, 39645), (104, 39708),

Gene: Strokeseat\_55 Start: 38052, Stop: 38333, Start Num: 26

Candidate Starts for Strokeseat\_55:

(18, 38025), (Start: 26 @38052 has 97 MA's), (41, 38076), (57, 38091), (71, 38136), (Start: 73 @38148 has 19 MA's), (94, 38226), (97, 38238), (104, 38262), (107, 38274), (121, 38325),

Gene: Sulley\_50 Start: 37598, Stop: 37861, Start Num: 46

Candidate Starts for Sulley\_50:

(Start: 46 @37598 has 120 MA's), (89, 37739),

Gene: Sunflower1121\_57 Start: 38391, Stop: 38642, Start Num: 46

Candidate Starts for Sunflower1121\_57:

(Start: 46 @38391 has 120 MA's), (Start: 50 @38397 has 2 MA's), (89, 38529),

Gene: SwagPiggett\_64 Start: 42244, Stop: 42525, Start Num: 26

Candidate Starts for SwagPiggett\_64:

(18, 42217), (Start: 26 @42244 has 97 MA's), (41, 42268), (57, 42283), (71, 42328), (Start: 73 @42340 has 19 MA's), (94, 42418), (97, 42430), (104, 42454), (107, 42466), (121, 42517),

Gene: Syra333\_56 Start: 38055, Stop: 38306, Start Num: 46

Candidate Starts for Syra333\_56:

(Start: 46 @38055 has 120 MA's), (Start: 50 @38061 has 2 MA's), (87, 38181), (89, 38193),

Gene: TBond007\_51 Start: 37450, Stop: 37719, Start Num: 40

Candidate Starts for TBond007\_51:

(6, 37210), (Start: 40 @37450 has 8 MA's), (Start: 58 @37474 has 4 MA's), (89, 37594), (104, 37648),

Gene: TBrady12\_96 Start: 56634, Stop: 56894, Start Num: 51

Candidate Starts for TBrady12\_96:

(Start: 51 @56634 has 123 MA's), (61, 56655), (81, 56730), (98, 56799), (113, 56865),

Gene: TChen\_60 Start: 41367, Stop: 41636, Start Num: 36

Candidate Starts for TChen\_60:

(14, 41322), (Start: 26 @41358 has 97 MA's), (Start: 36 @41367 has 1 MA's), (69, 41424), (72, 41442), (74, 41451), (89, 41514), (94, 41529), (97, 41541), (104, 41565), (107, 41577), (121, 41628),

Gene: TClif\_54 Start: 38425, Stop: 38685, Start Num: 48

Candidate Starts for TClif\_54:

(Start: 48 @38425 has 8 MA's), (69, 38467), (97, 38581), (100, 38599), (119, 38674),

Gene: TM4\_49 Start: 33917, Stop: 34147, Start Num: 54

Candidate Starts for TM4\_49:

(Start: 53 @33914 has 10 MA's), (Start: 54 @33917 has 6 MA's), (Start: 58 @33923 has 4 MA's), (61, 33929), (86, 34019), (87, 34025), (104, 34088),

Gene: TPA4\_72 Start: 46359, Stop: 46703, Start Num: 13

Candidate Starts for TPA4\_72:

(13, 46359), (47, 46464), (104, 46644), (111, 46680),



Gene: Tachez\_50 Start: 37316, Stop: 37579, Start Num: 46

Candidate Starts for Tachez\_50:

(Start: 46 @37316 has 120 MA's), (89, 37457),

Gene: TaiwanKao\_52 Start: 37612, Stop: 37875, Start Num: 46

Candidate Starts for TaiwanKao\_52:

(Start: 46 @37612 has 120 MA's), (89, 37753),

Gene: Taptic\_55 Start: 44928, Stop: 45209, Start Num: 38

Candidate Starts for Taptic\_55:

(Start: 38 @44928 has 9 MA's), (68, 44988), (84, 45045), (102, 45117), (118, 45189),

Gene: Tarkin\_92 Start: 56882, Stop: 57142, Start Num: 51

Candidate Starts for Tarkin\_92:

(Start: 51 @56882 has 123 MA's), (61, 56903), (81, 56978), (98, 57047), (113, 57113),

Gene: TeardropMSU\_89 Start: 55882, Stop: 56142, Start Num: 51

Candidate Starts for TeardropMSU\_89:

(Start: 51 @55882 has 123 MA's), (61, 55903), (81, 55978), (98, 56047), (113, 56113),

Gene: Teaspoon\_94 Start: 56734, Stop: 56994, Start Num: 51

Candidate Starts for Teaspoon\_94:

(Start: 51 @56734 has 123 MA's), (61, 56755), (81, 56830), (98, 56899), (113, 56965),

Gene: Terminus\_96 Start: 57669, Stop: 57929, Start Num: 51

Candidate Starts for Terminus\_96:

(Start: 51 @57669 has 123 MA's), (61, 57690), (81, 57765), (98, 57834), (113, 57900),

Gene: ThetaBob\_64 Start: 41432, Stop: 41710, Start Num: 26

Candidate Starts for ThetaBob\_64:

(14, 41396), (Start: 26 @41432 has 97 MA's), (Start: 36 @41441 has 1 MA's), (69, 41498), (72, 41516), (74, 41525), (89, 41588), (94, 41603), (97, 41615), (104, 41639), (107, 41651), (121, 41702),

Gene: ThirteenKH\_7 Start: 5168, Stop: 4911, Start Num: 59

Candidate Starts for ThirteenKH\_7:

(Start: 28 @5228 has 6 MA's), (Start: 59 @5168 has 10 MA's), (79, 5096), (89, 5054), (108, 4979), (120, 4934),

Gene: Thresher\_96 Start: 57744, Stop: 58004, Start Num: 51

Candidate Starts for Thresher\_96:

(Start: 51 @57744 has 123 MA's), (61, 57765), (81, 57840), (98, 57909), (113, 57975),

Gene: Tierra\_54 Start: 37943, Stop: 38200, Start Num: 46

Candidate Starts for Tierra\_54:

(Start: 46 @37943 has 120 MA's), (60, 37964), (Start: 73 @38018 has 19 MA's), (89, 38081), (92, 38090), (110, 38168),

Gene: TingHuaYa\_51 Start: 36397, Stop: 36660, Start Num: 46

Candidate Starts for TingHuaYa\_51:

(Start: 46 @36397 has 120 MA's), (Start: 54 @36409 has 6 MA's), (86, 36520), (89, 36538),

Gene: TiniBug\_51 Start: 38238, Stop: 38501, Start Num: 46

Candidate Starts for TiniBug\_51:

(6, 37986), (Start: 46 @38238 has 120 MA's), (69, 38292), (86, 38361), (89, 38379),

Gene: TinyDot\_55 Start: 34530, Stop: 34790, Start Num: 49

Candidate Starts for TinyDot\_55:

(Start: 49 @34530 has 1 MA's), (107, 34740),

Gene: Tiri\_51 Start: 37646, Stop: 37909, Start Num: 46

Candidate Starts for Tiri\_51:

(Start: 46 @37646 has 120 MA's), (69, 37700), (89, 37787),

Gene: Tomaszewski\_88 Start: 56045, Stop: 56305, Start Num: 51

Candidate Starts for Tomaszewski\_88:

(Start: 51 @56045 has 123 MA's), (61, 56066), (81, 56141), (98, 56210), (113, 56276),

Gene: Topper\_50 Start: 37471, Stop: 37734, Start Num: 46

Candidate Starts for Topper\_50:

(Start: 46 @37471 has 120 MA's), (89, 37612),

Gene: Toron\_67 Start: 42166, Stop: 42447, Start Num: 33

Candidate Starts for Toron\_67:

(20, 42130), (33, 42166), (65, 42241), (111, 42427), (117, 42439),

Gene: Torres\_48 Start: 39654, Stop: 39923, Start Num: 46

Candidate Starts for Torres\_48:

(Start: 46 @39654 has 120 MA's), (80, 39750), (95, 39810), (96, 39816), (97, 39819), (104, 39846), (107, 39858), (119, 39912),

Gene: Toto\_91 Start: 57094, Stop: 57354, Start Num: 51

Candidate Starts for Toto\_91:

(Start: 51 @57094 has 123 MA's), (61, 57115), (81, 57190), (98, 57259), (113, 57325),

Gene: Tourach\_80 Start: 54051, Stop: 54332, Start Num: 63

Candidate Starts for Tourach\_80:

(Start: 56 @54036 has 33 MA's), (Start: 63 @54051 has 12 MA's), (89, 54162), (97, 54189), (104, 54219), (125, 54306),

Gene: TownLake\_8 Start: 5549, Stop: 5280, Start Num: 59

Candidate Starts for TownLake\_8:

(Start: 28 @5609 has 6 MA's), (Start: 59 @5549 has 10 MA's), (101, 5411), (108, 5381), (120, 5336),

Gene: Traaww1\_89 Start: 55902, Stop: 56162, Start Num: 51

Candidate Starts for Traaww1\_89:

(Start: 51 @55902 has 123 MA's), (61, 55923), (81, 55998), (98, 56067), (113, 56133),

Gene: TreyKay\_51 Start: 37556, Stop: 37819, Start Num: 46

Candidate Starts for TreyKay\_51:

(Start: 46 @37556 has 120 MA's), (69, 37610), (89, 37697),

Gene: TriFive\_79 Start: 53809, Stop: 54063, Start Num: 63

Candidate Starts for TriFive\_79:

(Start: 56 @53794 has 33 MA's), (Start: 63 @53809 has 12 MA's), (97, 53944), (106, 53986), (113, 54022), (121, 54046),

Gene: TribbleTrouble\_50 Start: 37335, Stop: 37601, Start Num: 40  
Candidate Starts for TribbleTrouble\_50:  
(Start: 40 @37335 has 8 MA's), (Start: 58 @37356 has 4 MA's), (Start: 63 @37362 has 12 MA's), (89, 37476), (100, 37521), (104, 37530),

Gene: TrippleS\_7 Start: 5168, Stop: 4911, Start Num: 59  
Candidate Starts for TrippleS\_7:  
(Start: 28 @5228 has 6 MA's), (Start: 59 @5168 has 10 MA's), (79, 5096), (89, 5054), (108, 4979), (120, 4934),

Gene: TruffulaTree\_50 Start: 37350, Stop: 37613, Start Num: 46  
Candidate Starts for TruffulaTree\_50:  
(Start: 46 @37350 has 120 MA's), (89, 37491),

Gene: Truong\_7 Start: 5255, Stop: 4923, Start Num: 28  
Candidate Starts for Truong\_7:  
(Start: 28 @5255 has 6 MA's), (Start: 59 @5195 has 10 MA's), (89, 5081), (106, 5018), (108, 5006), (120, 4961),

Gene: Tuco\_94 Start: 57641, Stop: 57901, Start Num: 51  
Candidate Starts for Tuco\_94:  
(Start: 51 @57641 has 123 MA's), (61, 57662), (81, 57737), (98, 57806), (113, 57872),

Gene: Twitch\_50 Start: 37473, Stop: 37736, Start Num: 46  
Candidate Starts for Twitch\_50:  
(Start: 46 @37473 has 120 MA's), (89, 37614),

Gene: Tyson\_79 Start: 52361, Stop: 52651, Start Num: 63  
Candidate Starts for Tyson\_79:  
(Start: 56 @52346 has 33 MA's), (Start: 63 @52361 has 12 MA's), (Start: 73 @52421 has 19 MA's), (89, 52484), (97, 52511), (124, 52634), (125, 52637),

Gene: UPIE\_77 Start: 52017, Stop: 52247, Start Num: 73  
Candidate Starts for UPIE\_77:  
(Start: 56 @51942 has 33 MA's), (Start: 63 @51957 has 12 MA's), (Start: 73 @52017 has 19 MA's), (89, 52080), (97, 52107), (124, 52230), (125, 52233),

Gene: Ukulele\_88 Start: 56027, Stop: 56287, Start Num: 51  
Candidate Starts for Ukulele\_88:  
(Start: 51 @56027 has 123 MA's), (61, 56048), (81, 56123), (98, 56192), (113, 56258),

Gene: Underpass\_72 Start: 48849, Stop: 49085, Start Num: 73  
Candidate Starts for Underpass\_72:  
(Start: 56 @48789 has 33 MA's), (Start: 73 @48849 has 19 MA's), (85, 48894), (88, 48906), (97, 48942), (108, 48996), (109, 48999),

Gene: Unicorn\_53 Start: 37175, Stop: 37432, Start Num: 46  
Candidate Starts for Unicorn\_53:  
(Start: 46 @37175 has 120 MA's), (60, 37196), (Start: 73 @37250 has 19 MA's), (89, 37313), (92, 37322), (110, 37400),

Gene: Urkel\_51 Start: 38242, Stop: 38505, Start Num: 46  
Candidate Starts for Urkel\_51:

(6, 37990), (Start: 46 @38242 has 120 MA's), (69, 38296), (86, 38365), (89, 38383),

Gene: VRedHorse\_59 Start: 39252, Stop: 39533, Start Num: 26

Candidate Starts for VRedHorse\_59:

(18, 39225), (Start: 26 @39252 has 97 MA's), (41, 39276), (57, 39291), (71, 39336), (Start: 73 @39348 has 19 MA's), (94, 39426), (97, 39438), (104, 39462), (107, 39474), (121, 39525),

Gene: VWB\_44 Start: 35402, Stop: 35647, Start Num: 54

Candidate Starts for VWB\_44:

(10, 35270), (11, 35279), (12, 35282), (34, 35369), (Start: 53 @35399 has 10 MA's), (Start: 54 @35402 has 6 MA's), (89, 35531), (98, 35564), (104, 35582),

Gene: Validus\_55 Start: 38351, Stop: 38623, Start Num: 46

Candidate Starts for Validus\_55:

(Start: 46 @38351 has 120 MA's), (Start: 54 @38363 has 6 MA's), (82, 38453), (86, 38471), (89, 38489), (97, 38516), (114, 38594),

Gene: Veliki\_51 Start: 37390, Stop: 37653, Start Num: 46

Candidate Starts for Veliki\_51:

(Start: 46 @37390 has 120 MA's), (89, 37531),

Gene: Vetrix\_80 Start: 53895, Stop: 54131, Start Num: 73

Candidate Starts for Vetrix\_80:

(Start: 56 @53835 has 33 MA's), (Start: 73 @53895 has 19 MA's), (85, 53940), (88, 53952), (97, 53988), (109, 54045),

Gene: Vivum\_62 Start: 40254, Stop: 40535, Start Num: 26

Candidate Starts for Vivum\_62:

(18, 40227), (Start: 26 @40254 has 97 MA's), (41, 40278), (57, 40293), (71, 40338), (Start: 73 @40350 has 19 MA's), (94, 40428), (97, 40440), (104, 40464), (107, 40476), (121, 40527),

Gene: Wamburgexpress\_78 Start: 52456, Stop: 52686, Start Num: 73

Candidate Starts for Wamburgexpress\_78:

(Start: 56 @52381 has 33 MA's), (Start: 63 @52396 has 12 MA's), (Start: 73 @52456 has 19 MA's), (89, 52519), (97, 52546), (124, 52669), (125, 52672),

Gene: Wee\_63 Start: 41773, Stop: 42054, Start Num: 26

Candidate Starts for Wee\_63:

(Start: 26 @41773 has 97 MA's), (41, 41797), (57, 41812), (71, 41857), (Start: 73 @41869 has 19 MA's), (94, 41947), (97, 41959), (104, 41983), (107, 41995), (121, 42046),

Gene: Wee\_60 Start: 40789, Stop: 41067, Start Num: 25

Candidate Starts for Wee\_60:

(Start: 25 @40789 has 1 MA's), (27, 40795), (Start: 29 @40798 has 1 MA's), (Start: 38 @40822 has 9 MA's), (97, 40981), (99, 40996), (102, 41002),

Gene: Whirlwind\_80 Start: 53994, Stop: 54305, Start Num: 56

Candidate Starts for Whirlwind\_80:

(Start: 56 @53994 has 33 MA's), (Start: 63 @54009 has 12 MA's), (88, 54120), (97, 54156), (126, 54285),

Gene: Whouxphf\_56 Start: 39848, Stop: 40129, Start Num: 26

Candidate Starts for Whouxphf\_56:

(18, 39821), (Start: 26 @39848 has 97 MA's), (41, 39872), (57, 39887), (71, 39932), (Start: 73 @39944 has 19 MA's), (94, 40022), (97, 40034), (104, 40058), (107, 40070), (121, 40121),

Gene: Wiggin\_95 Start: 56303, Stop: 56563, Start Num: 51

Candidate Starts for Wiggin\_95:

(Start: 51 @56303 has 123 MA's), (61, 56324), (81, 56399), (98, 56468), (113, 56534),

Gene: Wigglewigggle\_80 Start: 53840, Stop: 54076, Start Num: 73

Candidate Starts for Wigglewigggle\_80:

(Start: 56 @53780 has 33 MA's), (Start: 73 @53840 has 19 MA's), (85, 53885), (88, 53897), (97, 53933), (106, 53975), (108, 53987), (109, 53990),

Gene: Wilder\_82 Start: 53924, Stop: 54220, Start Num: 56

Candidate Starts for Wilder\_82:

(Start: 56 @53924 has 33 MA's), (Start: 73 @53984 has 19 MA's), (85, 54029), (88, 54041), (97, 54077), (108, 54131), (109, 54134),

Gene: WillSterrel\_60 Start: 41723, Stop: 42004, Start Num: 26

Candidate Starts for WillSterrel\_60:

(18, 41696), (Start: 26 @41723 has 97 MA's), (41, 41747), (57, 41762), (71, 41807), (Start: 73 @41819 has 19 MA's), (94, 41897), (97, 41909), (104, 41933), (107, 41945), (121, 41996),

Gene: Willez\_88 Start: 54914, Stop: 55174, Start Num: 51

Candidate Starts for Willez\_88:

(Start: 51 @54914 has 123 MA's), (61, 54935), (81, 55010), (98, 55079), (113, 55145),

Gene: Winky\_81 Start: 53918, Stop: 54214, Start Num: 56

Candidate Starts for Winky\_81:

(Start: 56 @53918 has 33 MA's), (Start: 73 @53978 has 19 MA's), (85, 54023), (88, 54035), (97, 54071), (108, 54125), (109, 54128),

Gene: Wyatt2\_79 Start: 52344, Stop: 52649, Start Num: 56

Candidate Starts for Wyatt2\_79:

(Start: 56 @52344 has 33 MA's), (Start: 63 @52359 has 12 MA's), (Start: 73 @52419 has 19 MA's), (89, 52482), (97, 52509), (124, 52632), (125, 52635),

Gene: Xandras\_92 Start: 56126, Stop: 56386, Start Num: 51

Candidate Starts for Xandras\_92:

(Start: 51 @56126 has 123 MA's), (61, 56147), (81, 56222), (98, 56291), (113, 56357),

Gene: Ximenita\_57 Start: 38244, Stop: 38495, Start Num: 46

Candidate Starts for Ximenita\_57:

(Start: 46 @38244 has 120 MA's), (Start: 50 @38250 has 2 MA's), (89, 38382),

Gene: Yafa\_7 Start: 5183, Stop: 4926, Start Num: 59

Candidate Starts for Yafa\_7:

(Start: 28 @5243 has 6 MA's), (Start: 59 @5183 has 10 MA's), (79, 5111), (89, 5069), (108, 4994), (120, 4949),

Gene: YassJohnny\_90 Start: 55767, Stop: 56027, Start Num: 51

Candidate Starts for YassJohnny\_90:

(Start: 51 @55767 has 123 MA's), (61, 55788), (81, 55863), (98, 55932), (113, 55998),

Gene: Yorick\_58 Start: 40310, Stop: 40591, Start Num: 26

Candidate Starts for Yorick\_58:

(18, 40283), (Start: 26 @40310 has 97 MA's), (41, 40334), (57, 40349), (71, 40394), (Start: 73 @40406 has 19 MA's), (94, 40484), (97, 40496), (104, 40520), (107, 40532), (121, 40583),

Gene: Yoshi\_72 Start: 41696, Stop: 41974, Start Num: 26

Candidate Starts for Yoshi\_72:

(14, 41660), (Start: 26 @41696 has 97 MA's), (Start: 36 @41705 has 1 MA's), (69, 41762), (72, 41780), (74, 41789), (89, 41852), (94, 41867), (97, 41879), (104, 41903), (107, 41915), (121, 41966),

Gene: Youngblood\_96 Start: 57596, Stop: 57856, Start Num: 51

Candidate Starts for Youngblood\_96:

(Start: 51 @57596 has 123 MA's), (61, 57617), (81, 57692), (98, 57761), (113, 57827),

Gene: YoureAdopted\_49 Start: 37555, Stop: 37818, Start Num: 46

Candidate Starts for YoureAdopted\_49:

(Start: 46 @37555 has 120 MA's), (89, 37696),

Gene: Yuna\_57 Start: 39151, Stop: 39429, Start Num: 46

Candidate Starts for Yuna\_57:

(8, 39004), (Start: 46 @39151 has 120 MA's), (89, 39280), (100, 39325), (104, 39334),

Gene: Yunkel11\_53 Start: 37143, Stop: 37406, Start Num: 46

Candidate Starts for Yunkel11\_53:

(Start: 46 @37143 has 120 MA's), (Start: 54 @37155 has 6 MA's), (86, 37266), (89, 37284),

Gene: Zabiza\_45 Start: 33661, Stop: 33924, Start Num: 46

Candidate Starts for Zabiza\_45:

(Start: 46 @33661 has 120 MA's), (89, 33802),

Gene: Zakai\_82 Start: 54244, Stop: 54540, Start Num: 56

Candidate Starts for Zakai\_82:

(Start: 56 @54244 has 33 MA's), (Start: 73 @54304 has 19 MA's), (85, 54349), (88, 54361), (97, 54397), (108, 54451), (109, 54454),

Gene: Zaria\_79 Start: 51796, Stop: 52101, Start Num: 56

Candidate Starts for Zaria\_79:

(Start: 56 @51796 has 33 MA's), (Start: 63 @51811 has 12 MA's), (Start: 73 @51871 has 19 MA's), (89, 51934), (97, 51961), (124, 52084), (125, 52087),

Gene: Zavala\_52 Start: 37632, Stop: 37895, Start Num: 46

Candidate Starts for Zavala\_52:

(Start: 46 @37632 has 120 MA's), (89, 37773),

Gene: ZenTime222\_40 Start: 31446, Stop: 31703, Start Num: 46

Candidate Starts for ZenTime222\_40:

(3, 31170), (5, 31191), (Start: 46 @31446 has 120 MA's), (Start: 73 @31530 has 19 MA's), (97, 31620),

Gene: ZhongYanYuan\_78 Start: 53431, Stop: 53667, Start Num: 73

Candidate Starts for ZhongYanYuan\_78:

(Start: 56 @53371 has 33 MA's), (Start: 73 @53431 has 19 MA's), (85, 53476), (88, 53488), (97, 53524), (106, 53566), (108, 53578), (109, 53581),

Gene: ZoeJ\_53 Start: 39008, Stop: 39238, Start Num: 54

Candidate Starts for ZoeJ\_53:

(Start: 53 @39005 has 10 MA's), (Start: 54 @39008 has 6 MA's), (Start: 58 @39014 has 4 MA's), (61, 39020), (86, 39110), (87, 39116), (104, 39179),

Gene: xkcd\_96 Start: 57780, Stop: 58040, Start Num: 51

Candidate Starts for xkcd\_96:

(Start: 51 @57780 has 123 MA's), (61, 57801), (81, 57876), (98, 57945), (113, 58011),