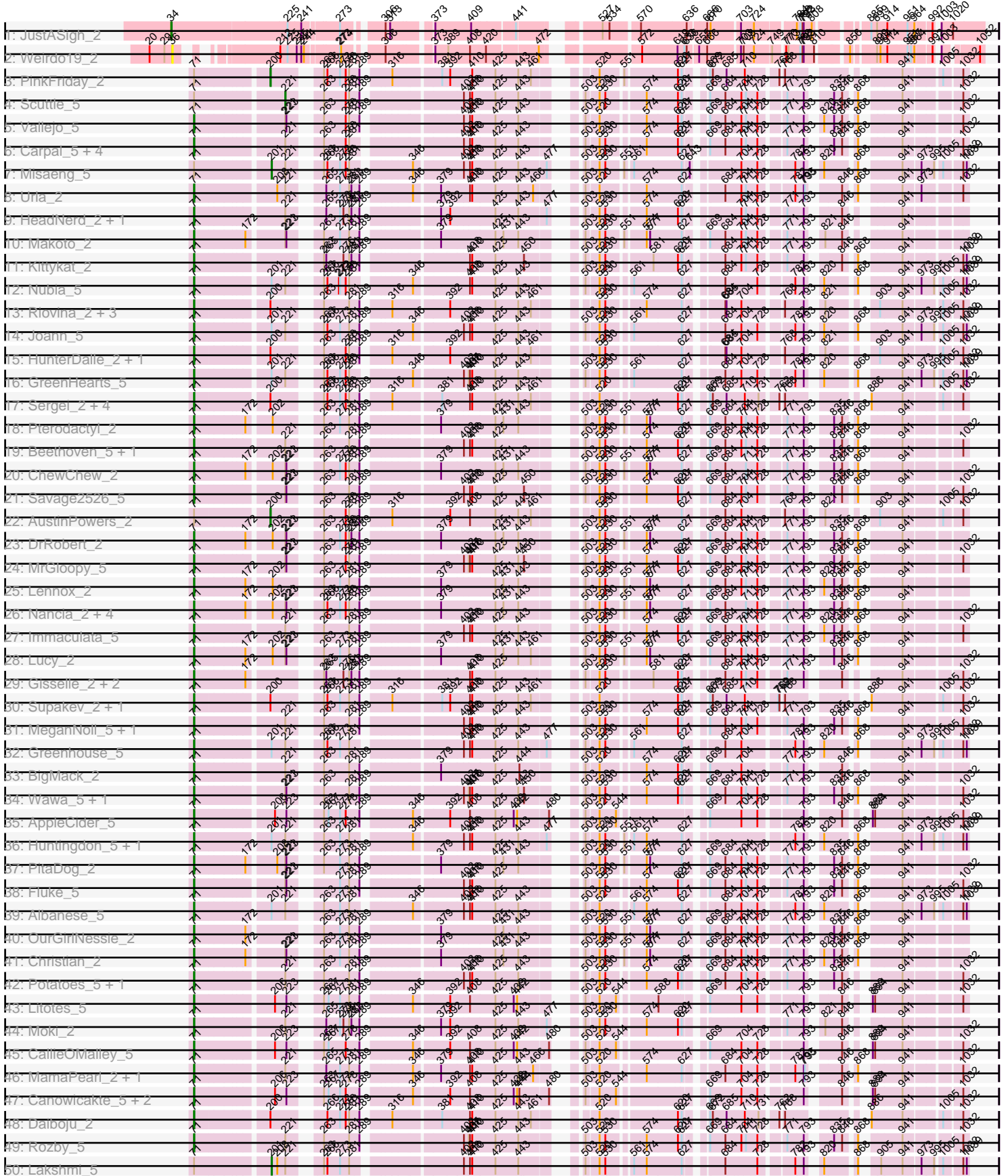
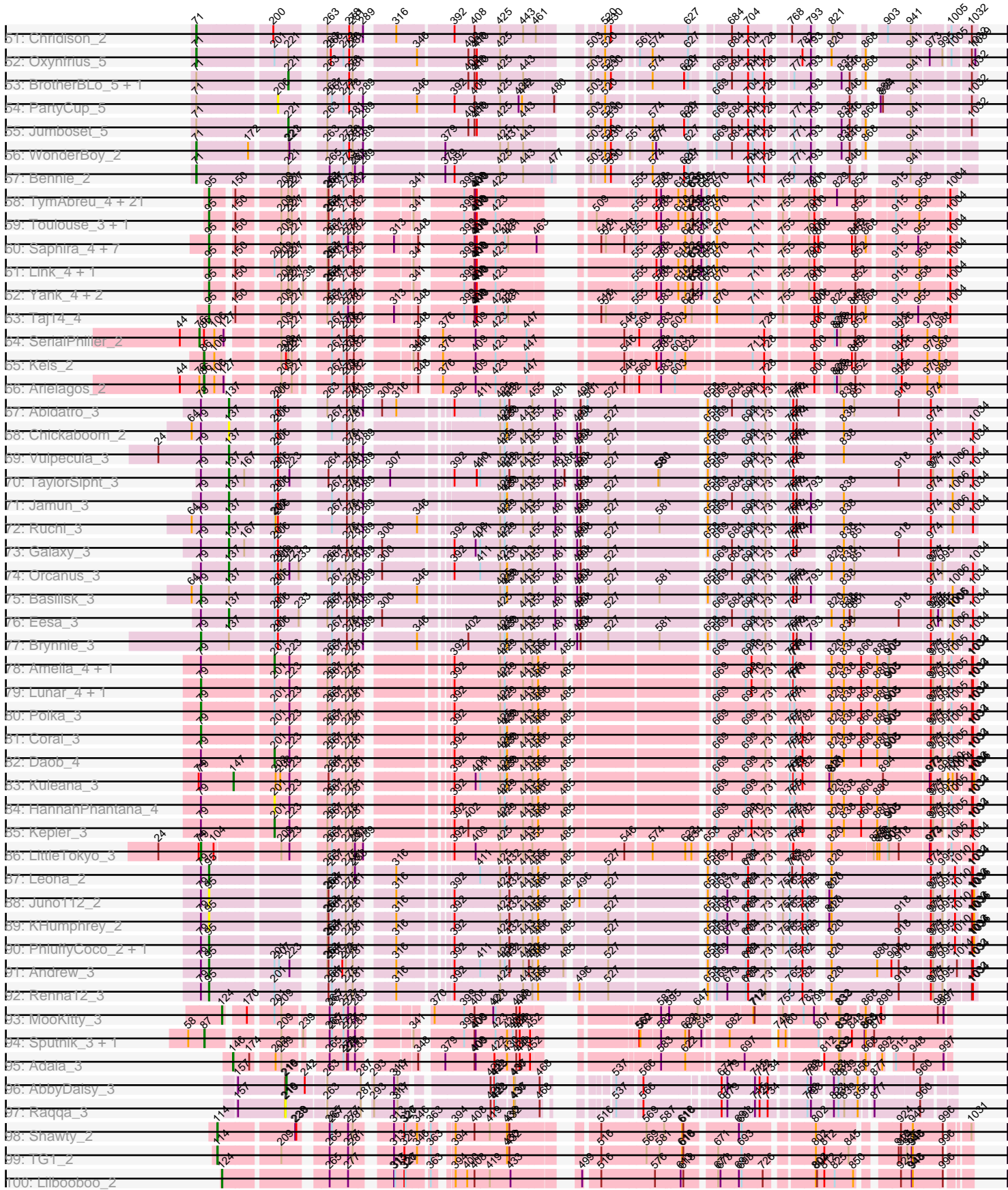


Pham 167856

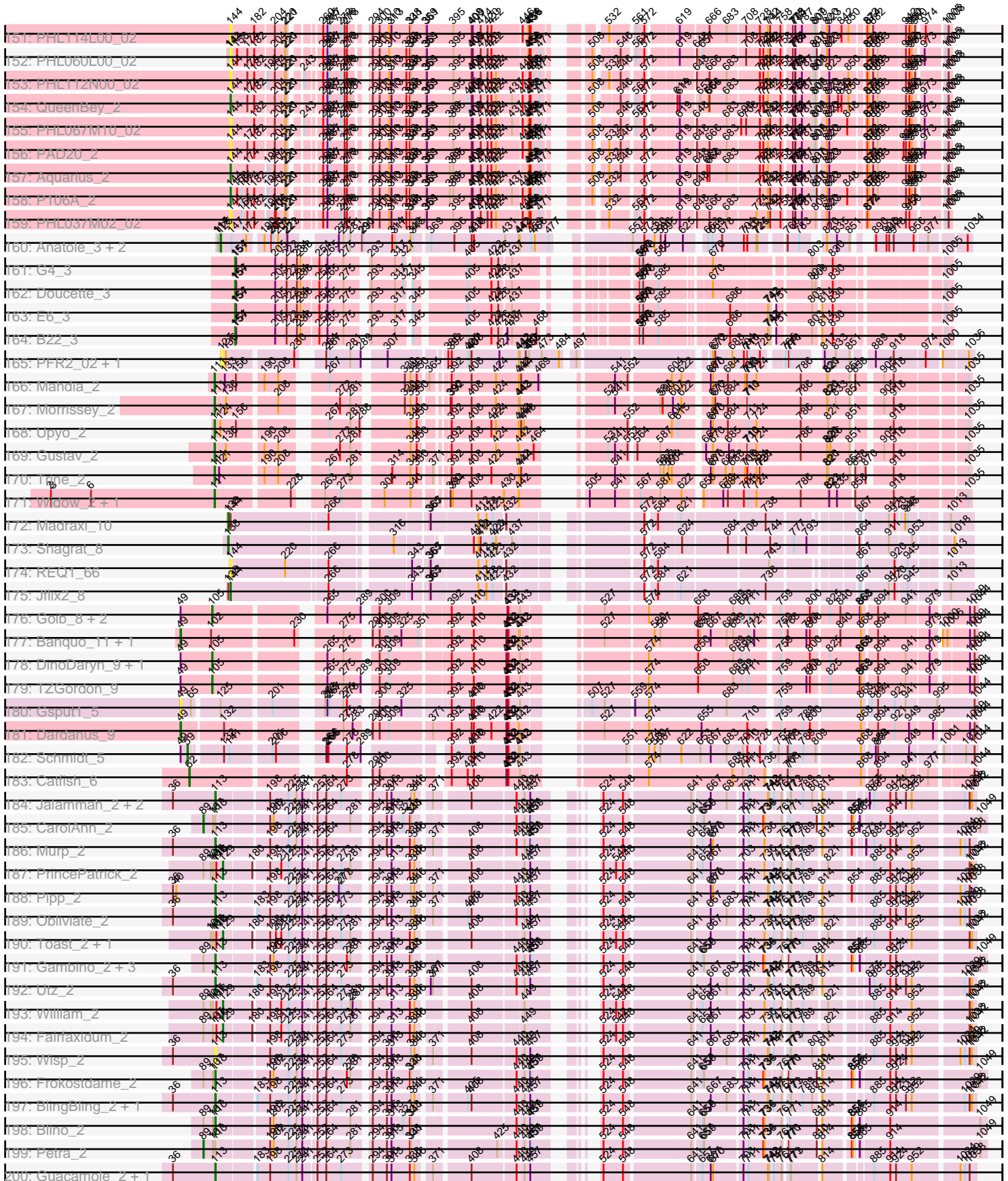


Pham 167856



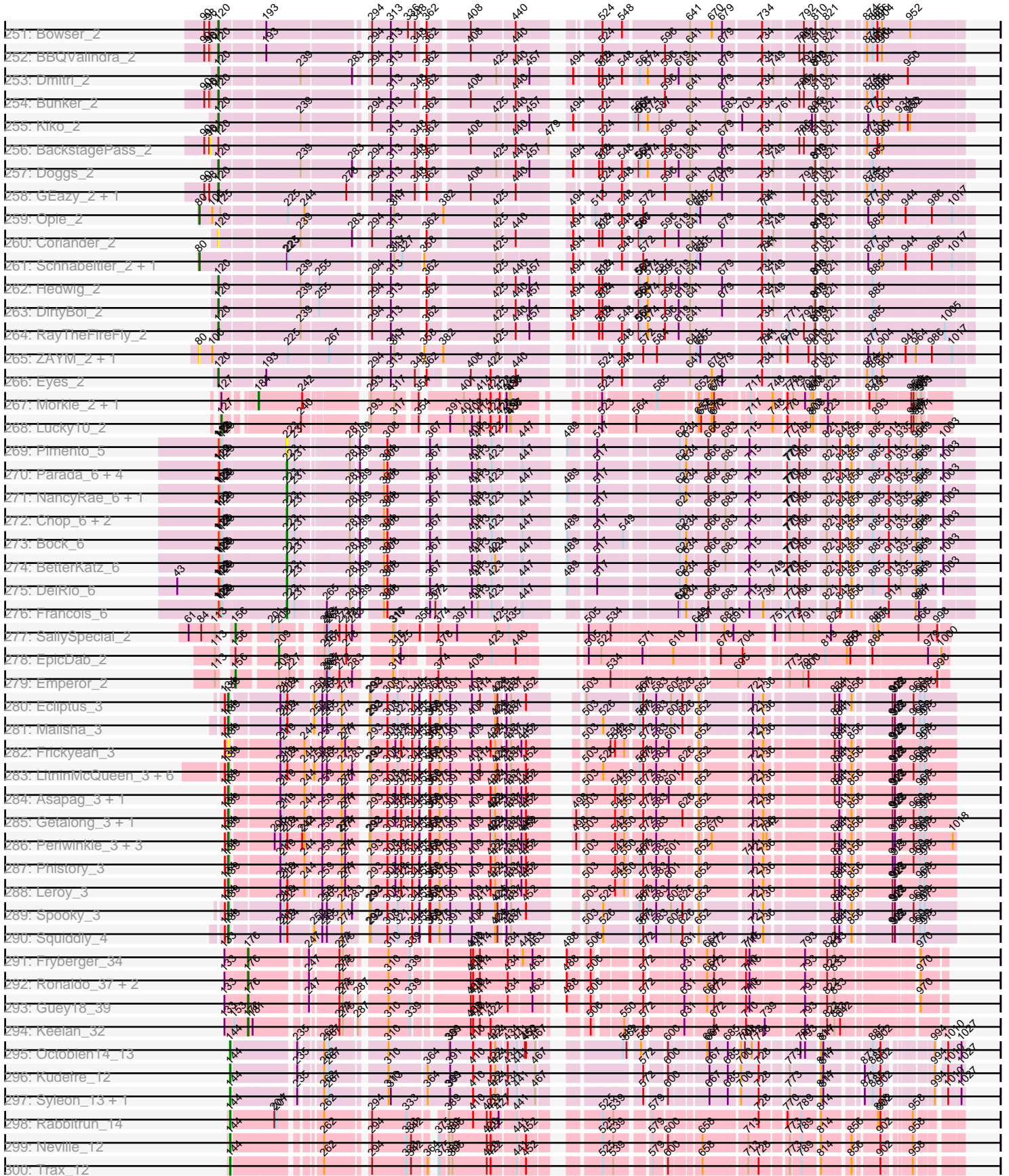


Pham 167856

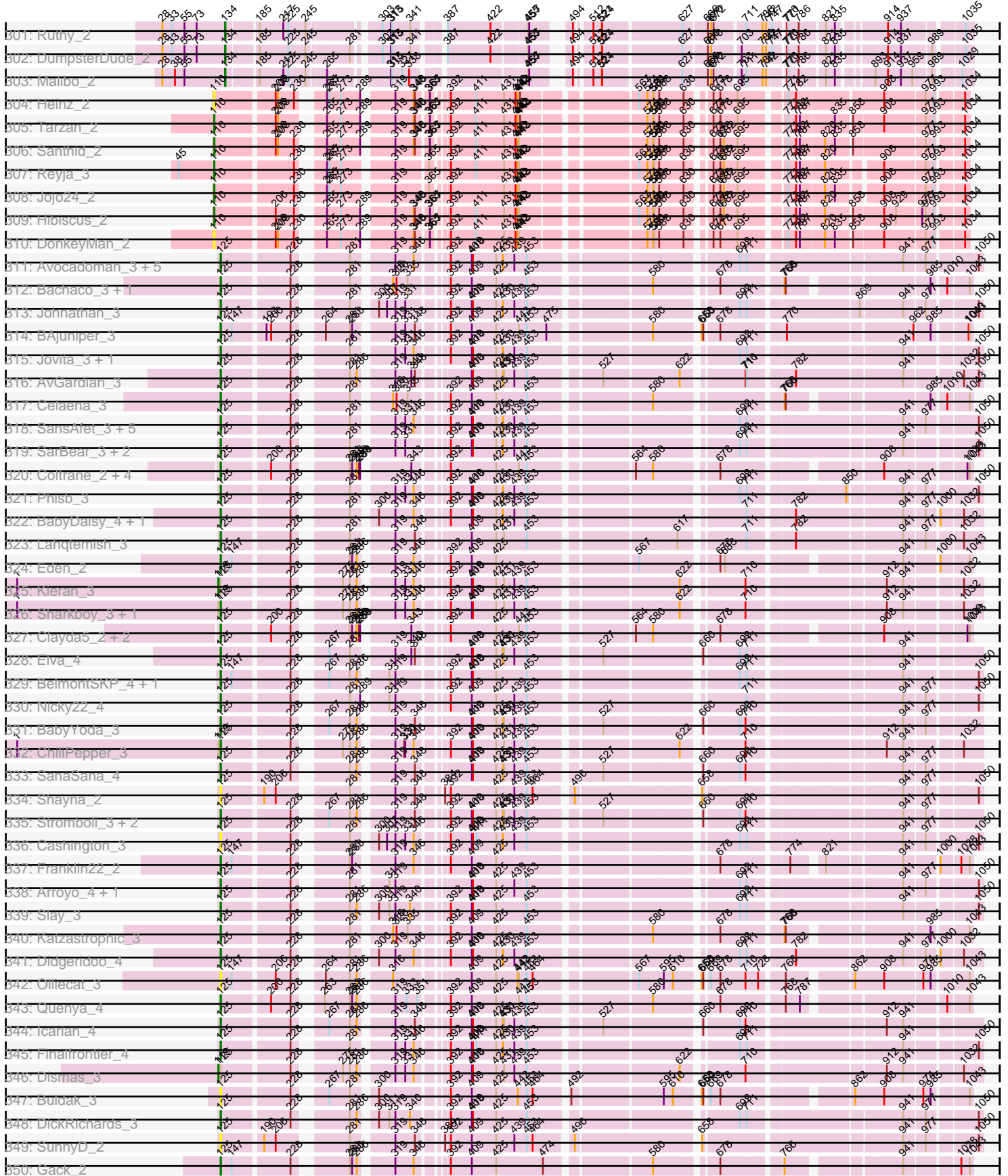


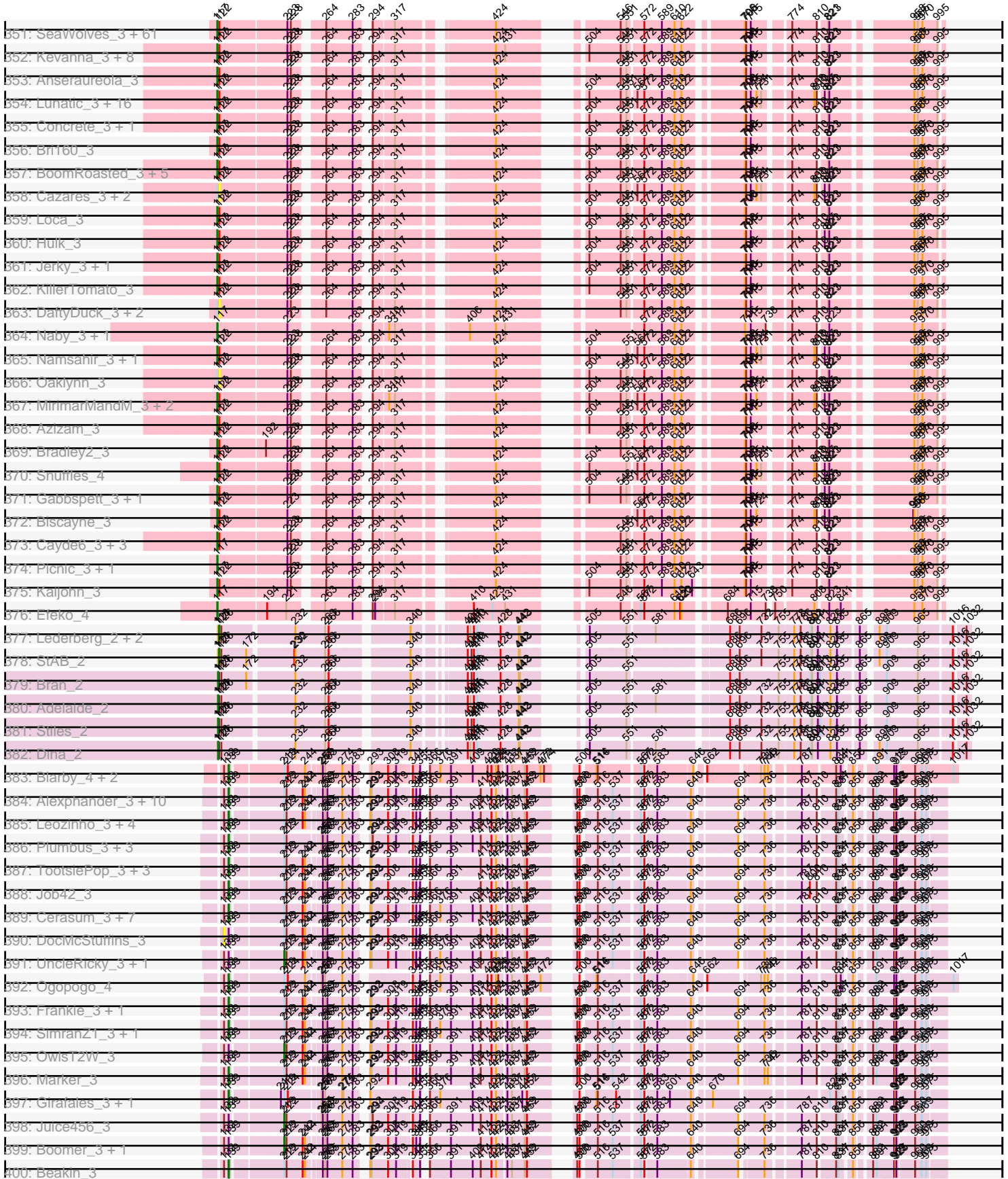


Pham 167856



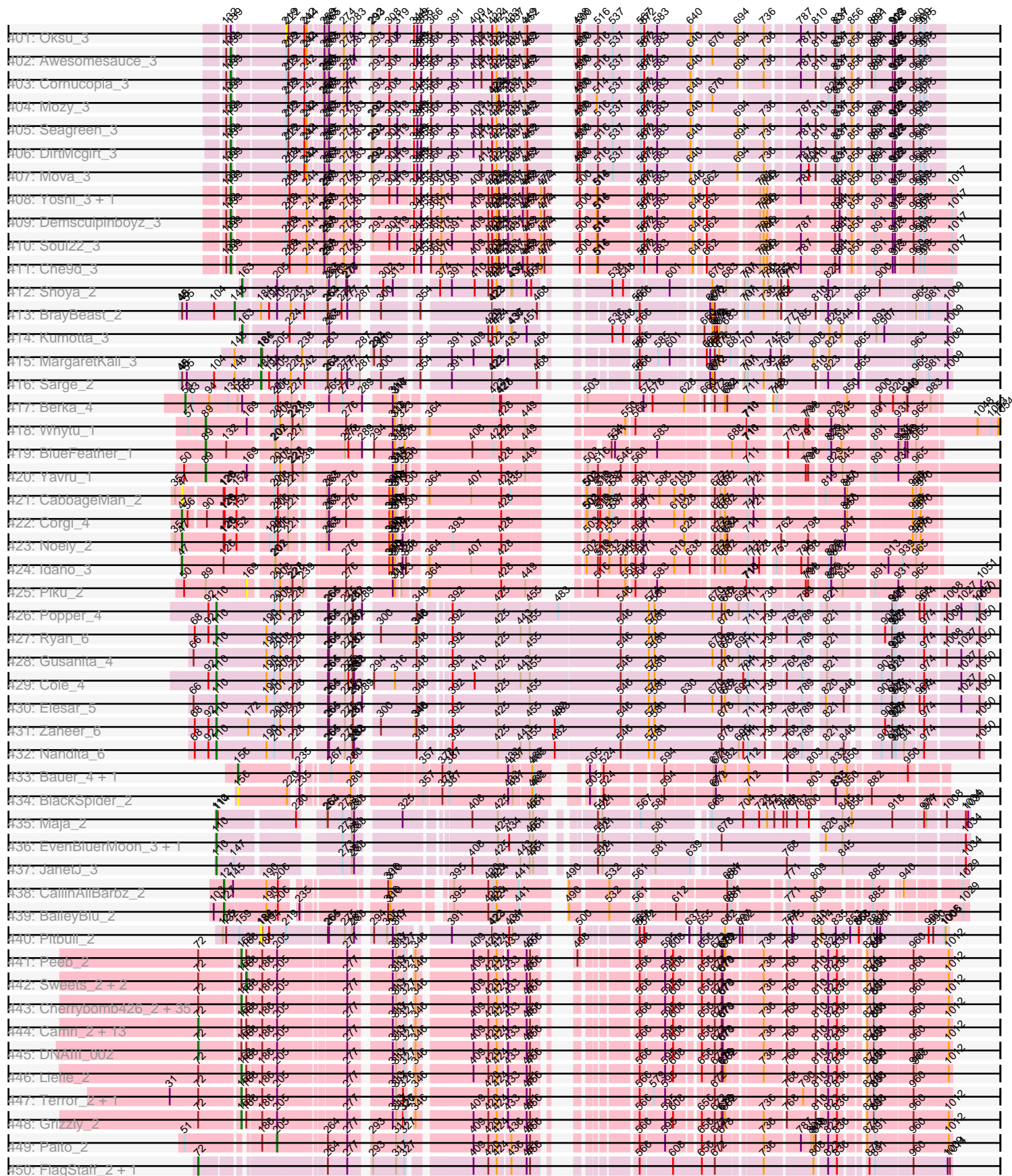
Pham 167856



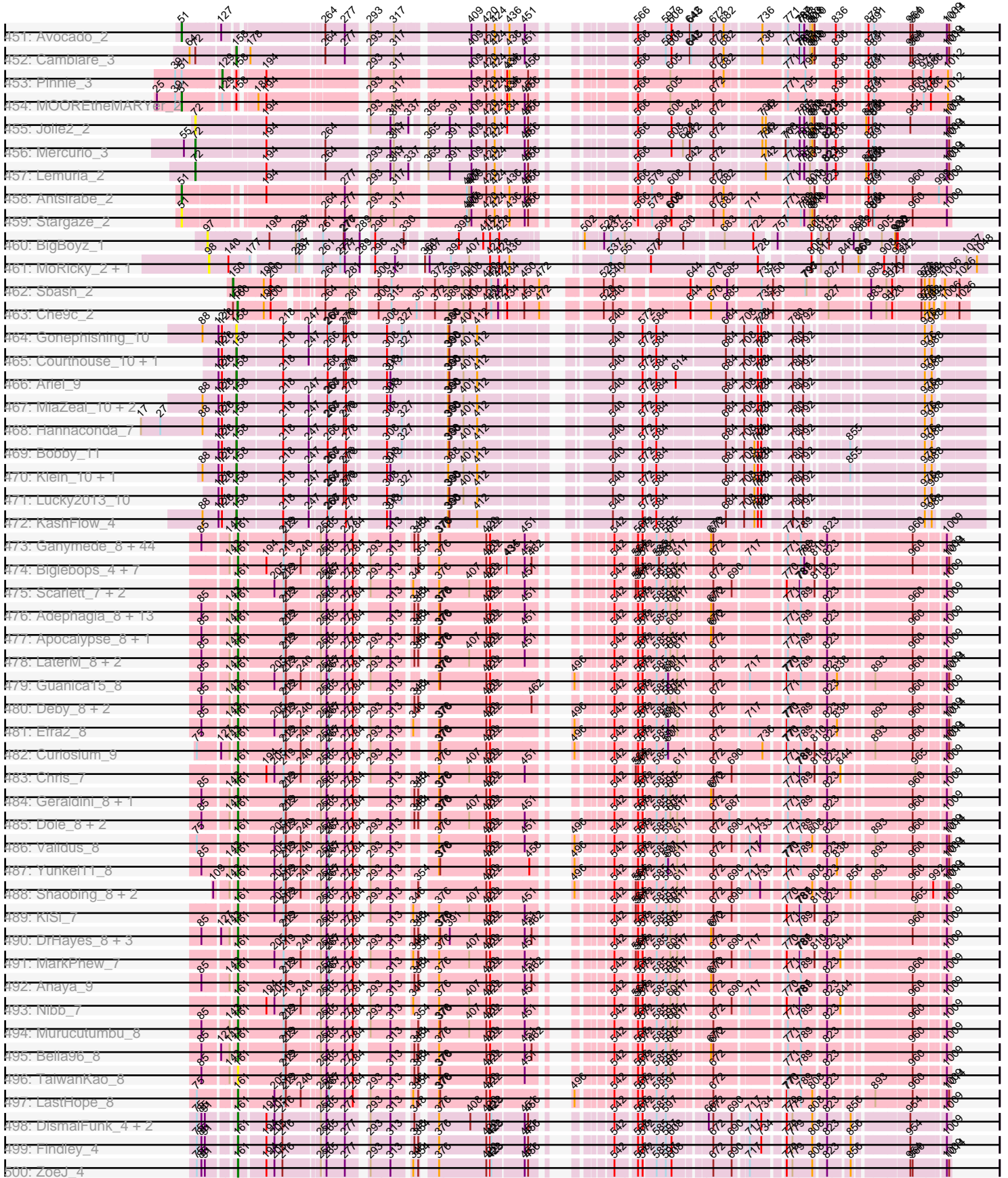




Pham 167856



Pham 167856

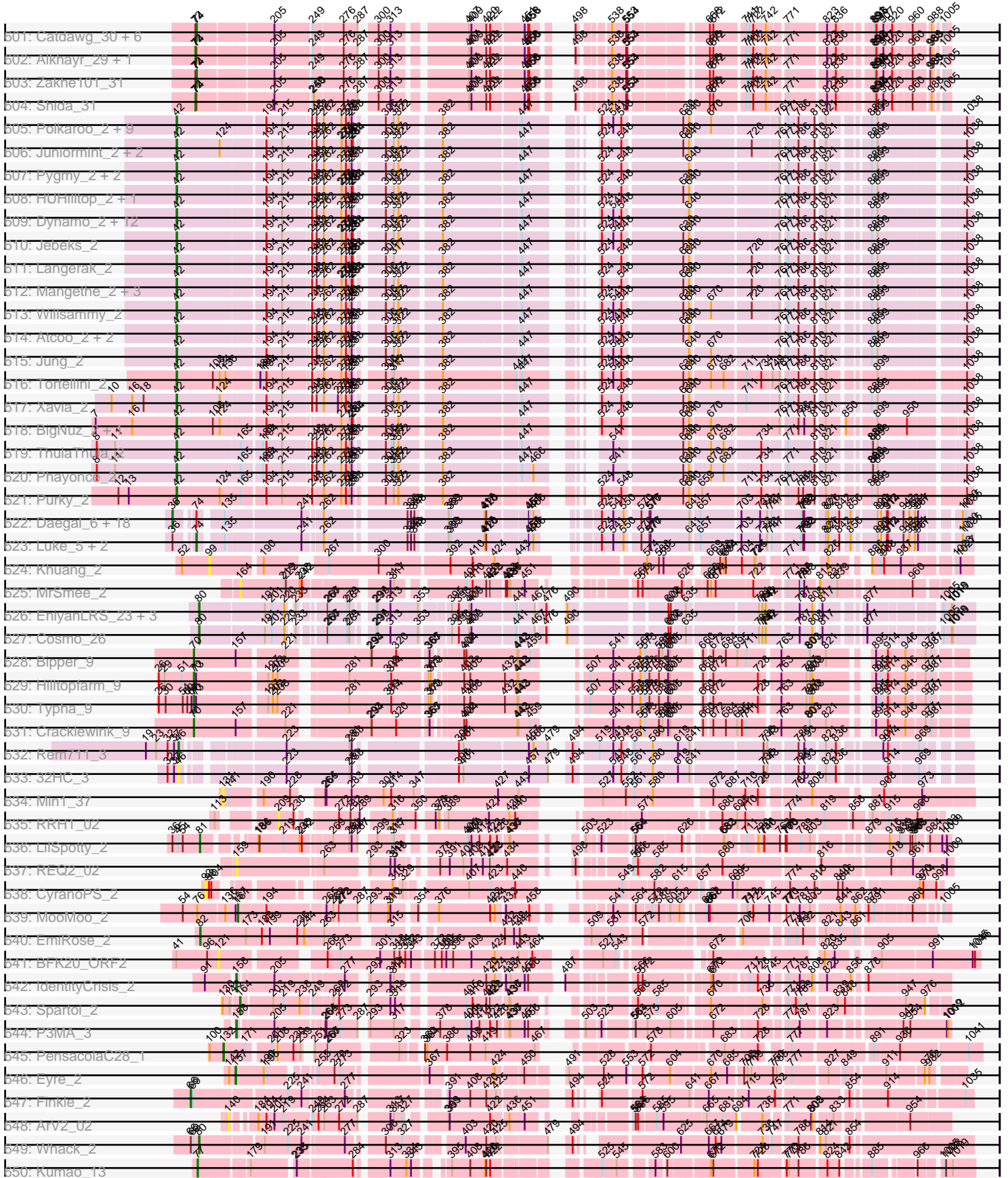


Pham 167856

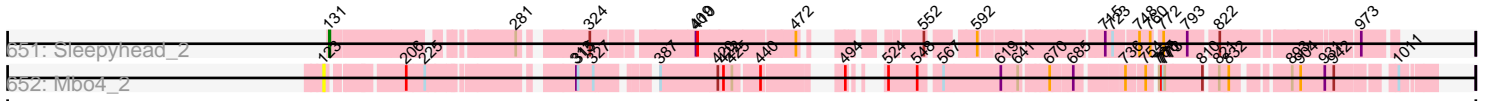
501: Strobilo_4		161	194	256	271	293	313	384	376	408	542	550	555	586	662	680	713	779	808	823	886	954	1009
502: BoostSeason_4		161	194	256	271	293	313	384	376	408	542	550	555	586	662	680	713	779	808	823	886	954	1009
503: Milly_4		161	194	256	271	293	313	384	376	408	542	550	555	586	662	680	713	779	808	823	886	954	1009
504: TM4_4		161	194	256	271	293	313	384	376	408	542	550	555	586	662	680	713	779	808	823	886	954	1009
505: Mulasa_4	11	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
506: Keshu_7 + 1	11	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
507: IndieTrouble_6		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
508: ShedlockHolmes_7	91	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
509: Pharb_7		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
510: Pixie_7		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
511: TBond007_7	11	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
512: MacnCheese_8		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
513: Flonhorth_9 + 3		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
514: Y2_09 + 1		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
515: Cheetbro_9 + 4		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
516: MissDaisy_9 + 2		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
517: Ruthiejr_8		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
518: Eponine_9		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
519: OmniCritical_9		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
520: SamScheppers_7		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
521: Juliette_9		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
522: Agent47_6 + 2		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
523: AileyCat_6 + 2		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
524: Rando14_6	75	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
525: Gengar_6 + 6		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
526: Larva_6		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
527: Omnicron_6		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
528: Collard_6 + 3	75	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
529: Waterfoul_6		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
530: Edugator_5		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
531: Cain_7 + 2		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
532: Marshawn_9		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
533: Ekidam_5	75	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
534: Sunflower1121_6 + 1		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
535: Ximentita_8		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
536: Amohnton_7 + 2	75	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
537: Elite_5		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
538: Unicorn_7 + 1		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
539: Krueger_7		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
540: Terra_7		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
541: Syra333_7	88	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
542: Yuna_8	75	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
543: Amgine_6	75	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
544: SirPhilip_7	75	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
545: Fellerhead_7	75	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
546: TCll_7		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
547: Aminay_6		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
548: Bollgate_5	91	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
549: CicholasNage_4 + 3	91	161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009
550: LeBron_4		161	194	256	271	293	313	384	376	401	542	550	555	586	662	680	713	779	808	823	886	954	1009



Pham 167856



# Pham 167856



Track	Coordinate
Sleepyhead_2	551
Mb04_2	552
Marker	131
Marker	208
Marker	226
Marker	281
Marker	311
Marker	324
Marker	321
Marker	381
Marker	400
Marker	425
Marker	440
Marker	472
Marker	494
Marker	524
Marker	540
Marker	552
Marker	561
Marker	592
Marker	619
Marker	641
Marker	670
Marker	685
Marker	715
Marker	731
Marker	748
Marker	760
Marker	793
Marker	822
Marker	842
Marker	884
Marker	912
Marker	973
Marker	1011

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 167856 Report

This analysis was run 07/09/24 on database version 566.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 167856 has 1298 members, 124 are drafts.

Phages represented in each track:

- Track 1 : JustASigh\_2
- Track 2 : Weirdo19\_2
- Track 3 : PinkFriday\_2
- Track 4 : Scuttle\_5
- Track 5 : Vallejo\_5
- Track 6 : Carpal\_5, Korra\_5, Dino\_5, Zorro\_5, TattModd\_5
- Track 7 : Misaeng\_5
- Track 8 : Urla\_2
- Track 9 : HeadNerd\_2, Huckleberry\_2
- Track 10 : Makoto\_2
- Track 11 : Kittykat\_2
- Track 12 : Nubia\_5
- Track 13 : Riovina\_2, Eunoia\_2, Aledel\_2, OMalley\_2
- Track 14 : Joann\_5
- Track 15 : HunterDalle\_2, Vulture\_2
- Track 16 : GreenHearts\_5
- Track 17 : Sergei\_2, Herb\_2, Maria1952\_2, Temper16\_2, KingBob\_2
- Track 18 : Pterodactyl\_2
- Track 19 : Beethoven\_5, Riverdale\_5
- Track 20 : ChewChew\_2
- Track 21 : Savage2526\_5
- Track 22 : AustinPowers\_2
- Track 23 : DrRobert\_2
- Track 24 : MrGloopy\_5
- Track 25 : Lennox\_2
- Track 26 : Nancia\_2, Bodacious\_2, LilStuart\_2, Lasagna\_2, CristinaYang\_2
- Track 27 : Immaculata\_5
- Track 28 : Lucy\_2
- Track 29 : Gisselle\_2, DreamTeam\_2, Preamble\_2
- Track 30 : Supakev\_2, Pumancara\_2
- Track 31 : MeganNoll\_5, RAP15\_5
- Track 32 : Greenhouse\_5
- Track 33 : BigMack\_2

- Track 34 : Wawa\_5, Glenn\_5
- Track 35 : AppleCider\_5
- Track 36 : Huntingdon\_5, RcigaStruga\_5
- Track 37 : PitaDog\_2
- Track 38 : Fluke\_5
- Track 39 : Albanese\_5
- Track 40 : OurGirlNessie\_2
- Track 41 : Christian\_2
- Track 42 : Potatoes\_5, Cholula\_5
- Track 43 : Litotes\_5
- Track 44 : Moki\_2
- Track 45 : CallieOMalley\_5
- Track 46 : MamaPearl\_2, EstebanJulior\_2
- Track 47 : Canowicakte\_5, Suppi\_5, Wayne\_5
- Track 48 : Daiboju\_2
- Track 49 : Rozby\_5
- Track 50 : Lakshmi\_5
- Track 51 : Chridison\_2
- Track 52 : Oxynfrius\_5
- Track 53 : BrotherBLo\_5, Kalizoi\_5
- Track 54 : PartyCup\_5
- Track 55 : Jumboset\_5
- Track 56 : WonderBoy\_2
- Track 57 : Bennie\_2
- Track 58 : TymAbreu\_4, Hunnie\_4, Ronnie\_4, Stratus\_4, Azathoth\_4, Mariposa\_4, Courtney3\_4, TinoCrisci\_4, Guntur\_4, Sandman\_4, LouisXIV\_4, Chestnut\_4, Prospero\_4, Jessica\_5, Massimo\_4, Inspire2\_4, Maggie\_4, Arby\_4, Copper\_4, Dewayne\_4, CGermain\_4, Moloch\_4
- Track 59 : Toulouse\_3, Seume\_4
- Track 60 : Saphira\_4, Swenson\_4, StewieGriff\_4, Blair\_4, Elkhorn\_4, Laila\_5, KylieMac\_5, Lore\_4
- Track 61 : Link\_4, Sourignavong\_5
- Track 62 : Yank\_4, Decurro\_4, Muttie\_4
- Track 63 : Taj14\_4
- Track 64 : SerialPhiller\_2
- Track 65 : Kels\_2
- Track 66 : Arielagos\_2
- Track 67 : Abidatro\_3
- Track 68 : Chickaboom\_2
- Track 69 : Vulpecula\_3
- Track 70 : TaylorSipht\_3
- Track 71 : Jamun\_3
- Track 72 : Ruchi\_3
- Track 73 : Galaxy\_3
- Track 74 : Orcanus\_3
- Track 75 : Basilisk\_3
- Track 76 : Eesa\_3
- Track 77 : Brynnie\_3
- Track 78 : Amelia\_4, Cote\_4
- Track 79 : Lunar\_4, Melons\_4
- Track 80 : Polka\_3
- Track 81 : Coral\_3
- Track 82 : Daob\_4



- Track 83 : Kuleana\_3
- Track 84 : HannahPhantana\_4
- Track 85 : Kepler\_3
- Track 86 : LittleTokyo\_3
- Track 87 : Leona\_2
- Track 88 : Juno112\_2
- Track 89 : KHumphrey\_2
- Track 90 : PhluffyCoco\_2, RedFox\_2
- Track 91 : Andrew\_3
- Track 92 : Renna12\_3
- Track 93 : MooKitty\_3
- Track 94 : Sputnik\_3, Atraxa\_3
- Track 95 : Adaia\_3
- Track 96 : AbbyDaisy\_3
- Track 97 : Raqqa\_3
- Track 98 : Shawty\_2
- Track 99 : TG1\_2
- Track 100 : Lilbooboo\_2
- Track 101 : Samora\_2
- Track 102 : Vash\_2
- Track 103 : phiBT1\_33
- Track 104 : Euratis\_2
- Track 105 : Heather\_2
- Track 106 : Sebastisaurus\_2
- Track 107 : RemusLoopin\_2
- Track 108 : LilBandit\_2
- Track 109 : SKKY\_2
- Track 110 : Enoki\_2
- Track 111 : P106L\_2, P106I\_2, P106M\_2, P106C\_2
- Track 112 : DrParker\_2
- Track 113 : Attacne\_2
- Track 114 : PAS50\_2
- Track 115 : Enochoraptor\_2
- Track 116 : PHL113M01\_02
- Track 117 : Solid\_2
- Track 118 : Kubed\_2
- Track 119 : Ouroboros\_2
- Track 120 : P101A\_2
- Track 121 : P107C\_2, ATCC29399BC\_2
- Track 122 : Wizzo\_2
- Track 123 : P104B\_2
- Track 124 : PHL010M04\_02
- Track 125 : MEAK\_2
- Track 126 : P100.1\_2
- Track 127 : Cota\_2, Keiki\_2
- Track 128 : P100A\_2
- Track 129 : Pirate\_2
- Track 130 : P1.1\_2
- Track 131 : Stormborn\_2
- Track 132 : PA6\_2
- Track 133 : Moyashi\_2
- Track 134 : BruceLethal\_2
- Track 135 : P107A\_2

- Track 136 : PHL071N05\_02
- Track 137 : P9.1\_2
- Track 138 : Procrass1\_2
- Track 139 : P100D\_2
- Track 140 : ATCC29399BT\_2
- Track 141 : Leviosa\_2
- Track 142 : P105\_2
- Track 143 : P14.4\_2
- Track 144 : PHL111M01\_02
- Track 145 : MrAK\_2
- Track 146 : Supernova\_2
- Track 147 : P108C\_2
- Track 148 : Rileysaurus\_2
- Track 149 : P104A\_2
- Track 150 : Lauchelly\_2
- Track 151 : PHL114L00\_02
- Track 152 : PHL060L00\_02
- Track 153 : PHL112N00\_02
- Track 154 : QueenBey\_2
- Track 155 : PHL067M10\_02
- Track 156 : PAD20\_2
- Track 157 : Aquarius\_2
- Track 158 : P106A\_2
- Track 159 : PHL037M02\_02
- Track 160 : Anatole\_3, B3\_3, E1\_3
- Track 161 : G4\_3
- Track 162 : Doucette\_3
- Track 163 : E6\_3
- Track 164 : B22\_3
- Track 165 : PFR2\_02, PFR1\_02
- Track 166 : Mahdia\_2
- Track 167 : Morrissey\_2
- Track 168 : Upyo\_2
- Track 169 : Gustav\_2
- Track 170 : Trine\_2
- Track 171 : Widow\_2, Puppies\_2
- Track 172 : Madraxi\_10
- Track 173 : Shagrat\_8
- Track 174 : REQ1\_66
- Track 175 : Jflix2\_8
- Track 176 : Goib\_8, Vendetta\_7, Splinter\_7
- Track 177 : Banquo\_11, TinaLin\_10
- Track 178 : DinoDaryn\_9, Huffy\_9
- Track 179 : TZGordon\_9
- Track 180 : Gspat1\_5
- Track 181 : Dardanus\_9
- Track 182 : Schmidt\_5
- Track 183 : Catfish\_6
- Track 184 : Jalamah\_2, Lysidious\_2, Samba\_2
- Track 185 : CarolAnn\_2
- Track 186 : Murp\_2
- Track 187 : PrincePatrick\_2
- Track 188 : Pipp\_2

- Track 189 : Obliviate\_2
- Track 190 : Toast\_2, PCoral7\_2
- Track 191 : Gambino\_2, Azula\_2, Blueberry\_2, MissRona\_2
- Track 192 : Utz\_2
- Track 193 : William\_2
- Track 194 : Fairfaxidum\_2
- Track 195 : Wisp\_2
- Track 196 : Frokostdame\_2
- Track 197 : BlingBling\_2, Hitter\_2
- Track 198 : Blino\_2
- Track 199 : Petra\_2
- Track 200 : Guacamole\_2, JasperJr\_2
- Track 201 : Zarbodnamra\_2, Melba\_2, CaptainKirk2\_2, MintFen\_2, Archis\_2, Barco\_2, Delian\_2
- Track 202 : Begonia\_2, Malachai\_2
- Track 203 : KappaFarmDelta\_2
- Track 204 : Walrus\_2
- Track 205 : Wocket\_2
- Track 206 : PhrostedPhlake\_2
- Track 207 : JuJu\_2
- Track 208 : Fenry\_2
- Track 209 : Mellie\_2
- Track 210 : ZiggyZoo\_2
- Track 211 : UmaThurman\_2
- Track 212 : Jeanie\_2, McGonagall\_2
- Track 213 : Coeur\_2
- Track 214 : GRU3\_2
- Track 215 : Rahul\_2
- Track 216 : GMA5\_2
- Track 217 : Schiebs\_2
- Track 218 : Lton\_2
- Track 219 : Ohgeesy\_2
- Track 220 : EdnaMode\_2, Pickett\_2, Lamberg\_2, Nettuno\_2
- Track 221 : Attis\_2, Bjanes7\_2, Yeet412\_2, LordFarquaad\_2, SoilAssassin\_2
- Track 222 : Vasanti\_2
- Track 223 : Ebert\_2, Whiteclaw\_2, Cynthia\_2, Haley23\_2, TuertoX\_2, Clap\_2, GemG\_2, Mocha12\_2, Gizermo\_2, Sproutie\_2, Savage\_2
- Track 224 : Matteo\_2
- Track 225 : Sahara\_2
- Track 226 : JCole\_2
- Track 227 : BaxterFox\_2
- Track 228 : Yeezy\_2
- Track 229 : PantheRoc\_1
- Track 230 : Hortense\_2, Howe\_2, Twinkle\_2, Adora\_2, Shlim410\_2
- Track 231 : Clark\_3, Beenie\_3, MichaelScott\_3, Easley\_3
- Track 232 : Oregano\_2
- Track 233 : Dolores\_3, WinkNick\_3
- Track 234 : Dorito\_2
- Track 235 : DobbysSock\_2
- Track 236 : Suerte\_2
- Track 237 : PhriskyACE\_2
- Track 238 : Samman98\_3
- Track 239 : Powerball\_2

- Track 240 : Annalisa\_3
- Track 241 : Thimann\_3
- Track 242 : Sekhmet\_3
- Track 243 : Denise\_2
- Track 244 : OneDirection\_2
- Track 245 : Moosehead\_2
- Track 246 : Faith5x5\_2
- Track 247 : Sidious\_2
- Track 248 : Ghobes\_1
- Track 249 : Archimedes\_1
- Track 250 : Sapo\_1
- Track 251 : Bowser\_2
- Track 252 : BBQValindra\_2
- Track 253 : Dmitri\_2
- Track 254 : Bunker\_2
- Track 255 : Kiko\_2
- Track 256 : BackstagePass\_2
- Track 257 : Doggs\_2
- Track 258 : GEazy\_2, HannahD\_2
- Track 259 : Opie\_2
- Track 260 : Coriander\_2
- Track 261 : Schnabeltier\_2, MagicMan\_2
- Track 262 : Hedwig\_2
- Track 263 : DirtyBoi\_2
- Track 264 : RayTheFireFly\_2
- Track 265 : ZAYM\_2, TaronosaurusRx\_2
- Track 266 : Eyes\_2
- Track 267 : Morkie\_2, PhorbesPhlower\_2
- Track 268 : Lucky10\_2
- Track 269 : Pimento\_5
- Track 270 : Parada\_6, Nadeem\_6, WheatThin\_6, Brylie\_6, Mulch\_6
- Track 271 : NancyRae\_6, Ayotoya\_6
- Track 272 : Chop\_6, Hamood\_6, GrandSlam\_6
- Track 273 : Bock\_6
- Track 274 : BetterKatz\_6
- Track 275 : DelRio\_6
- Track 276 : Francois\_6
- Track 277 : SallySpecial\_2
- Track 278 : EpicDab\_2
- Track 279 : Emperor\_2
- Track 280 : Ecliptus\_3
- Track 281 : Malisha\_3
- Track 282 : Frickyeah\_3
- Track 283 : LitninMcQueen\_3, Budski\_3, Kamaru\_3, Holliday\_3, Phabuloso\_3, ODay\_3, CheeseTouch\_3
- Track 284 : Asapag\_3, BENtherdunthat\_3
- Track 285 : Getalong\_3, Whitney\_3
- Track 286 : Periwinkle\_3, Kenna\_3, Lutum\_3, Horus\_3
- Track 287 : Phistory\_3
- Track 288 : Leroy\_3
- Track 289 : Spooky\_3
- Track 290 : Squiddly\_4
- Track 291 : Fryberger\_34

- Track 292 : Ronaldo\_37, Volt\_36, Ziko\_37
- Track 293 : Guey18\_39
- Track 294 : Keelan\_32
- Track 295 : Octobien14\_13
- Track 296 : Kudefre\_12
- Track 297 : Syleon\_13, Sephiroth\_13
- Track 298 : Rabbitrun\_14
- Track 299 : Neville\_12
- Track 300 : Trax\_12
- Track 301 : Ruthy\_2
- Track 302 : DumpsterDude\_2
- Track 303 : Malibo\_2
- Track 304 : Heinz\_2
- Track 305 : Tarzan\_2
- Track 306 : Santhid\_2
- Track 307 : Reyja\_3
- Track 308 : Jojo24\_2
- Track 309 : Hibiscus\_2
- Track 310 : DonkeyMan\_2
- Track 311 : Avocadoman\_3, Abigail\_3, Burritobowl\_3, Albright\_3, LimaBean\_3, Doobus\_3
- Track 312 : Bachaco\_3, FlameThrower\_3
- Track 313 : Johnathan\_3
- Track 314 : BAjuniper\_3
- Track 315 : Jovita\_3, Eula\_3
- Track 316 : AvGardian\_3
- Track 317 : Celaena\_3
- Track 318 : SansAfet\_3, BubbaBear\_3, Albedo\_3, CroZenni\_3, Lynlen\_3, Kenzers\_3
- Track 319 : SarBear\_3, Swervy\_3, TukTuk\_3
- Track 320 : Coltrane\_2, Skylord\_2, Rollins\_2, Brahms\_2, Bernstein\_2
- Track 321 : Phisb\_3
- Track 322 : BabyDaisy\_4, IndyLu\_3
- Track 323 : Lahqtemish\_3
- Track 324 : Eden\_2
- Track 325 : Kieran\_3
- Track 326 : Sharkboy\_3, Rona\_3
- Track 327 : Clayda5\_2, Armstrong\_2, Vitas\_2
- Track 328 : Elva\_4
- Track 329 : BelmontSKP\_4, AnnaLie\_4
- Track 330 : Nicky22\_4
- Track 331 : BabyYoda\_3
- Track 332 : ChiliPepper\_3
- Track 333 : SanaSana\_4
- Track 334 : Shayna\_2
- Track 335 : Stromboli\_3, Stoor\_3, DirtyBubble\_3
- Track 336 : Cashington\_3
- Track 337 : Franklin22\_2
- Track 338 : Arroyo\_4, QMacho\_4
- Track 339 : Slay\_3
- Track 340 : Katzastrophic\_3
- Track 341 : Didgeridoo\_4
- Track 342 : Olliecat\_3

- Track 343 : Quenya\_4
- Track 344 : Icarian\_4
- Track 345 : Finalfrontier\_4
- Track 346 : Dismas\_3
- Track 347 : Buldak\_3
- Track 348 : DickRichards\_3
- Track 349 : SunnyD\_2
- Track 350 : Gack\_2
- Track 351 : SeaWolves\_3, Goobery\_3, Maneater\_3, Horacetta\_3, Eightball\_3, Aztec\_3, Gillker\_3, Dongwon\_3, Chatham\_3, JoBros\_3, BinkBonk\_3, Octopus\_3, EdElric\_3, Gardevoir\_3, Scrunchy\_3, Charbie\_3, Slentz\_3, Astro16\_3, TimoTea\_3, LemonPepper\_3, Rhogar\_3, Cheesecake\_3, Alucard\_3, Scamander\_3, Burgy\_3, Minima\_3, ManAs\_3, Jahseh\_3, TeddyBoy\_3, Avvas\_3, Owens\_3, SantasSleigh\_3, Dooby\_3, KyriosFaba\_3, Jannah\_3, Erin\_3, GoldenBlanche\_3, NeumannU\_3, Pondwater\_3, PaoPu\_3, Yubaba\_3, Josuke\_3, Godfather\_3, Rhysand\_3, Aries55\_3, Otwor\_3, Majesty\_3, Luxx\_3, JaimeB\_3, Ciel\_3, Vanisius\_3, LionelHutz\_3, Witch\_3, RoscoWindex\_3, LaviMo\_3, Sara\_3, BarBear\_3, Kojax4\_3, BurtonThePup\_3, YertPhresh\_3, Danimal\_3, Danno\_3
- Track 352 : Kevanna\_3, MelBee03\_3, Bodhi17\_3, KayPaulus\_3, Sippinontea\_3, Livingwater\_3, Douggie\_3, Quaker\_3, Wolfpack\_3
- Track 353 : Anseraureola\_3
- Track 354 : Lunatic\_3, Elspeth\_3, PuffyCat\_3, HarperAnne\_3, Slizam\_3, TinyTruffula\_3, Miaurora\_3, Bintii\_3, JooneeDee\_3, Bullzi2019\_3, Clownery\_3, Trireme\_3, TomBrady12\_3, Nobel\_3, Ekko14\_3, Niffler\_3, Noelani\_3
- Track 355 : Concrete\_3, Belthelas\_3
- Track 356 : Bri160\_3
- Track 357 : BoomRoasted\_3, McShie\_3, Leafy\_3, MrGreen\_3, BrokMonster\_3, JRok\_3
- Track 358 : Cazares\_3, Stem\_3, Yami\_3
- Track 359 : Loca\_3
- Track 360 : Hulk\_3
- Track 361 : Jerky\_3, VitulaEligans\_3
- Track 362 : KillerTomato\_3
- Track 363 : DaftyDuck\_3, Sage7\_3, MasterPitts\_3
- Track 364 : Naby\_3, BonaeVitae\_3
- Track 365 : Namsahir\_3, Publix\_3
- Track 366 : Oaklynn\_3
- Track 367 : MirimarMandM\_3, Upsilon\_3, PoRanda\_3
- Track 368 : Azizam\_3
- Track 369 : Bradley2\_3
- Track 370 : Snuffles\_4
- Track 371 : Gabbspett\_3, Hernandez44\_3
- Track 372 : Biscayne\_3
- Track 373 : Cayde6\_3, Baine\_3, Yasuo\_3, Lola20\_3
- Track 374 : Picnic\_3, Puddles3\_3
- Track 375 : Kaijohn\_3
- Track 376 : Efeko\_4
- Track 377 : Lederberg\_2, Troy\_2, SamW\_2
- Track 378 : StAB\_2
- Track 379 : Bran\_2
- Track 380 : Adelaide\_2
- Track 381 : Stiles\_2
- Track 382 : Dina\_2

- Track 383 : Blarby\_4, Zapner\_4, Jabbawokkie\_4
- Track 384 : Alexphander\_3, Spikelee\_3, Stap\_3, Bobi\_3, DosHalletts\_3, Totinger\_3, Starceвич\_3, Rialto\_3, JalFarm20\_3, Ramsey\_3, Tootsieroll\_3
- Track 385 : Leozinho\_3, BuzzLyseyear\_3, DaWorst\_3, RockyHorror\_3, Madiba\_3
- Track 386 : Plumbus\_3, Hegedechwinu\_3, Kimberlium\_3, Flathead\_3
- Track 387 : TootsiePop\_3, Piper2020\_3, Misha28\_3, ChickenDinner\_3
- Track 388 : Job42\_3
- Track 389 : Cerasum\_3, Kingsley\_3, Enby\_3, Sarma624\_3, Lorde\_3, Coco12\_3, BigPhil\_3, Velveteen\_3
- Track 390 : DocMcStuffins\_3
- Track 391 : UncleRicky\_3, Drago\_3
- Track 392 : Ogopogo\_4
- Track 393 : Frankie\_3, Squirty\_3
- Track 394 : SimranZ1\_3, Pollywog\_3
- Track 395 : OwlsT2W\_3
- Track 396 : Marker\_3
- Track 397 : Girafales\_3, Quico\_3
- Track 398 : Juice456\_3
- Track 399 : Boomer\_3, LittleShirley\_3
- Track 400 : Beakin\_3
- Track 401 : Oksu\_3
- Track 402 : Awesomesauce\_3
- Track 403 : Cornucopia\_3
- Track 404 : Mozy\_3
- Track 405 : Seagreen\_3
- Track 406 : DirtMcgirt\_3
- Track 407 : Mova\_3
- Track 408 : Yoshi\_3, Avani\_3
- Track 409 : Demsculpinboyz\_3
- Track 410 : Soul22\_3
- Track 411 : Che9d\_3
- Track 412 : Shoya\_2
- Track 413 : BrayBeast\_2
- Track 414 : Kumotta\_3
- Track 415 : MargaretKali\_3
- Track 416 : Sarge\_2
- Track 417 : Berka\_4
- Track 418 : Whytu\_1
- Track 419 : BlueFeather\_1
- Track 420 : Yavru\_1
- Track 421 : CabbageMan\_2
- Track 422 : Corgi\_4
- Track 423 : Noely\_2
- Track 424 : Idaho\_3
- Track 425 : Piku\_2
- Track 426 : Popper\_4
- Track 427 : Ryan\_6
- Track 428 : Gusanita\_4
- Track 429 : Cole\_4
- Track 430 : Elesar\_5
- Track 431 : Zaheer\_6
- Track 432 : Nandita\_6
- Track 433 : Bauer\_4, Zucker\_3

- Track 434 : BlackSpider\_2
- Track 435 : Maja\_2
- Track 436 : EvenBluerMoon\_3, Aoka\_3
- Track 437 : JanetJ\_3
- Track 438 : CallinAllBarbz\_2
- Track 439 : BaileyBlu\_2
- Track 440 : Pitbull\_2
- Track 441 : Peeb\_2
- Track 442 : Sweets\_2, ShaboiShabazz\_2, TomBrady\_2
- Track 443 : Cherrybomb426\_2, Avrafan\_2, BruceB\_2, Hope\_2, Phish\_2, Hotshotbaby7\_2, CassieYates\_2, Coleslaw\_2, Kasen3\_2, ECartman\_2, Halo\_2, Jane\_2, Jonghyun\_2, Renaissance\_2, Rabbs\_2, Cedasite\_2, Periodt\_2, BQuat\_2, Annihilator\_2, GoldenAsh\_2, Crespo\_2, Gomashi\_2, ZoMa\_2, OctaviousRex\_2, BPs\_2, Barkley26\_2, Olga\_2, Phreak\_2, Angel\_2, Aroostook\_2, JorRay\_2, LouisV14\_2, Jolene\_2, Kareem\_2, Sneeze\_2, Chance64\_2
- Track 444 : Camri\_2, PinkYoshi\_2, Mowgli\_2, Marmie\_2, Zombie\_2, CLED96\_2, Darionha\_2, Schiebel\_2, Frosty24\_2, Sizemore\_2, Remy19\_2, Plagueis\_2, Gideon\_2, DMoney\_2
- Track 445 : DNAIII\_002
- Track 446 : Liefie\_2
- Track 447 : Terror\_2, Taheera\_2
- Track 448 : Grizzly\_2
- Track 449 : Paito\_2
- Track 450 : FlagStaff\_2, Pace1224\_2
- Track 451 : Avocado\_2
- Track 452 : Cambiare\_3
- Track 453 : Pinnie\_3
- Track 454 : MOOREtheMARYer\_2
- Track 455 : Jolie2\_2
- Track 456 : Mercurio\_3
- Track 457 : Lemuria\_2
- Track 458 : Antsirabe\_2
- Track 459 : Stargaze\_2
- Track 460 : BigBoyz\_1
- Track 461 : MoRicky\_2, Smilerella\_2
- Track 462 : Sbash\_2
- Track 463 : Che9c\_2
- Track 464 : Gonephishing\_10
- Track 465 : Courthouse\_10, Superphikiman\_10
- Track 466 : Ariel\_9
- Track 467 : MiaZeal\_10, Porcelain\_10, Squint\_10
- Track 468 : Hannaconda\_7
- Track 469 : Bobby\_11
- Track 470 : Klein\_10, Wanda\_10
- Track 471 : Lucky2013\_10
- Track 472 : KashFlow\_4
- Track 473 : Ganymede\_8, BGlluviae\_8, Durfee\_8, ShiaSurprise\_8, Dalmuri\_8, Jarvi\_8, Asayake\_8, CREW\_8, Hyperbowlee\_8, Veliki\_8, Belladonna\_8, Homura\_8, BEEST\_8, Capricorn\_8, Padpat\_8, Padfoot\_8, Atiba\_8, Boiii\_8, CrimD\_8, Megsy\_8, Pokerus\_7, Emerson\_8, Topper\_8, CheetoDust\_8, Piatt\_8, Tiri\_8, CaseJules\_8, Inky\_8, Llorens\_8, Jeckyll\_8, AlishaPH\_8, Adonis\_8, Blizzard\_8, LindNT\_8, Prithvi\_8, TreyKay\_8, MeaningOfLife\_8, Twitch\_8, Lunahalos\_8, QuincyRose\_7, Zavala\_8, Rosmarinus\_8, Peel\_8, Tachez\_8, Spock\_8



- Track 474 : Biglebops\_4, Amelie\_4, Enkosi\_4, Nikao\_4, Nutello\_4, Mdavu\_4, SgtBeansprout\_4, LilPharaoh\_4
- Track 475 : Scarlett\_7, LeMond\_7, Oscar\_7
- Track 476 : Adephagia\_8, Zabiza\_8, Jayhawk\_8, Ramen\_8, Slimphazie\_8, TruffulaTree\_8, HedwigODU\_8, BarrelRoll\_8, JAWS\_8, Rapunzel97\_8, Joy99\_8, ActinUp\_8, YoureAdopted\_7, BaghaKamala\_8
- Track 477 : Apocalypse\_8, Mynx\_8
- Track 478 : LaterM\_8, Ageofdapage\_8, Stinson\_8
- Track 479 : Guanica15\_8
- Track 480 : Deby\_8, Sulley\_8, Angelica\_8
- Track 481 : Efra2\_8
- Track 482 : Curiosium\_9
- Track 483 : Chris\_7
- Track 484 : Geraldini\_8, Beezoo\_8
- Track 485 : Dole\_8, Illumine\_8, Devera\_8
- Track 486 : Validus\_8
- Track 487 : Yunkel11\_8
- Track 488 : Shaobing\_8, Niklas\_8, Peanam\_8
- Track 489 : KiSi\_7
- Track 490 : DrHayes\_8, SamuelLPlaqson\_8, TiniBug\_8, Urkel\_8
- Track 491 : MarkPhew\_7
- Track 492 : Anaya\_9
- Track 493 : Nibb\_7
- Track 494 : Murucutumbu\_8
- Track 495 : Bella96\_8
- Track 496 : TaiwanKao\_8
- Track 497 : LastHope\_8
- Track 498 : DismalFunk\_4, Marcoliusprime\_4, DismalStressor\_4
- Track 499 : Findley\_4
- Track 500 : ZoeJ\_4
- Track 501 : Strobilo\_4
- Track 502 : BoostSeason\_4
- Track 503 : Milly\_4
- Track 504 : TM4\_4
- Track 505 : Mufasa\_4
- Track 506 : Keshu\_7, Hurricane\_7
- Track 507 : TribbleTrouble\_6
- Track 508 : ShedlockHolmes\_7
- Track 509 : Pharb\_7
- Track 510 : Pixie\_7
- Track 511 : TBond007\_7
- Track 512 : MacnCheese\_8
- Track 513 : Fionnbharth\_9, Malthus\_9, JF1\_9, Wintermute\_9
- Track 514 : Y2\_09, Y10\_09
- Track 515 : Cheetobro\_9, Taquito\_7, Mitti\_9, Chancellor\_9, Slarp\_9
- Track 516 : MissDaisy\_9, Patt\_9, Reptar3000\_9
- Track 517 : Ruthiejr\_8
- Track 518 : Eponine\_9
- Track 519 : OmniCritical\_9
- Track 520 : SamScheppers\_7
- Track 521 : Juliette\_9
- Track 522 : Agent47\_6, Kratio\_5, InvictusManeo\_6
- Track 523 : AlleyCat\_6, Psycho\_6, Dadosky\_6

- Track 524 : Rando14\_6
- Track 525 : Gengar\_6, SoSeph\_6, OkiRoe\_6, Heftyboy\_6, Guillsminger\_6, Paola\_6, Leston\_6
- Track 526 : Larva\_6
- Track 527 : Omnicron\_6
- Track 528 : Collard\_6, Feyre\_6, Thyatira\_6, Miryou\_6
- Track 529 : Waterfoul\_6
- Track 530 : Edugator\_5
- Track 531 : Cain\_7, Bryler\_7, Phrank\_7
- Track 532 : Marshawn\_9
- Track 533 : Ekdilam\_5
- Track 534 : Sunflower1121\_6, Shadow1\_6
- Track 535 : Ximenita\_8
- Track 536 : Amohnition\_7, Hammy\_7, DARTH\_P\_7
- Track 537 : Ellie\_5
- Track 538 : Unicorn\_7, PhelpsODU\_7
- Track 539 : Krueger\_7
- Track 540 : Tierra\_7
- Track 541 : Syra333\_7
- Track 542 : Yuna\_8
- Track 543 : Amgine\_6
- Track 544 : SirPhilip\_7
- Track 545 : Fefferhead\_7
- Track 546 : TClif\_7
- Track 547 : Aminay\_6
- Track 548 : Boilgate\_5
- Track 549 : CicholasNage\_4, UPIE\_4, JoeDirt\_4, Calm\_4
- Track 550 : LeBron\_4
- Track 551 : DirkDirk\_4, Appletree2\_4, Halena\_4, Enceladus\_4
- Track 552 : OhShagHennessy\_4, MAckerman\_4
- Track 553 : Zaria\_4, AvadaKedavra\_4, Wamburggrxpress\_4, Acquire49\_4, Tyson\_4, Wyatt2\_4, Rose5\_4, Silverleaf\_4
- Track 554 : Nicholasp3\_4, Crossroads\_4, Gardann\_4, Loadrie\_4, MkaliMitinis3\_4, Finemlucis\_4, Hafay\_4, Vetrix\_4, Kahlid\_4, Wilder\_4, Wigglewiggles\_4
- Track 555 : BobsGarage\_4, Miley16\_4, BigCheese\_4, Faith1\_4, Itos\_4, Breezona\_4, Gabriela\_4, Netyap\_4, LilDestine\_4, Winky\_4, DrSeegs\_4
- Track 556 : Zakai\_4
- Track 557 : Claus\_4
- Track 558 : Baoshan\_3, ZhongYanYuan\_3
- Track 559 : Lewan\_4
- Track 560 : GuuelaD\_4
- Track 561 : Rumpelstiltskin\_4
- Track 562 : Archie\_4
- Track 563 : Bazzle\_4
- Track 564 : Tourach\_4
- Track 565 : Krypton555\_5
- Track 566 : Nicholas\_5, Clautastrophe\_5, Lumos\_5, Jubie\_5, Kingsolomon\_5, Snenia\_5, MsGreen\_5
- Track 567 : MiniLon\_5, Lolly9\_5
- Track 568 : Jobypre\_5
- Track 569 : Bellis\_5, Moostard\_5, Samty\_5, Finnry\_5
- Track 570 : Ellson\_5
- Track 571 : DuncansLeg\_5

- Track 572 : Whirlwind\_6
- Track 573 : MiniMac\_5
- Track 574 : Douge\_4
- Track 575 : DyoEdafos\_5
- Track 576 : Chaser\_4
- Track 577 : Bromden\_4
- Track 578 : Glaske16\_15, IPhane7\_14, PegLeg\_14, LilhomieP\_13, TyDawg\_14, Dulcita\_15, Auspice\_14, Diminimus\_15, Bongo\_14
- Track 579 : Bricole\_14, Skinny\_15, SlimJimmy\_13
- Track 580 : Reindeer\_12
- Track 581 : Aziz\_18, GenevaB15\_18
- Track 582 : Rey\_18
- Track 583 : Estes\_19
- Track 584 : MrMagoo\_18, GardenSalsa\_18
- Track 585 : Nanosmite\_18
- Track 586 : Panchino\_2, SkinnyPete\_2
- Track 587 : Carcharodon\_2, Scitech\_2, Duplicity\_2, Journey\_2, Silvy\_2, Charlie\_2, Phloss\_2, Melville\_2, Tapioca\_2, Magsby\_2, Smurph\_2, Gex\_2
- Track 588 : Bosection6\_2, ParmesanJohn\_2, Andies\_2, Silvafighter\_2, Fulbright\_2, Schnauzer\_2, Pipsqueaks\_2, Chewbacca\_2, Philonius\_2, Xeno\_2, Xerxes\_2, Aggie\_2
- Track 589 : PhancyPhin\_2, Jamie19\_2, Rebel\_2, SpongeBob\_2, Nенаe\_2
- Track 590 : Raymond7\_2, Phrann\_2
- Track 591 : MichelleMyBell\_2
- Track 592 : Redi\_2, ShrimpFriedEgg\_2, Purgamenstris\_2, Snekmaggedon\_2
- Track 593 : BabeRuth\_2
- Track 594 : Shweta\_2
- Track 595 : Butters\_2
- Track 596 : Rubeelu\_2
- Track 597 : Kevin1\_2
- Track 598 : Bora\_28, Firecracker\_31, MadKillah\_32
- Track 599 : Ashwin\_32, Dylan\_30
- Track 600 : Familton\_31, SchoolBus\_30, Ryadel\_33, Idergollasper\_30, TelAviv\_28, JangDynasty\_30, Mori\_30, Krili\_30, FoulBall\_28, NiebruSaylor\_30, Smooch\_33, Winget\_31
- Track 601 : Catdawg\_30, YungJamal\_33, Blessica\_31, Vorrps\_30, Corndog\_32, Murai\_31, Schuy\_32
- Track 602 : Alkhayr\_29, Wildflower\_31
- Track 603 : Zakhe101\_31
- Track 604 : Shida\_31
- Track 605 : Polkaroo\_2, KilKor\_2, StevieRay\_2, Glaske\_2, Bunnies\_2, Phalm\_2, StressBall\_2, Megiddo\_2, CactusJack\_2, Ksquared\_2
- Track 606 : Juniormint\_2, Donovan\_2, Sonah\_2
- Track 607 : Pygmy\_2, Bogie\_2, Shipwreck\_2
- Track 608 : HUHilltop\_2, Techage\_2
- Track 609 : Dynamo\_2, Bartholomew\_2, Malithi\_2, Necropolis\_2, Vidya\_2, Phineas\_2, Fishburne\_2, FirstPlacePfu\_2, Venti\_2, Camster\_2, Kari\_2, GreaseLightnin\_2, Zilizebeth\_2
- Track 610 : Jebeks\_2
- Track 611 : Langerak\_2
- Track 612 : Mangethe\_2, Majeke\_2, Arib1\_2, Phegasus\_2
- Track 613 : Willsammy\_2
- Track 614 : Atcoo\_2, Brusacoram\_2, Thespis\_2

- Track 615 : Jung\_2
- Track 616 : Tortellini\_2
- Track 617 : Xavia\_2
- Track 618 : BigNuz\_2, Nazo\_2
- Track 619 : ThulaThula\_2
- Track 620 : Phayonce\_2
- Track 621 : Purky\_2
- Track 622 : Daegal\_6, Amochick\_5, Gancho\_4, Hail\_5, LilHazelNut\_5, OBUpride\_5, Ein37\_5, Luna22\_5, Ubuntu\_5, Dewey\_5, Amymech\_5, Wishmaker\_5, Giles\_5, Forge\_5, HH92\_5, Gravallia\_5, Kinbote\_5, Webster2\_5, DeepSoil15\_5
- Track 623 : Luke\_5, Evanesce\_5, Hadrien\_5
- Track 624 : Khuang\_2
- Track 625 : MrSmee\_2
- Track 626 : EniyanLRS\_23, Azrael100\_25, Wildcat\_26, MaryV\_26
- Track 627 : Cosmo\_26
- Track 628 : Bipper\_9
- Track 629 : Hilltopfarm\_9
- Track 630 : Typha\_9
- Track 631 : Cracklewink\_9
- Track 632 : Rem711\_3
- Track 633 : 32HC\_3
- Track 634 : Min1\_37
- Track 635 : RRH1\_02
- Track 636 : LilSpotty\_2
- Track 637 : REQ2\_02
- Track 638 : CyranoPS\_2
- Track 639 : MooMoo\_2
- Track 640 : EmiRose\_2
- Track 641 : BFK20\_ORF2
- Track 642 : IdentityCrisis\_2
- Track 643 : Spartoi\_2
- Track 644 : P3MA\_3
- Track 645 : PensacolaC28\_1
- Track 646 : Eyre\_2
- Track 647 : Finkle\_2
- Track 648 : ArV2\_02
- Track 649 : Whack\_2
- Track 650 : Kumao\_13
- Track 651 : Sleepyhead\_2
- Track 652 : Mbo4\_2

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

The start number called the most often in the published annotations is 161, it was called in 150 of the 1174 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_8, Adephagia\_8, Adonis\_8, Ageofdapage\_8, AlishaPH\_8, Amelie\_4, Amgine\_6, Aminay\_6, Amohnition\_7, Anaya\_9, Angelica\_8, Apocalypse\_8, Asayake\_8, Atiba\_8, BEEST\_8, BGlluviae\_8, BaghaKamala\_8, BarrelRoll\_8,

Beezoo\_8, Bella96\_8, Belladonna\_8, Biglebops\_4, Blizzard\_8, Boiiii\_8, Boilgate\_5, BoostSeason\_4, Bryler\_7, CREW\_8, Cain\_7, Capricorn\_8, CaseJules\_8, Chancellor\_9, CheetoDust\_8, Cheetobro\_9, Chris\_7, CrimD\_8, Curiosium\_9, Dalmuri\_8, DARTH\_P\_7, Deby\_8, Devera\_8, DismalFunk\_4, DismalStressor\_4, Dole\_8, DrHayes\_8, Durfee\_8, Efra2\_8, Ekdilam\_5, Ellie\_5, Emerson\_8, Enkosi\_4, Eponine\_9, Fefferhead\_7, Findley\_4, Fionnbharth\_9, Ganymede\_8, Geraldini\_8, Guanica15\_8, Hammy\_7, HedwigODU\_8, Homura\_8, Hurricane\_7, Hyperbowlee\_8, Illumine\_8, Inky\_8, JAWS\_8, JF1\_9, Jarvi\_8, Jayhawk\_8, Jeckyll\_8, Joy99\_8, Keshu\_7, KiSi\_7, Krueger\_7, LastHope\_8, LaterM\_8, LeMond\_7, LilPharaoh\_4, LindNT\_8, Llorens\_8, Lunahalos\_8, MacnCheese\_8, Malthus\_9, Marcoliusprime\_4, MarkPhew\_7, Mdavu\_4, MeaningOfLife\_8, Megsy\_8, Milly\_4, Mitti\_9, MooMoo\_2, Mufasa\_4, Murucutumbu\_8, Mynx\_8, Nibb\_7, Nikao\_4, Niklas\_8, Nutello\_4, Oscar\_7, Padfoot\_8, Padpat\_8, Peanam\_8, Peel\_8, Pharb\_7, PhelpsODU\_7, Phrank\_7, Piatt\_8, Pixie\_7, Pokerus\_7, Prithvi\_8, QuincyRose\_7, Ramen\_8, Rapunzel97\_8, Rosmarinus\_8, Ruthiejr\_8, SamuelLPlaqsom\_8, Scarlett\_7, SgtBeansprout\_4, Shadow1\_6, Shaobing\_8, ShedlockHolmes\_7, ShiaSurprise\_8, SirPhilip\_7, Slarp\_9, Slimphazie\_8, Spock\_8, Stinson\_8, Strobilo\_4, Sulley\_8, Sunflower1121\_6, Syra333\_7, TClif\_7, TM4\_4, Tachez\_8, TaiwanKao\_8, Taquito\_7, Tierra\_7, TiniBug\_8, Tiri\_8, Topper\_8, TreyKay\_8, TribbleTrouble\_6, TruffulaTree\_8, Twitch\_8, Unicorn\_7, Urkel\_8, Validus\_8, Veliki\_8, Wintermute\_9, Ximenita\_8, YoureAdopted\_7, Yunkel11\_8, Zabiza\_8, Zavala\_8, ZoeJ\_4,

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

- Juliette\_9, Marshawn\_9, MissDaisy\_9, OmniCritical\_9, Patt\_9, Reptar3000\_9, SamScheppers\_7, TBond007\_7, Y10\_09, Y2\_09, Yuna\_8,

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

- 32HC\_3, ATCC29399BC\_2, ATCC29399BT\_2, AbbyDaisy\_3, Abidatro\_3, Abigail\_3, Acquire49\_4, Adaaia\_3, Adelaide\_2, Adora\_2, Agent47\_6, Aggie\_2, Albanese\_5, Albedo\_3, Albright\_3, Aledel\_2, Alexphander\_3, Alkhayr\_29, AlleyCat\_6, Alucard\_3, Amelia\_4, Amochick\_5, Amymech\_5, Anatole\_3, Andies\_2, Andrew\_3, Angel\_2, AnnaLie\_4, Annalisa\_3, Annihilator\_2, Anseraureola\_3, Antsirabe\_2, Aoka\_3, AppleCider\_5, Appletree2\_4, Aquarius\_2, ArV2\_02, Arby\_4, Archie\_4, Archimedes\_1, Archis\_2, Arib1\_2, Ariel\_9, Arielagos\_2, Aries55\_3, Armstrong\_2, Aroostook\_2, Arroyo\_4, Asapag\_3, Ashwin\_32, Astro16\_3, Atcoo\_2, Atraxa\_3, Attacne\_2, Attis\_2, Auspice\_14, AustinPowers\_2, AvGardian\_3, AvadaKedavra\_4, Avani\_3, Avocado\_2, Avocadoman\_3, Avrafan\_2, Avvas\_3, Awesomesauce\_3, Ayotoya\_6, Azathoth\_4, Aziz\_18, Azizam\_3, Azrael100\_25, Aztec\_3, Azula\_2, B22\_3, B3\_3, BAjuniper\_3, BBQValindra\_2, BENtherdunthat\_3, BFK20\_ORF2, BPs\_2, BQuat\_2, BabeRuth\_2, BabyDaisy\_4, BabyYoda\_3, Bachaco\_3, BackstagePass\_2, BaileyBlu\_2, Baine\_3, Banquo\_11, Baoshan\_3, BarBear\_3, Barco\_2, Barkley26\_2, Bartholomew\_2, Basilisk\_3, Bauer\_4, BaxterFox\_2, Bazzle\_4, Beakin\_3, Beenie\_3, Beethoven\_5, Begonia\_2, Bellis\_5, BelmontSKP\_4, Belthelas\_3, Bennie\_2, Berka\_4, Bernstein\_2, BetterKatz\_6, BigBoyz\_1, BigCheese\_4, BigMack\_2, BigNuz\_2, BigPhil\_3, BinkBonk\_3, Bintii\_3, Bipper\_9, Biscayne\_3, Bjaner7\_2, BlackSpider\_2, Blair\_4, Blarby\_4, Blessica\_31, BlingBling\_2, Blino\_2, BlueFeather\_1, Blueberry\_2, Bobby\_11, Bobi\_3, BobsGarage\_4, Bock\_6, Bodacious\_2, Bodhi17\_3, Bogie\_2, BonaeVitae\_3, Bongo\_14, BoomRoasted\_3, Boomer\_3, Bora\_28, Bosection6\_2, Bowser\_2, Bradley2\_3, Brahms\_2, Bran\_2, BrayBeast\_2, Breezona\_4, Bri160\_3, Bricole\_14, BrokMonster\_3, Bromden\_4, BrotherBLo\_5, BruceB\_2, BruceLethal\_2, Brusacoram\_2, Brylie\_6, Brynnie\_3, BubbaBear\_3, Budski\_3, Buldak\_3, Bullzi2019\_3, Bunker\_2, Bunnies\_2, Burgy\_3, Burritobowl\_3, BurtonThePup\_3,

Butters\_2, BuzzLyseyear\_3, CGermain\_4, CLED96\_2, CabbageMan\_2, CactusJack\_2, CallieOMalley\_5, CallinAllBarbz\_2, Calm\_4, Cambiare\_3, Camri\_2, Camster\_2, Canowicakte\_5, CaptainKirk2\_2, Carcharodon\_2, CarolAnn\_2, Carpal\_5, Cashington\_3, CassieYates\_2, Catdawg\_30, Catfish\_6, Cayde6\_3, Cazares\_3, Cedasite\_2, Celaena\_3, Cerasum\_3, Chance64\_2, Charbie\_3, Charlie\_2, Chaser\_4, Chatham\_3, Che9c\_2, Che9d\_3, CheeseTouch\_3, Cheesecake\_3, Cherrybomb426\_2, Chestnut\_4, ChewChew\_2, Chewbacca\_2, Chickaboom\_2, ChickenDinner\_3, ChiliPepper\_3, Cholula\_5, Chop\_6, Chridison\_2, Christian\_2, CicholasNage\_4, Ciel\_3, Clap\_2, Clark\_3, Claus\_4, Clautastrophe\_5, Clayda5\_2, Clownery\_3, Coco12\_3, Coeur\_2, Cole\_4, Coleslaw\_2, Collard\_6, Coltrane\_2, Concrete\_3, Copper\_4, Coral\_3, Corgi\_4, Coriander\_2, Corndog\_32, Cornucopia\_3, Cosmo\_26, Cota\_2, Cote\_4, Courthouse\_10, Courtney3\_4, Cracklewink\_9, Crespo\_2, CristinaYang\_2, CroZenni\_3, Crossroads\_4, Cynthia\_2, CyranoPS\_2, DMoney\_2, DNAll\_002, DaWorst\_3, Dadosky\_6, Daegal\_6, DaftyDuck\_3, Daiboju\_2, Danimal\_3, Danno\_3, Daob\_4, Dardanus\_9, Darionha\_2, Decurro\_4, DeepSoil15\_5, DelRio\_6, Delian\_2, Demsculpinboyz\_3, Denise\_2, Dewayne\_4, Dewey\_5, DickRichards\_3, Didgeridoo\_4, Diminimus\_15, Dina\_2, DinoDaryn\_9, Dino\_5, DirkDirk\_4, DirtMcgirt\_3, DirtyBoi\_2, DirtyBubble\_3, Dismas\_3, Dmitri\_2, DobbysSock\_2, DocMcStuffins\_3, Doggs\_2, Dolores\_3, Dongwon\_3, DonkeyMan\_2, Donovan\_2, Doobus\_3, Dooby\_3, Dorito\_2, DosHalletts\_3, Doucette\_3, Douge\_4, Duggie\_3, DrParker\_2, DrRobert\_2, DrSeegs\_4, Drago\_3, DreamTeam\_2, Dulcita\_15, DumpsterDude\_2, DuncansLeg\_5, Duplicity\_2, Dylan\_30, Dynamo\_2, DyoEdafos\_5, E1\_3, E6\_3, ECartman\_2, Easley\_3, Ebert\_2, Ecliptus\_3, EdElric\_3, Eden\_2, EdnaMode\_2, Edugator\_5, Eesa\_3, Efeke\_4, Eightball\_3, Ein37\_5, Ekko14\_3, Elesar\_5, Elkhorn\_4, Ellson\_5, Elspeth\_3, Elva\_4, EmiRose\_2, Emperor\_2, Enby\_3, Enceladus\_4, EniyanLRS\_23, Enochoraptor\_2, Enoki\_2, EpicDab\_2, Erin\_3, EstebanJulior\_2, Estes\_19, Eula\_3, Eunoia\_2, Euratis\_2, Evanesce\_5, EvenBluerMoon\_3, Eyes\_2, Eyre\_2, Fairfaxidum\_2, Faith1\_4, Faith5x5\_2, Familton\_31, Fenry\_2, Feyre\_6, Finalfrontier\_4, Finemlucis\_4, Finkle\_2, Finny\_5, Firecracker\_31, FirstPlacePfu\_2, Fishburne\_2, FlagStaff\_2, FlameThrower\_3, Flathead\_3, Fluke\_5, Forge\_5, FoulBall\_28, Francois\_6, Frankie\_3, Franklin22\_2, Frickyeah\_3, Frokostdame\_2, Frosty24\_2, Fryberger\_34, Fulbright\_2, G4\_3, GEazy\_2, GMA5\_2, GRU3\_2, Gabbspett\_3, Gabriela\_4, Gack\_2, Galaxy\_3, Gambino\_2, Gancho\_4, Gardann\_4, GardenSalsa\_18, Gardevoir\_3, GemG\_2, GenevaB15\_18, Gengar\_6, Getalong\_3, Gex\_2, Ghobes\_1, Gideon\_2, Giles\_5, Gillker\_3, Girafales\_3, Gisselle\_2, Gizermo\_2, Glaske16\_15, Glaske\_2, Glenn\_5, Godfather\_3, Goib\_8, GoldenAsh\_2, GoldenBlanche\_3, Gomashi\_2, Gonephishing\_10, Goobery\_3, GrandSlam\_6, Gravaillia\_5, GreaseLightnin\_2, GreenHearts\_5, Greenhouse\_5, Grizzly\_2, Gsput1\_5, Guacamole\_2, Guey18\_39, Guillsminger\_6, Guntur\_4, Gusanita\_4, Gustav\_2, GuuelaD\_4, HH92\_5, HUHilltop\_2, Hadrien\_5, Hafay\_4, Hail\_5, Halena\_4, Haley23\_2, Halo\_2, Hamood\_6, Hannaconda\_7, HannahD\_2, HannahPhantana\_4, HarperAnne\_3, HeadNerd\_2, Heather\_2, Hedwig\_2, Heftyboy\_6, Hegedechwinu\_3, Heinz\_2, Herb\_2, Hernandez44\_3, Hibiscus\_2, Hilltopfarm\_9, Hitter\_2, Holliday\_3, Hope\_2, Horacetta\_3, Hortense\_2, Horus\_3, Hotshotbaby7\_2, Howe\_2, Huckleberry\_2, Huffy\_9, Hulk\_3, Hunnie\_4, HunterDalle\_2, Huntingdon\_5, IPhane7\_14, Icarian\_4, Idaho\_3, IdentityCrisis\_2, Idergollasper\_30, Immaculata\_5, IndyLu\_3, Inspire2\_4, InvictusManeo\_6, Itos\_4, JCole\_2, JRok\_3, Jabbawokkie\_4, Jahseh\_3, JaimeB\_3, Jalfarm20\_3, Jalammah\_2, Jamie19\_2, Jamun\_3, Jane\_2, JanetJ\_3, JangDynasty\_30, Jannah\_3, JasperJr\_2, Jeanie\_2, Jebeks\_2, Jerky\_3, Jessica\_5, Jflix2\_8, JoBros\_3, Joann\_5, Job42\_3, Jobypre\_5, JoeDirt\_4, Johnathan\_3, Jojo24\_2, Jolene\_2, Jolie2\_2, Jonghyun\_2, JooneeDee\_3, JorRay\_2, Josuke\_3, Journey\_2, Jovita\_3, JuJu\_2, Jubie\_5, Juice456\_3, Jumboset\_5, Jung\_2,

Juniormint\_2, Juno112\_2, JustASigh\_2, KHumphrey\_2, Kahlid\_4, Kaijohn\_3, Kalizoi\_5, Kamaru\_3, KappaFarmDelta\_2, Kareem\_2, Kari\_2, Kasen3\_2, KashFlow\_4, Katzastrophic\_3, KayPaulus\_3, Keelan\_32, Keiki\_2, Kels\_2, Kenna\_3, Kenzers\_3, Kepler\_3, Kevanna\_3, Kevin1\_2, Khuang\_2, Kieran\_3, Kiko\_2, KilKor\_2, KillerTomato\_3, Kimberlium\_3, Kinbote\_5, KingBob\_2, Kingsley\_3, Kingsolomon\_5, Kittykat\_2, Klein\_10, Kojax4\_3, Korra\_5, Kratio\_5, Krili\_30, Krypton555\_5, Ksquared\_2, Kubed\_2, Kudrefre\_12, Kuleana\_3, Kumao\_13, Kumotta\_3, KylieMac\_5, KyriosFaba\_3, Lahqtemish\_3, Laila\_5, Lakshmi\_5, Lamberg\_2, Langerak\_2, Larva\_6, Lasagna\_2, Lauchelly\_2, LaviMo\_3, LeBron\_4, Leafy\_3, Lederberg\_2, LemonPepper\_3, Lemuria\_2, Lennox\_2, Leona\_2, Leozinho\_3, Leroy\_3, Leston\_6, Leviosa\_2, Lewan\_4, Liefie\_2, LilBandit\_2, LilDestine\_4, LilHazelnut\_5, LilSpotty\_2, LilStuart\_2, Lilbooboo\_2, LilhomieP\_13, LimaBean\_3, Link\_4, LionelHutz\_3, LitninMcQueen\_3, Litotes\_5, LittleShirley\_3, LittleTokyo\_3, Livingwater\_3, Loadrie\_4, Loca\_3, Lola20\_3, Lolly9\_5, LordFarquaad\_2, Lorde\_3, Lore\_4, LouisV14\_2, LouisXIV\_4, Lton\_2, Lucky10\_2, Lucky2013\_10, Lucy\_2, Luke\_5, Lumos\_5, Luna22\_5, Lunar\_4, Lunatic\_3, Lutum\_3, Luxx\_3, Lynlen\_3, Lysidious\_2, MAckerman\_4, MEAK\_2, MOOREtheMARYer\_2, MadKillah\_32, Madiba\_3, Madraxi\_10, Maggie\_4, MagicMan\_2, Magsby\_2, Mahdia\_2, Maja\_2, Majeke\_2, Majesty\_3, Makoto\_2, Malachai\_2, Malibo\_2, Malisha\_3, Malithi\_2, MamaPearl\_2, ManAs\_3, Maneater\_3, Mangethe\_2, MargaretKali\_3, Maria1952\_2, Mariposa\_4, Marker\_3, Marmie\_2, MaryV\_26, Massimo\_4, MasterPitts\_3, Matteo\_2, Mbo4\_2, McGonagall\_2, McShie\_3, MeganNoll\_5, Megiddo\_2, MelBee03\_3, Melba\_2, Mellie\_2, Melons\_4, Melville\_2, Mercurio\_3, MiaZeal\_10, Miaurora\_3, MichaelScott\_3, MichelleMyBell\_2, Miley16\_4, Min1\_37, MiniLon\_5, MiniMac\_5, Minima\_3, MintFen\_2, MirimarMandM\_3, Miryou\_6, Misaeng\_5, Misha28\_3, MissRona\_2, MkaliMitinis3\_4, MoRicky\_2, Mocha12\_2, Moki\_2, Moloch\_4, MooKitty\_3, Moosehead\_2, Moostard\_5, Mori\_30, Morkie\_2, Morrissey\_2, Mova\_3, Mowgli\_2, Moyashi\_2, Mozy\_3, MrAK\_2, MrGloopy\_5, MrGreen\_3, MrMagoo\_18, MrSmee\_2, MsGreen\_5, Mulch\_6, Murai\_31, Murp\_2, Muttie\_4, Naby\_3, Nadeem\_6, Namsahir\_3, Nancia\_2, NancyRae\_6, Nandita\_6, Nanosmite\_18, Nazo\_2, Necropolis\_2, Nенаe\_2, Nettuno\_2, Netyap\_4, NeumannU\_3, Neville\_12, Nicholas\_5, Nicholasp3\_4, Nicky22\_4, NiebruSaylor\_30, Niffler\_3, Nobel\_3, Noelani\_3, Noely\_2, Nubia\_5, OBUpride\_5, ODay\_3, OMalley\_2, Oaklynn\_3, Obliviate\_2, OctaviousRex\_2, Octobien14\_13, Octopus\_3, Ogopogo\_4, OhShagHennessy\_4, Ohgeesy\_2, OkiRoe\_6, Oksu\_3, Olga\_2, Olliecat\_3, Omnicron\_6, OneDirection\_2, Opie\_2, Orcanus\_3, Oregano\_2, Otwor\_3, OurGirlNessie\_2, Ouroboros\_2, Owens\_3, OwlsT2W\_3, Oxynfrius\_5, P1.1\_2, P100.1\_2, P100A\_2, P100D\_2, P101A\_2, P104A\_2, P104B\_2, P105\_2, P106A\_2, P106C\_2, P106I\_2, P106L\_2, P106M\_2, P107A\_2, P107C\_2, P108C\_2, P14.4\_2, P3MA\_3, P9.1\_2, PA6\_2, PAD20\_2, PAS50\_2, PCoral7\_2, PFR1\_02, PFR2\_02, PHL010M04\_02, PHL037M02\_02, PHL060L00\_02, PHL067M10\_02, PHL071N05\_02, PHL111M01\_02, PHL112N00\_02, PHL113M01\_02, PHL114L00\_02, Pace1224\_2, Paito\_2, Panchino\_2, PantheRoc\_1, PaoPu\_3, Paola\_6, Parada\_6, Parmesanjohn\_2, PartyCup\_5, Peeb\_2, PegLeg\_14, PensacolaC28\_1, Periodt\_2, Periwinkle\_3, Petra\_2, Phabuloso\_3, Phalm\_2, PhancyPhin\_2, Phayonce\_2, Phegasus\_2, Philonius\_2, Phineas\_2, Phisb\_3, Phish\_2, Phistory\_3, Phloss\_2, PhluffyCoco\_2, Phorbeshflower\_2, Phrann\_2, Phreak\_2, PhriskyACE\_2, PhrostedPhlake\_2, Pickett\_2, Picnic\_3, Piku\_2, Pimento\_5, PinkFriday\_2, PinkYoshi\_2, Pinnie\_3, Piper2020\_3, Pipp\_2, Pipsqueaks\_2, Pirate\_2, PitaDog\_2, Pitbull\_2, Plagueis\_2, Plumbus\_3, PoRanda\_3, Polka\_3, Polkaroo\_2, Pollywog\_3, Pondwater\_3, Popper\_4, Porcelain\_10, Potatoes\_5, Powerball\_2, Preamble\_2, PrincePatrick\_2, Procrass1\_2, Prospero\_4, Psycho\_6, Pterodactyl\_2, Publix\_3, Puddles3\_3, PuffyCat\_3, Pumancara\_2,

Puppies\_2, Purgamenstris\_2, Purky\_2, Pygmy\_2, QMacho\_4, Quaker\_3,  
 QueenBey\_2, Quenya\_4, Quico\_3, RAP15\_5, REQ1\_66, REQ2\_02, RRH1\_02,  
 Rabbitrun\_14, Rabbs\_2, Rahul\_2, Ramsey\_3, Rando14\_6, Raqqa\_3,  
 RayTheFireFly\_2, Raymond7\_2, RcigaStruga\_5, Rebel\_2, RedFox\_2, Redi\_2,  
 Reindeer\_12, Rem711\_3, RemusLoopin\_2, Remy19\_2, Renaissance\_2, Renna12\_3,  
 Rey\_18, Reyja\_3, Rhogar\_3, Rhysand\_3, Rialto\_3, Rileysaurus\_2, Riovina\_2,  
 Riverdale\_5, RockyHorror\_3, Rollins\_2, Rona\_3, Ronaldo\_37, Ronnie\_4,  
 RoscoWindex\_3, Rose5\_4, Rozby\_5, Rubeelu\_2, Ruchi\_3, Rumpelstiltskin\_4,  
 Ruthy\_2, Ryadel\_33, Ryan\_6, SKKY\_2, Sage7\_3, Sahara\_2, SallySpecial\_2,  
 SamW\_2, Samba\_2, Samman98\_3, Samora\_2, Samty\_5, SanaSana\_4, Sandman\_4,  
 SansAfet\_3, SantasSleigh\_3, Santhid\_2, Saphira\_4, Sapo\_1, SarBear\_3, Sara\_3,  
 Sarge\_2, Sarma624\_3, Savage2526\_5, Savage\_2, Sbash\_2, Scamander\_3,  
 Schiebel\_2, Schiebs\_2, Schmidt\_5, Schnabeltier\_2, Schnauzer\_2, SchoolBus\_30,  
 Schuy\_32, Scitech\_2, Scrunchy\_3, Scuttle\_5, SeaWolves\_3, Seagreen\_3,  
 Sebastisaurus\_2, Sekhmet\_3, Sephiroth\_13, Sergei\_2, SerialPhiller\_2, Seume\_4,  
 ShaboiShabazz\_2, Shagrat\_8, Sharkboy\_3, Shawty\_2, Shayna\_2, Shida\_31,  
 Shipwreck\_2, Shlim410\_2, Shoya\_2, ShrimpFriedEgg\_2, Shweta\_2, Sidious\_2,  
 Silvafighter\_2, Silverleaf\_4, Silvy\_2, SimranZ1\_3, Sippinontea\_3, Sizemore\_2,  
 SkinnyPete\_2, Skinny\_15, Skylord\_2, Slay\_3, Sleepyhead\_2, Slentz\_3,  
 SlimJimmy\_13, Slizam\_3, Smilerella\_2, Smooch\_33, Smurph\_2, Sneeze\_2,  
 Snekmaggon\_2, Snenia\_5, Snuffles\_4, SoSeph\_6, SoilAssassin\_2, Solid\_2,  
 Sonah\_2, Soul22\_3, Sourignavong\_5, Spartoi\_2, Spikelee\_3, Splinter\_7,  
 SpongeBob\_2, Spooky\_3, Sproutie\_2, Sputnik\_3, Squiddly\_4, Squint\_10, Squirty\_3,  
 StAB\_2, Stap\_3, Starcevic\_3, Stargaze\_2, Stem\_3, StevieRay\_2, StewieGriff\_4,  
 Stiles\_2, Stoor\_3, Stormborn\_2, Stratus\_4, StressBall\_2, Stromboli\_3, Suerte\_2,  
 SunnyD\_2, Supakev\_2, Supernova\_2, Superphikiman\_10, Suppi\_5, Sweets\_2,  
 Swenson\_4, Swervy\_3, Syleon\_13, TG1\_2, TZGordon\_9, Taheera\_2, Taj14\_4,  
 Tapioca\_2, TaronosaurusRx\_2, Tarzan\_2, TattModd\_5, TaylorSipht\_3, Techage\_2,  
 TeddyBoy\_3, TelAviv\_28, Temper16\_2, Terror\_2, Thespis\_2, Thimann\_3,  
 ThulaThula\_2, Thyatira\_6, TimoTea\_3, TinaLin\_10, TinoCrisci\_4, TinyTruffula\_3,  
 Toast\_2, TomBrady12\_3, TomBrady\_2, TootsiePop\_3, Tootsieroll\_3, Tortellini\_2,  
 Totinger\_3, Toulouse\_3, Tourach\_4, Trax\_12, Trine\_2, Trireme\_3, Troy\_2,  
 TuertoX\_2, TukTuk\_3, Twinkle\_2, TyDawg\_14, TymAbreu\_4, Typha\_9, Tyson\_4,  
 UPIE\_4, Ubuntu\_5, UmaThurman\_2, UncleRicky\_3, Upsilon\_3, Upyo\_2, Urla\_2,  
 Utz\_2, Vallejo\_5, Vanisius\_3, Vasanti\_2, Vash\_2, Velveteen\_3, Vendetta\_7, Venti\_2,  
 Vetrux\_4, Vidya\_2, Vitas\_2, VitulaEligans\_3, Volt\_36, Vorrps\_30, Vulpecula\_3,  
 Vulture\_2, Walrus\_2, Wamburgxpress\_4, Wanda\_10, Waterfoul\_6, Wawa\_5,  
 Wayne\_5, Webster2\_5, Weirdo19\_2, Whack\_2, WheatThin\_6, Whirlwind\_6,  
 Whiteclaw\_2, Whitney\_3, Whytu\_1, Widow\_2, Wigglewiggle\_4, Wildcat\_26, Wilder\_4,  
 Wildflower\_31, William\_2, Willsammy\_2, Winget\_31, WinkNick\_3, Winky\_4,  
 Wishmaker\_5, Wisp\_2, Witch\_3, Wizzo\_2, Wocket\_2, Wolfpack\_3, WonderBoy\_2,  
 Wyatt2\_4, Xavia\_2, Xeno\_2, Xerxes\_2, Yami\_3, Yank\_4, Yasuo\_3, Yavru\_1,  
 Yeet412\_2, Yeezy\_2, YertPhresh\_3, Yoshi\_3, Yubaba\_3, YungJamal\_33, ZAYM\_2,  
 Zaheer\_6, Zakai\_4, Zakhe101\_31, Zapner\_4, Zarbodnamra\_2, Zaria\_4,  
 ZhongYanYuan\_3, ZiggyZoo\_2, Ziko\_37, Zilizebeth\_2, ZoMa\_2, Zombie\_2, Zorro\_5,  
 Zucker\_3, phiBT1\_33,

### Summary by start number:

Start 19:

- Found in 4 of 1298 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 3 of 1174
- Called 75.0% of time when present



- Phage (with cluster) where this start called: Archimedes\_1 (DA), Ghobes\_1 (DA), Sapo\_1 (DA),

#### Start 34:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JustASigh\_2 (AH),

#### Start 36:

- Found in 62 of 1298 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 19 of 1174
- Called 32.3% of time when present
- Phage (with cluster) where this start called: Amochick\_5 (Q), Amymech\_5 (Q), Daegal\_6 (Q), DeepSoil15\_5 (Q), Dewey\_5 (Q), Ein37\_5 (Q), Forge\_5 (Q), Gancho\_4 (Q), Giles\_5 (Q), Gravaillia\_5 (Q), HH92\_5 (Q), Hail\_5 (Q), Kinbote\_5 (Q), LilHazelNut\_5 (Q), Luna22\_5 (Q), OBUpride\_5 (Q), Ubuntu\_5 (Q), Webster2\_5 (Q), Weirdo19\_2 (AH), Wishmaker\_5 (Q),

#### Start 42:

- Found in 49 of 1298 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 46 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arib1\_2 (P1), Atcoo\_2 (P1), Bartholomew\_2 (P1), BigNuz\_2 (P4), Bogie\_2 (P1), Brusacoram\_2 (P1), Bunnies\_2 (P1), CactusJack\_2 (P1), Camster\_2 (P1), Donovan\_2 (P1), Dynamo\_2 (P1), FirstPlacePfu\_2 (P1), Fishburne\_2 (P1), Glaske\_2 (P1), GreaseLightnin\_2 (P1), HUHilltop\_2 (P1), Jebeks\_2 (P1), Jung\_2 (P1), Juniormint\_2 (P1), Kari\_2 (P1), KilKor\_2 (P1), Ksquared\_2 (P1), Langerak\_2 (P1), Majeke\_2 (P1), Malithi\_2 (P1), Mangethe\_2 (P1), Megiddo\_2 (P1), Nazo\_2 (P4), Necropolis\_2 (P1), Phalm\_2 (P1), Phayonce\_2 (P5), Phegasus\_2 (P1), Phineas\_2 (P1), Polkaroo\_2 (P1), Purky\_2 (P6), Pygmy\_2 (P1), Shipwreck\_2 (P1), Sonah\_2 (P1), StevieRay\_2 (P1), StressBall\_2 (P1), Techage\_2 (P1), Thespis\_2 (P1), ThulaThula\_2 (P5), Tortellini\_2 (P2), Venti\_2 (P1), Vidya\_2 (P1), Willsammy\_2 (P1), Xavia\_2 (P3), Zilizebeth\_2 (P1),

#### Start 46:

- Found in 2 of 1298 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 32HC\_3 (Z), Rem711\_3 (Z),

#### Start 47:

- Found in 4 of 1298 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 3 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CabbageMan\_2 (FE), Corgi\_4 (FE), Idaho\_3 (FE), Noely\_2 (FE),

#### Start 49:

- Found in 11 of 1298 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 3 of 1174
- Called 36.4% of time when present

- Phage (with cluster) where this start called: Banquo\_11 (CU1), Dardanus\_9 (CU3), Gsput1\_5 (CU2), TinaLin\_10 (CU1),

Start 51:

- Found in 7 of 1298 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 3 of 1174
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Antsirabe\_2 (G5), Avocado\_2 (G2), MOOREtheMARYer\_2 (G3), Stargaze\_2 (G5),

Start 53:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Berka\_4 (FE),

Start 59:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Schmidt\_5 (CU4),

Start 62:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Catfish\_6 (CU5),

Start 66:

- Found in 4 of 1298 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Finkle\_2 (singleton),

Start 68:

- Found in 77 of 1298 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 59 of 1174
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Acquire49\_4 (L1), Appletree2\_4 (L1), Archie\_4 (L2), AvadaKedavra\_4 (L1), Baoshan\_3 (L2), Bazzle\_4 (L2), Bellis\_5 (L3), BigCheese\_4 (L2), BobsGarage\_4 (L2), Breezona\_4 (L2), Bromden\_4 (L4), Chaser\_4 (L4), Claus\_4 (L2), Clautastrophe\_5 (L3), Crossroads\_4 (L2), DirkDirk\_4 (L1), Douge\_4 (L4), DrSeegs\_4 (L2), DuncansLeg\_5 (L3), DyoEdafos\_5 (L4), Ellson\_5 (L3), Enceladus\_4 (L1), Faith1\_4 (L2), Finemlucis\_4 (L2), Finnry\_5 (L3), Gabriela\_4 (L2), Gardann\_4 (L2), GuuelaD\_4 (L2), Hafay\_4 (L2), Halena\_4 (L1), Itos\_4 (L2), Jubie\_5 (L3), Kahlid\_4 (L2), Kingsolomon\_5 (L3), Krypton555\_5 (L3), Lewan\_4 (L2), LilDestine\_4 (L2), Loadrie\_4 (L2), Lolly9\_5 (L3), Lumos\_5 (L3), Miley16\_4 (L2), MiniLon\_5 (L3), MiniMac\_5 (L3), MkaliMitinis3\_4 (L2), Moostard\_5 (L3), MsGreen\_5 (L3), Netyap\_4 (L2), Nicholas\_5 (L3), Nicholasp3\_4 (L2), Rose5\_4 (L1), Rumpelstiltskin\_4 (L2), Samty\_5 (L3), Silverleaf\_4 (L1), Snenia\_5 (L3), Tourach\_4 (L2), Tyson\_4 (L1), Vetrix\_4 (L2), Wamburggrxpress\_4 (L1), Whirlwind\_6 (L3), Wigglewiggles\_4 (L2), Wilder\_4 (L2), Winky\_4 (L2), Wyatt2\_4 (L1), Zakai\_4 (L2), Zaria\_4 (L1), ZhongYanYuan\_3 (L2),

Start 70:

- Found in 4 of 1298 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 4 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bipper\_9 (Y), Cracklewink\_9 (Y), Hilltopfarm\_9 (Y), Typha\_9 (Y),

Start 71:

- Found in 158 of 1298 ( 12.2% ) of genes in pham
- Manual Annotations of this start: 81 of 1174
- Called 52.5% of time when present
- Phage (with cluster) where this start called: Albanese\_5 (AK), Aledel\_2 (AK), AppleCider\_5 (AK), Beethoven\_5 (AK), Bennie\_2 (AK), BigMack\_2 (AK), Bodacious\_2 (AK), CallieOMalley\_5 (AK), Calm\_4 (L1), Canowicakte\_5 (AK), Carpal\_5 (AK), ChewChew\_2 (AK), Cholula\_5 (AK), Chridison\_2 (AK), Christian\_2 (AK), CicholasNage\_4 (L1), CristinaYang\_2 (AK), Daiboju\_2 (AK), Dino\_5 (AK), DrRobert\_2 (AK), DreamTeam\_2 (AK), EstebanJulior\_2 (AK), Eunoia\_2 (AK), Fluke\_5 (AK), Gisselle\_2 (AK), Glenn\_5 (AK), GreenHearts\_5 (AK), Greenhouse\_5 (AK), HeadNerd\_2 (AK), Herb\_2 (AK), Huckleberry\_2 (AK), HunterDalle\_2 (AK), Huntingdon\_5 (AK), Immaculata\_5 (AK), Joann\_5 (AK), Jobypre\_5 (L3), JoeDirt\_4 (L1), KingBob\_2 (AK), Kittykat\_2 (AK), Korra\_5 (AK), Lasagna\_2 (AK), LeBron\_4 (L1), Lennox\_2 (AK), LilStuart\_2 (AK), Litotes\_5 (AK), Lucy\_2 (AK), MAckerman\_4 (L1), Makoto\_2 (AK), MamaPearl\_2 (AK), Maria1952\_2 (AK), MeganNoll\_5 (AK), Moki\_2 (AK), MrGloopy\_5 (AK), Nancia\_2 (AK), Nubia\_5 (AK), OMalley\_2 (AK), OhShagHennessy\_4 (L1), OurGirlNessie\_2 (AK), Oxynfrius\_5 (AK), PitaDog\_2 (AK), Potatoes\_5 (AK), Preamble\_2 (AK), Pterodactyl\_2 (AK), Pumancara\_2 (AK), RAP15\_5 (AK), RcigaStruga\_5 (AK), Riovina\_2 (AK), Riverdale\_5 (AK), Rozby\_5 (AK), Savage2526\_5 (AK), Sergei\_2 (AK), Supakev\_2 (AK), Suppi\_5 (AK), TattModd\_5 (AK), Temper16\_2 (AK), UPIE\_4 (L1), Urla\_2 (AK), Vallejo\_5 (AK), Vulture\_2 (AK), Wawa\_5 (AK), Wayne\_5 (AK), WonderBoy\_2 (AK), Zorro\_5 (AK),

Start 72:

- Found in 93 of 1298 ( 7.2% ) of genes in pham
- Manual Annotations of this start: 33 of 1174
- Called 39.8% of time when present
- Phage (with cluster) where this start called: Alkhayr\_29 (O), Ashwin\_32 (O), CLED96\_2 (G1), Camri\_2 (G1), DMoney\_2 (G1), DNAllI\_002 (G1), Darionha\_2 (G1), Dylan\_30 (O), Familton\_31 (O), FlagStaff\_2 (G2), FoulBall\_28 (O), Frosty24\_2 (G1), Gideon\_2 (G1), Idergollasper\_30 (O), JangDynasty\_30 (O), Jolie2\_2 (G4), Krili\_30 (O), Lemuria\_2 (G4), Marmie\_2 (G1), Mercurio\_3 (G4), Mori\_30 (O), Mowgli\_2 (G1), NiebruSaylor\_30 (O), Pace1224\_2 (G2), PinkYoshi\_2 (G1), Plagueis\_2 (G1), Remy19\_2 (G1), Ryadel\_33 (O), Schiebel\_2 (G1), SchoolBus\_30 (O), Shida\_31 (O), Sizemore\_2 (G1), Smooch\_33 (O), TelAviv\_28 (O), Wildflower\_31 (O), Winget\_31 (O), Zombie\_2 (G1),

Start 74:

- Found in 52 of 1298 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 14 of 1174
- Called 26.9% of time when present
- Phage (with cluster) where this start called: Blessica\_31 (O), Bora\_28 (O), Catdawg\_30 (O), Corndog\_32 (O), Evanesce\_5 (Q), Firecracker\_31 (O), Hadrien\_5 (Q), Luke\_5 (Q), MadKillah\_32 (O), Murai\_31 (O), Schuy\_32 (O), Vorrps\_30 (O),

YungJamal\_33 (O), Zakhe101\_31 (O),

Start 76:

- Found in 3 of 1298 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 33.3% of time when present
- Phage (with cluster) where this start called: SerialPhiller\_2 (AN),

Start 77:

- Found in 5 of 1298 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Kumao\_13 (singleton),

Start 79:

- Found in 29 of 1298 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 7 of 1174
- Called 24.1% of time when present
- Phage (with cluster) where this start called: Basilisk\_3 (AS1), Brynnie\_3 (AS1), Coral\_3 (AS2), LittleTokyo\_3 (AS2), Lunar\_4 (AS2), Melons\_4 (AS2), Polka\_3 (AS2),

Start 80:

- Found in 11 of 1298 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 9 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100\_25 (V), Cosmo\_26 (V), EniyanLRS\_23 (V), MagicMan\_2 (DB), MaryV\_26 (V), Opie\_2 (DB), Schnabeltier\_2 (DB), TaronosaurusRx\_2 (DB), Whack\_2 (singleton), Wildcat\_26 (V), ZAYM\_2 (DB),

Start 81:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilSpotty\_2 (singleton),

Start 82:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EmiRose\_2 (singleton),

Start 86:

- Found in 3 of 1298 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1174
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Arielagos\_2 (AN), Kels\_2 (AN),

Start 87:

- Found in 2 of 1298 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atraxa\_3 (AX), Sputnik\_3 (AX),

#### Start 89:

- Found in 68 of 1298 ( 5.2% ) of genes in pham
- Manual Annotations of this start: 52 of 1174
- Called 82.4% of time when present
- Phage (with cluster) where this start called: Adora\_2 (CZ4), Annalisa\_3 (CZ4), Attis\_2 (CZ2), BaxterFox\_2 (CZ3), Beenie\_3 (CZ4), Bjaner7\_2 (CZ2), BlueFeather\_1 (FE), CarolAnn\_2 (CV), Clap\_2 (CZ2), Clark\_3 (CZ4), Cynthia\_2 (CZ2), Denise\_2 (CZ5), DobbysSock\_2 (CZ4), Dolores\_3 (CZ4), Dorito\_2 (CZ4), Easley\_3 (CZ4), Ebert\_2 (CZ2), EdnaMode\_2 (CZ2), GemG\_2 (CZ2), Gizermo\_2 (CZ2), Haley23\_2 (CZ2), Hortense\_2 (CZ4), Howe\_2 (CZ4), JCole\_2 (CZ2), Lamberg\_2 (CZ2), LordFarquaad\_2 (CZ2), Matteo\_2 (CZ2), MichaelScott\_3 (CZ4), Mocha12\_2 (CZ2), Nettuno\_2 (CZ2), Ohgeesy\_2 (CZ), Oregano\_2 (CZ4), PantheRoc\_1 (CZ3), Petra\_2 (CV), PhriskyACE\_2 (CZ4), Pickett\_2 (CZ2), Powerball\_2 (CZ4), Sahara\_2 (CZ2), Samman98\_3 (CZ4), Savage\_2 (CZ2), Sekhmet\_3 (CZ4), Shlim410\_2 (CZ4), Sidious\_2 (CZ7), SoilAssassin\_2 (CZ2), Sproutie\_2 (CZ2), Suerte\_2 (CZ4), Thimann\_3 (CZ4), TuertoX\_2 (CZ2), Twinkle\_2 (CZ4), Vasanti\_2 (CZ2), Whiteclaw\_2 (CZ2), Whytu\_1 (FE), WinkNick\_3 (CZ4), Yavru\_1 (FE), Yeet412\_2 (CZ2), Yeezy\_2 (CZ3),

#### Start 92:

- Found in 6 of 1298 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 16.7% of time when present
- Phage (with cluster) where this start called: CyranoPS\_2 (singleton),

#### Start 93:

- Found in 20 of 1298 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 19 of 1174
- Called 95.0% of time when present
- Phage (with cluster) where this start called: Auspice\_14 (M1), Aziz\_18 (M2), Bongo\_14 (M1), Bricole\_14 (M1), Diminimus\_15 (M1), Dulcita\_15 (M1), Estes\_19 (M2), GardenSalsa\_18 (M2), GenevaB15\_18 (M2), Glaske16\_15 (M1), IPhone7\_14 (M1), LilhomieP\_13 (M1), MrMagoo\_18 (M2), Nanosmite\_18 (M3), PegLeg\_14 (M1), Reindeer\_12 (M1), Skinny\_15 (M1), SlimJimmy\_13 (M1), TyDawg\_14 (M1),

#### Start 95:

- Found in 45 of 1298 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 42 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Andrew\_3 (AS3), Arby\_4 (AN), Azathoth\_4 (AN), Blair\_4 (AN), CGermain\_4 (AN), Chestnut\_4 (AN), Copper\_4 (AN), Courtney3\_4 (AN), Decurro\_4 (AN), Dewayne\_4 (AN), Elkhorn\_4 (AN), Guntur\_4 (AN), Hunnie\_4 (AN), Inspire2\_4 (AN), Jessica\_5 (AN), Juno112\_2 (AS3), KHumphrey\_2 (AS3), KylieMac\_5 (AN), Laila\_5 (AN), Leona\_2 (AS3), Link\_4 (AN), Lore\_4 (AN), LouisXIV\_4 (AN), Maggie\_4 (AN), Mariposa\_4 (AN), Massimo\_4 (AN), Moloch\_4 (AN), Muttlie\_4 (AN), PhluffyCoco\_2 (AS3), Prospero\_4 (AN), RedFox\_2 (AS3), Renna12\_3 (AS3), Ronnie\_4 (AN), Sandman\_4 (AN), Saphira\_4 (AN), Seume\_4 (AN), Sourignavong\_5 (AN), StewieGriff\_4 (AN), Stratus\_4 (AN), Swenson\_4 (AN), Taj14\_4 (AN), TinoCrisci\_4 (AN), Toulouse\_3 (AN), TymAbreu\_4 (AN), Yank\_4 (AN),

#### Start 96:

- Found in 8 of 1298 ( 0.6% ) of genes in pham

- Manual Annotations of this start: 1 of 1174
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Rey\_18 (M2),

Start 97:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigBoyz\_1 (GH),

Start 98:

- Found in 10 of 1298 ( 0.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: MoRicky\_2 (GH), Smilerella\_2 (GH),

Start 99:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Khuang\_2 (UNK),

Start 101:

- Found in 7 of 1298 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: BackstagePass\_2 (DB),

Start 104:

- Found in 6 of 1298 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 33.3% of time when present
- Phage (with cluster) where this start called: JuJu\_2 (CV), phiBT1\_33 (BB1),

Start 105:

- Found in 6 of 1298 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 6 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DinoDaryn\_9 (CU1), Goib\_8 (CU1), Huffy\_9 (CU1), Splinter\_7 (CU1), TZGordon\_9 (CU1), Vendetta\_7 (CU1),

Start 110:

- Found in 18 of 1298 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 15 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aoka\_3 (FO), Cole\_4 (FF), DonkeyMan\_2 (DY), Elesar\_5 (FF), EvenBluerMoon\_3 (FO), Gusanita\_4 (FF), Heinz\_2 (DY), Hibiscus\_2 (DY), JanetJ\_3 (FO), Jojo24\_2 (DY), Maja\_2 (FO), Nandita\_6 (FF), Popper\_4 (FF), Reyja\_3 (DY), Ryan\_6 (FF), Santhid\_2 (DY), Tarzan\_2 (DY), Zaheer\_6 (FF),

Start 111:

- Found in 7 of 1298 ( 0.5% ) of genes in pham

- Manual Annotations of this start: 7 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gustav\_2 (CD), Mahdia\_2 (CD), Morrissey\_2 (CD), Poppers\_2 (CD), Trine\_2 (CD), Upyo\_2 (CD), Widow\_2 (CD),

#### Start 113:

- Found in 46 of 1298 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 34 of 1174
- Called 76.1% of time when present
- Phage (with cluster) where this start called: Archis\_2 (CV), Azula\_2 (CV), Barco\_2 (CV), Begonia\_2 (CV), BlingBling\_2 (CV), Blino\_2 (CV), Blueberry\_2 (CV), CaptainKirk2\_2 (CV), Delian\_2 (CV), Fenry\_2 (CV), Frokostdame\_2 (CV), Gambino\_2 (CV), Guacamole\_2 (CV), Hitter\_2 (CV), Jalammah\_2 (CV), JasperJr\_2 (CV), KappaFarmDelta\_2 (CV), Lysidious\_2 (CV), Malachai\_2 (CV), Melba\_2 (CV), Mellie\_2 (CV), MintFen\_2 (CV), MissRona\_2 (CV), Murp\_2 (CV), Obliviate\_2 (CV), PhrostedPhlake\_2 (CV), Pipp\_2 (CV), Samba\_2 (CV), UmaThurman\_2 (CV), Utz\_2 (CV), Walrus\_2 (CV), Wisp\_2 (CV), Wocket\_2 (CV), Zarbodnamra\_2 (CV), ZiggyZoo\_2 (CV),

#### Start 114:

- Found in 4 of 1298 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 3 of 1174
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Euratis\_2 (BB1), Shawty\_2 (BB1), TG1\_2 (BB1),

#### Start 117:

- Found in 134 of 1298 ( 10.3% ) of genes in pham
- Manual Annotations of this start: 111 of 1174
- Called 92.5% of time when present
- Phage (with cluster) where this start called: Alucard\_3 (EE), Anseraureola\_3 (EE), Aries55\_3 (EE), Astro16\_3 (EE), Avvas\_3 (EE), Azizam\_3 (EE), Aztec\_3 (EE), Baine\_3 (EE), BarBear\_3 (EE), Belthelas\_3 (EE), BinkBonk\_3 (EE), Bintii\_3 (EE), Biscayne\_3 (EE), Bodhi17\_3 (EE), BonaeVitae\_3 (EE), BoomRoasted\_3 (EE), Bradley2\_3 (EE), Bri160\_3 (EE), BrokMonster\_3 (EE), Bullzi2019\_3 (EE), Burgy\_3 (EE), BurtonThePup\_3 (EE), Cayde6\_3 (EE), Charbie\_3 (EE), Chatham\_3 (EE), Cheesecake\_3 (EE), Ciel\_3 (EE), Clownery\_3 (EE), Concrete\_3 (EE), Danimal\_3 (EE), Danno\_3 (EE), Dongwon\_3 (EE), Dooby\_3 (EE), Douggie\_3 (EE), EdElric\_3 (EE), Efeko\_4 (EE), Eightball\_3 (EE), Ekko14\_3 (EE), Elspeth\_3 (EE), Erin\_3 (EE), Gabbspett\_3 (EE), Gardevoir\_3 (EE), Gillker\_3 (EE), Godfather\_3 (EE), GoldenBlanche\_3 (EE), Goobery\_3 (EE), HarperAnne\_3 (EE), Hernandez44\_3 (EE), Horacetta\_3 (EE), Hulk\_3 (EE), JRok\_3 (EE), Jahseh\_3 (EE), JaimeB\_3 (EE), Jannah\_3 (EE), Jerky\_3 (EE), JoBros\_3 (EE), JooneeDee\_3 (EE), Josuke\_3 (EE), Kaijohn\_3 (EE), KayPaulus\_3 (EE), Kevanna\_3 (EE), KillerTomato\_3 (EE), Kojax4\_3 (EE), KyriosFaba\_3 (EE), LaviMo\_3 (EE), Leafy\_3 (EE), LemonPepper\_3 (EE), LionelHutz\_3 (EE), Livingwater\_3 (EE), Loca\_3 (EE), Lola20\_3 (EE), Lunatic\_3 (EE), Luxx\_3 (EE), Majesty\_3 (EE), ManAs\_3 (EE), Maneater\_3 (EE), McShie\_3 (EE), MelBee03\_3 (EE), Miaurora\_3 (EE), Minima\_3 (EE), MirimarMandM\_3 (EE), MrGreen\_3 (EE), Naby\_3 (EE), Namsahir\_3 (EE), NeumannU\_3 (EE), Niffler\_3 (EE), Nobel\_3 (EE), Noelani\_3 (EE), Octopus\_3 (EE), Otwor\_3 (EE), Owens\_3 (EE), PaoPu\_3 (EE), Picnic\_3 (EE), PoRanda\_3 (EE), Pondwater\_3 (EE), Publix\_3 (EE), Puddles3\_3 (EE), PuffyCat\_3 (EE), Quaker\_3 (EE), Rhogar\_3 (EE), Rhysand\_3 (EE), RoscoWindex\_3 (EE), SantasSleigh\_3 (EE), Sara\_3 (EE), Scamander\_3 (EE),

Scrunchy\_3 (EE), SeaWolves\_3 (EE), Sippinontea\_3 (EE), Slentz\_3 (EE), Slizam\_3 (EE), Snuffles\_4 (EE), TeddyBoy\_3 (EE), TimoTea\_3 (EE), TinyTruffula\_3 (EE), TomBrady12\_3 (EE), Trireme\_3 (EE), Upsilon\_3 (EE), Vanisius\_3 (EE), VitulaEligans\_3 (EE), Witch\_3 (EE), Wolfpack\_3 (EE), Yasuo\_3 (EE), YertPhresh\_3 (EE), Yubaba\_3 (EE),

Start 118:

- Found in 8 of 1298 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 4 of 1174
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Adelaide\_2 (EP), Bran\_2 (EP), Dina\_2 (EP), Stiles\_2 (EP),

Start 119:

- Found in 23 of 1298 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 2 of 1174
- Called 8.7% of time when present
- Phage (with cluster) where this start called: Dismas\_3 (EB), Kieran\_3 (EB),

Start 120:

- Found in 18 of 1298 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 15 of 1174
- Called 94.4% of time when present
- Phage (with cluster) where this start called: BBQValindra\_2 (DB), Bowser\_2 (DB), Bunker\_2 (DB), Coriander\_2 (DB), DirtyBoi\_2 (DB), Dmitri\_2 (DB), Doggs\_2 (DB), Eyes\_2 (DB), GEazy\_2 (DB), HannahD\_2 (DB), Heather\_2 (BB2), Hedwig\_2 (DB), Kiko\_2 (DB), RayTheFireFly\_2 (DB), RemusLoopin\_2 (BB2), Samora\_2 (BB1), Sebastisaurus\_2 (BB2),

Start 121:

- Found in 23 of 1298 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 4 of 1174
- Called 21.7% of time when present
- Phage (with cluster) where this start called: BFK20\_ORF2 (singleton), Lederberg\_2 (EP), SamW\_2 (EP), StAB\_2 (EP), Troy\_2 (EP),

Start 122:

- Found in 141 of 1298 ( 10.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Cazares\_3 (EE), DaftyDuck\_3 (EE), MasterPitts\_3 (EE), Oaklynn\_3 (EE), Sage7\_3 (EE), Stem\_3 (EE), Yami\_3 (EE),

Start 123:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mbo4\_2 (singleton),

Start 124:

- Found in 12 of 1298 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 1174
- Called 25.0% of time when present



- Phage (with cluster) where this start called: Lilbooboo\_2 (BB1), MooKitty\_3 (AX), Vash\_2 (BB1),

#### Start 125:

- Found in 80 of 1298 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 61 of 1174
- Called 83.8% of time when present
- Phage (with cluster) where this start called: Abigail\_3 (EB), Albedo\_3 (EB), Albright\_3 (EB), Anatole\_3 (BV), AnnaLie\_4 (EB), Armstrong\_2 (EB), Arroyo\_4 (EB), AvGuardian\_3 (EB), Avocadoman\_3 (EB), B3\_3 (BV), BAjuniper\_3 (EB), BabyDaisy\_4 (EB), BabyYoda\_3 (EB), Bachaco\_3 (EB), BelmontSKP\_4 (EB), Bernstein\_2 (EB), Brahms\_2 (EB), BubbaBear\_3 (EB), Buldak\_3 (EB), Burritobowl\_3 (EB), Cashington\_3 (EB), Celaena\_3 (EB), ChiliPepper\_3 (EB), Clayda5\_2 (EB), Coltrane\_2 (EB), CroZenni\_3 (EB), DickRichards\_3 (EB), Didgeridoo\_4 (EB), DirtyBubble\_3 (EB), Doobus\_3 (EB), E1\_3 (BV), Eden\_2 (EB), Elva\_4 (EB), Eula\_3 (EB), Finalfrontier\_4 (EB), FlameThrower\_3 (EB), Franklin22\_2 (EB), Gack\_2 (EB), Icarian\_4 (EB), IndyLu\_3 (EB), Johnathan\_3 (EB), Jovita\_3 (EB), Katzastrophic\_3 (EB), Kenzers\_3 (EB), Lahqtemish\_3 (EB), LimaBean\_3 (EB), Lynlen\_3 (EB), Nicky22\_4 (EB), Olliecat\_3 (EB), Phisb\_3 (EB), QMacho\_4 (EB), Quenya\_4 (EB), Rollins\_2 (EB), Rona\_3 (EB), SanaSana\_4 (EB), SansAfet\_3 (EB), SarBear\_3 (EB), Sharkboy\_3 (EB), Shayna\_2 (EB), Skylord\_2 (EB), Slay\_3 (EB), Stoor\_3 (EB), Stromboli\_3 (EB), SunnyD\_2 (EB), Swervy\_3 (EB), TukTuk\_3 (EB), Vitas\_2 (EB),

#### Start 127:

- Found in 16 of 1298 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 3 of 1174
- Called 31.2% of time when present
- Phage (with cluster) where this start called: BaileyBlu\_2 (FP), CallinAllBarbz\_2 (FP), Lucky10\_2 (DH), PFR1\_02 (BX), PFR2\_02 (BX),

#### Start 129:

- Found in 23 of 1298 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 6 of 1174
- Called 26.1% of time when present
- Phage (with cluster) where this start called: Fairfaxidum\_2 (CV), PCoral7\_2 (CV), Pinnie\_3 (G3), PrincePatrick\_2 (CV), Toast\_2 (CV), William\_2 (CV),

#### Start 131:

- Found in 2 of 1298 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Min1\_37 (singleton), Sleepyhead\_2 (singleton),

#### Start 132:

- Found in 69 of 1298 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 2.9% of time when present
- Phage (with cluster) where this start called: DocMcStuffins\_3 (F1), PensacolaC28\_1 (singleton),

#### Start 134:

- Found in 25 of 1298 ( 1.9% ) of genes in pham

- Manual Annotations of this start: 3 of 1174
- Called 12.0% of time when present
- Phage (with cluster) where this start called: DumpsterDude\_2 (DW), Malibo\_2 (DW), Ruthy\_2 (DW),

#### Start 137:

- Found in 11 of 1298 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 8 of 1174
- Called 81.8% of time when present
- Phage (with cluster) where this start called: Abidatro\_3 (AS1), Chickaboom\_2 (AS1), Eesa\_3 (AS1), Galaxy\_3 (AS1), Jamun\_3 (AS1), Orcanus\_3 (AS1), Ruchi\_3 (AS1), TaylorSipt\_3 (AS1), Vulpecula\_3 (AS1),

#### Start 138:

- Found in 3 of 1298 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1174
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Madraxi\_10 (CF), Shagrat\_8 (CF),

#### Start 139:

- Found in 86 of 1298 ( 6.6% ) of genes in pham
- Manual Annotations of this start: 74 of 1174
- Called 90.7% of time when present
- Phage (with cluster) where this start called: Alexphander\_3 (F1), Asapag\_3 (DN1), Avani\_3 (F2), Awesomesauce\_3 (F1), BENtherdunthat\_3 (DN1), Beakin\_3 (F1), BigPhil\_3 (F1), Blarby\_4 (F), Bobi\_3 (F1), Budski\_3 (DN), BuzzLyseyear\_3 (F1), Cerasum\_3 (F1), Che9d\_3 (F2), CheeseTouch\_3 (DN1), ChickenDinner\_3 (F1), Coco12\_3 (F1), Cornucopia\_3 (F1), DaWorst\_3 (F1), Demsculpinboyz\_3 (F2), DirtMcgirt\_3 (F1), DosHalletts\_3 (F1), Ecliptus\_3 (DN), Enby\_3 (F1), Flathead\_3 (F1), Frankie\_3 (F1), Frickyeah\_3 (DN1), Getalong\_3 (DN1), Girafales\_3 (F1), Hegedechwinu\_3 (F1), Holliday\_3 (DN1), Horus\_3 (DN1), Jabbawokkie\_4 (F2), JalFarm20\_3 (F1), Job42\_3 (F1), Kamaru\_3 (DN1), Kenna\_3 (DN1), Kimberlium\_3 (F1), Kingsley\_3 (F1), Leozinho\_3 (F1), Leroy\_3 (DN1), LitninMcQueen\_3 (DN1), Lorde\_3 (F1), Lutum\_3 (DN1), Madiba\_3 (F1), Malisha\_3 (DN), Marker\_3 (F1), Misha28\_3 (F1), Mova\_3 (F1), Mozy\_3 (F1), ODay\_3 (DN), Ogopogo\_4 (F1), Periwinkle\_3 (DN1), Phabuloso\_3 (DN1), Phistory\_3 (DN1), Piper2020\_3 (F1), Plumbus\_3 (F1), Pollywog\_3 (F1), Quico\_3 (F1), Ramsey\_3 (F1), Rialto\_3 (F1), RockyHorror\_3 (F1), Sarma624\_3 (F1), Seagreen\_3 (F1), SimranZ1\_3 (F1), Soul22\_3 (F2), Spikelee\_3 (F1), Spooky\_3 (DN2), Squiddly\_4 (DN2), Squirty\_3 (F3), Stap\_3 (F1), Starceвич\_3 (F1), TootsiePop\_3 (F1), Tootsieroll\_3 (F1), Totinger\_3 (F1), Velveteen\_3 (F1), Whitney\_3 (DN1), Yoshi\_3 (F2), Zapner\_4 (F2),

#### Start 140:

- Found in 3 of 1298 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: ArV2\_02 (singleton),

#### Start 143:

- Found in 116 of 1298 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 2 of 1174
- Called 1.7% of time when present
- Phage (with cluster) where this start called: TBond007\_7 (K3), Yuna\_8 (K6),

Start 144:

- Found in 67 of 1298 ( 5.2% ) of genes in pham
- Manual Annotations of this start: 46 of 1174
- Called 91.0% of time when present
- Phage (with cluster) where this start called: ATCC29399BC\_2 (BU), ATCC29399BT\_2 (BU), Aquarius\_2 (BU), Attacne\_2 (BU), BruceLethal\_2 (BU), Cota\_2 (BU), DrParker\_2 (BU), Enochoraptor\_2 (BU), Enoki\_2 (BU), JfliX2\_8 (CF), Keiki\_2 (BU), Kubed\_2 (BU), Kudrefre\_12 (DU1), Lauchelly\_2 (BU), Leviosa\_2 (BU), LilBandit\_2 (BU), MEAK\_2 (BU), Moyashi\_2 (BU), MrAK\_2 (BU), Neville\_12 (DU2), Octobien14\_13 (DU1), Ouroboros\_2 (BU), P1.1\_2 (BU), P100.1\_2 (BU), P100A\_2 (BU), P100D\_2 (BU), P101A\_2 (BU), P104A\_2 (BU), P105\_2 (BU), P106A\_2 (BU), P107A\_2 (BU), P107C\_2 (BU), P108C\_2 (BU), P14.4\_2 (BU), P9.1\_2 (BU), PA6\_2 (BU), PAD20\_2 (BU), PAS50\_2 (BU), PHL010M04\_02 (BU), PHL037M02\_02 (BU), PHL060L00\_02 (BU), PHL067M10\_02 (BU), PHL071N05\_02 (BU), PHL111M01\_02 (BU), PHL112N00\_02 (BU), PHL113M01\_02 (BU), PHL114L00\_02 (BU), Pirate\_2 (BU), Procrass1\_2 (BU), QueenBey\_2 (BU), REQ1\_66 (CF), Rabbitrun\_14 (DU2), Rileysaurus\_2 (BU), SKKY\_2 (BU), Sephiroth\_13 (DU1), Solid\_2 (BU), Stormborn\_2 (BU), Supernova\_2 (BU), Syleon\_13 (DU1), Trax\_12 (DU2), Wizzo\_2 (BU),

Start 146:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adaia\_3 (AX),

Start 147:

- Found in 16 of 1298 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Kuleana\_3 (AS2),

Start 148:

- Found in 3 of 1298 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 33.3% of time when present
- Phage (with cluster) where this start called: BrayBeast\_2 (FB),

Start 150:

- Found in 40 of 1298 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 2.5% of time when present
- Phage (with cluster) where this start called: Sbash\_2 (I2),

Start 152:

- Found in 46 of 1298 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 22 of 1174
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Aggie\_2 (N), Andies\_2 (N), Bosection6\_2 (N), Chewbacca\_2 (N), Fulbright\_2 (N), Jamie19\_2 (N), Kevin1\_2 (N), Nenae\_2 (N), Panchino\_2 (N), Parmesanjohn\_2 (N), PhancyPhin\_2 (N), Philonius\_2 (N), Phrann\_2 (N), Pipsqueaks\_2 (N), Raymond7\_2 (N), Rebel\_2 (N), Rubeelu\_2 (N), Schnauzer\_2 (N), Silvafighter\_2 (N), SkinnyPete\_2 (N), SpongeBob\_2 (N), Xen0\_2

(N), Xerxes\_2 (N),

Start 154:

- Found in 4 of 1298 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 4 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: B22\_3 (BW), Doucette\_3 (BW), E6\_3 (BW), G4\_3 (BW),

Start 156:

- Found in 60 of 1298 ( 4.6% ) of genes in pham
- Manual Annotations of this start: 23 of 1174
- Called 48.3% of time when present
- Phage (with cluster) where this start called: Bauer\_4 (FN), BlackSpider\_2 (FN), Butters\_2 (N), Carcharodon\_2 (N), Charlie\_2 (N), Duplicity\_2 (N), Emperor\_2 (DM), GMA5\_2 (CW2), GRU3\_2 (CW2), Gex\_2 (N), Jeanie\_2 (CW1), Journey\_2 (N), Magsby\_2 (N), McGonagall\_2 (CW1), Melville\_2 (N), MichelleMyBell\_2 (N), Phloss\_2 (N), Purgamenstris\_2 (N), Rahul\_2 (CW2), Redi\_2 (N), SallySpecial\_2 (DM), Scitech\_2 (N), ShrimpFriedEgg\_2 (N), Shweta\_2 (N), Silvy\_2 (N), Smurph\_2 (N), Snekmaggon\_2 (N), Tapioca\_2 (N), Zucker\_3 (FN),

Start 157:

- Found in 10 of 1298 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Eyre\_2 (singleton),

Start 158:

- Found in 32 of 1298 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 20 of 1174
- Called 65.6% of time when present
- Phage (with cluster) where this start called: Ariel\_9 (J), Bobby\_11 (J), Cambiare\_3 (G2), Courthouse\_10 (J), Gonephishing\_10 (J), Hannaconda\_7 (J), IdentityCrisis\_2 (singleton), KashFlow\_4 (J), Klein\_10 (J), Lucky2013\_10 (J), MiaZeal\_10 (J), P104B\_2 (BU), P106C\_2 (BU), P106I\_2 (BU), P106L\_2 (BU), P106M\_2 (BU), P3MA\_3 (singleton), Porcelain\_10 (J), Squint\_10 (J), Superphikiman\_10 (J), Wanda\_10 (J),

Start 159:

- Found in 7 of 1298 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 1174
- Called 42.9% of time when present
- Phage (with cluster) where this start called: Moosehead\_2 (CZ6), OneDirection\_2 (CZ6), REQ2\_02 (singleton),

Start 160:

- Found in 1 of 1298 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Che9c\_2 (I2),

Start 161:

- Found in 166 of 1298 ( 12.8% ) of genes in pham

- Manual Annotations of this start: 150 of 1174
- Called 93.4% of time when present
- Phage (with cluster) where this start called: ActinUp\_8 (K1), Adephagia\_8 (K1), Adonis\_8 (K1), Ageofdapage\_8 (K1), AlishaPH\_8 (K1), Amelie\_4 (K1), Amgine\_6 (K6), Aminay\_6 (K7), Amohnition\_7 (K6), Anaya\_9 (K1), Angelica\_8 (K1), Apocalypse\_8 (K1), Asayake\_8 (K1), Atiba\_8 (K1), BEEST\_8 (K1), BGlluviae\_8 (K1), BaghaKamala\_8 (K1), BarrelRoll\_8 (K1), Beezoo\_8 (K1), Bella96\_8 (K1), Belladonna\_8 (K1), Binglebops\_4 (K1), Blizzard\_8 (K1), Boiiii\_8 (K1), Boilgate\_5 (K8), BoostSeason\_4 (K2), Bryler\_7 (K6), CREW\_8 (K1), Cain\_7 (K6), Capricorn\_8 (K1), CaseJules\_8 (K1), Chancellor\_9 (K4), CheetoDust\_8 (K1), Cheetobro\_9 (K4), Chris\_7 (K1), CrimD\_8 (K1), Curiosium\_9 (K1), Dalmuri\_8 (K1), DarthP\_7 (K6), Deby\_8 (K1), Devera\_8 (K1), DismalFunk\_4 (K2), DismalStressor\_4 (K2), Dole\_8 (K1), DrHayes\_8 (K1), Durfee\_8 (K1), Efra2\_8 (K1), Ekdilam\_5 (K6), Ellie\_5 (K6), Emerson\_8 (K1), Enkosi\_4 (K1), Eponine\_9 (K4), Fefferhead\_7 (K6), Findley\_4 (K2), Fionnbharth\_9 (K4), Ganymede\_8 (K1), Geraldini\_8 (K1), Guanica15\_8 (K1), Hammy\_7 (K6), HedwigODU\_8 (K1), Homura\_8 (K1), Hurricane\_7 (K3), Hyperbowlee\_8 (K1), Illumine\_8 (K1), Inky\_8 (K1), JAWS\_8 (K1), JF1\_9 (K4), Jarvi\_8 (K1), Jayhawk\_8 (K1), Jeckyll\_8 (K1), Joy99\_8 (K1), Keshu\_7 (K3), KiSi\_7 (K1), Krueger\_7 (K6), LastHope\_8 (K1), LaterM\_8 (K1), LeMond\_7 (K1), LilPharaoh\_4 (K1), LindNT\_8 (K1), Llorens\_8 (K1), Lunahalos\_8 (K1), MacnCheese\_8 (K3), Malthus\_9 (K4), Marcoliusprime\_4 (K2), MarkPheW\_7 (K1), Mdavu\_4 (K1), MeaningOfLife\_8 (K1), Megsy\_8 (K1), Milly\_4 (K2), Mitti\_9 (K4), MooMoo\_2 (singleton), Mufasa\_4 (K2), Murucutumbu\_8 (K1), Mynx\_8 (K1), Nibb\_7 (K1), Nikao\_4 (K1), Niklas\_8 (K1), Nutello\_4 (K1), Oscar\_7 (K1), Padfoot\_8 (K1), Padpat\_8 (K1), Peanam\_8 (K1), Peel\_8 (K1), Pharb\_7 (K3), PhelpsODU\_7 (K6), Phrank\_7 (K6), Piatt\_8 (K1), Pixie\_7 (K3), Pokerus\_7 (K1), Prithvi\_8 (K1), QuincyRose\_7 (K1), Ramen\_8 (K1), Rapunzel97\_8 (K1), Rosmarinus\_8 (K1), Ruthiejr\_8 (K4), SamuelLPlaqson\_8 (K1), Scarlett\_7 (K1), SgtBeansprout\_4 (K1), Shadow1\_6 (K6), Shaobing\_8 (K1), ShedlockHolmes\_7 (K3), ShiaSurprise\_8 (K1), SirPhilip\_7 (K6), Slarp\_9 (K4), Slimphazie\_8 (K1), Spock\_8 (K1), Stinson\_8 (K1), Strobilo\_4 (K2), Sulley\_8 (K1), Sunflower1121\_6 (K6), Syra333\_7 (K6), TClif\_7 (K6), TM4\_4 (K2), Tachez\_8 (K1), TaiwanKao\_8 (K1), Taquito\_7 (K4), Tierra\_7 (K6), TiniBug\_8 (K1), Tiri\_8 (K1), Topper\_8 (K1), TreyKay\_8 (K1), TripleTrouble\_6 (K3), TruffulaTree\_8 (K1), Twitch\_8 (K1), Unicorn\_7 (K6), Urkel\_8 (K1), Validus\_8 (K1), Veliki\_8 (K1), Wintermute\_9 (K4), Ximenita\_8 (K6), YoureAdopted\_7 (K1), Yunkel11\_8 (K1), Zabiza\_8 (K1), Zavala\_8 (K1), ZoeJ\_4 (K2),

#### Start 162:

- Found in 59 of 1298 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 39 of 1174
- Called 69.5% of time when present
- Phage (with cluster) where this start called: Angel\_2 (G1), Annihilator\_2 (G1), Aroostook\_2 (G1), Avrafan\_2 (G1), BPs\_2 (G1), BQuat\_2 (G1), Barkley26\_2 (G1), BruceB\_2 (G1), CassieYates\_2 (G1), Cedasite\_2 (G1), Chance64\_2 (G1), Cherrybomb426\_2 (G1), Coleslaw\_2 (G1), Crespo\_2 (G1), ECartman\_2 (G1), GoldenAsh\_2 (G1), Gomashi\_2 (G1), Grizzly\_2 (G1), Halo\_2 (G1), Hope\_2 (G1), Hotshotbaby7\_2 (G1), Jane\_2 (G1), Jolene\_2 (G1), Jonghyun\_2 (G1), JorRay\_2 (G1), Kareem\_2 (G1), Kasen3\_2 (G1), Liefie\_2 (G1), LouisV14\_2 (G1), OctaviousRex\_2 (G1), Olga\_2 (G1), Peeb\_2 (G1), Periodt\_2 (G1), Phish\_2 (G1), Phreak\_2 (G1), Rabbs\_2 (G1), Renaissance\_2 (G1), Sneeze\_2 (G1), Taheera\_2 (G1), Terror\_2 (G1), ZoMa\_2 (G1),

#### Start 163:

- Found in 3 of 1298 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1174
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Kumotta\_3 (FB), Shoya\_2 (FB),

#### Start 164:

- Found in 26 of 1298 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 7.7% of time when present
- Phage (with cluster) where this start called: MrSmee\_2 (UNK), Spartoi\_2 (singleton),

#### Start 166:

- Found in 65 of 1298 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 22 of 1174
- Called 35.4% of time when present
- Phage (with cluster) where this start called: Agent47\_6 (K5), AlleyCat\_6 (K5), BabeRuth\_2 (N), Collard\_6 (K5), Dadosky\_6 (K5), Edugator\_5 (K5), Feyre\_6 (K5), Gengar\_6 (K5), Guillsminger\_6 (K5), Heftyboy\_6 (K5), InvictusManeo\_6 (K5), Kratio\_5 (K5), Larva\_6 (K5), Leston\_6 (K5), Miryou\_6 (K5), OkiRoe\_6 (K5), Omnicron\_6 (K5), Paola\_6 (K5), Psycho\_6 (K5), Rando14\_6 (K5), SoSeph\_6 (K5), Thyatira\_6 (K5), Waterfoul\_6 (K5),

#### Start 168:

- Found in 59 of 1298 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 3 of 1174
- Called 5.1% of time when present
- Phage (with cluster) where this start called: ShaboiShabazz\_2 (G1), Sweets\_2 (G1), TomBrady\_2 (G1),

#### Start 169:

- Found in 3 of 1298 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Piku\_2 (FE),

#### Start 176:

- Found in 6 of 1298 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 6 of 1174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fryberger\_34 (DP), Guey18\_39 (DP), Keelan\_32 (DP), Ronaldo\_37 (DP), Volt\_36 (DP), Ziko\_37 (DP),

#### Start 178:

- Found in 4 of 1298 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Faith5x5\_2 (CZ6),

#### Start 184:

- Found in 11 of 1298 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 5 of 1174
- Called 54.5% of time when present

- Phage (with cluster) where this start called: MargaretKali\_3 (FB), Marshawn\_9 (K6), Morkie\_2 (DH), PhorbesPhlower\_2 (DH), Pitbull\_2 (FQ), Sarge\_2 (FB),

Start 186:

- Found in 67 of 1298 ( 5.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 1.5% of time when present
- Phage (with cluster) where this start called: Lton\_2 (CZ),

Start 197:

- Found in 7 of 1298 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 1174
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Coeur\_2 (CW2), Schiebs\_2 (CW3),

Start 200:

- Found in 75 of 1298 ( 5.8% ) of genes in pham
- Manual Annotations of this start: 2 of 1174
- Called 2.7% of time when present
- Phage (with cluster) where this start called: AustinPowers\_2 (AK), PinkFriday\_2 (AK),

Start 201:

- Found in 64 of 1298 ( 4.9% ) of genes in pham
- Manual Annotations of this start: 6 of 1174
- Called 10.9% of time when present
- Phage (with cluster) where this start called: Amelia\_4 (AS2), Cote\_4 (AS2), Daob\_4 (AS2), HannahPhantana\_4 (AS2), Kepler\_3 (AS2), Lakshmi\_5 (AK), Misaeng\_5 (AK),

Start 205:

- Found in 184 of 1298 ( 14.2% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 0.5% of time when present
- Phage (with cluster) where this start called: Paito\_2 (G1),

Start 206:

- Found in 99 of 1298 ( 7.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.0% of time when present
- Phage (with cluster) where this start called: PartyCup\_5 (AK),

Start 209:

- Found in 59 of 1298 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 1174
- Called 3.4% of time when present
- Phage (with cluster) where this start called: EpicDab\_2 (DM), RRH1\_02 (singleton),

Start 216:

- Found in 12 of 1298 ( 0.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Raqqa\_3 (AY),

#### Start 219:

- Found in 270 of 1298 ( 20.8% ) of genes in pham
- Manual Annotations of this start: 15 of 1174
- Called 5.9% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_3 (AY), Boomer\_3 (F1), Drago\_3 (F1), Juice456\_3 (F1), Juliette\_9 (K4), LittleShirley\_3 (F1), MissDaisy\_9 (K4), Oksu\_3 (F1), OmniCritical\_9 (K4), OwlsT2W\_3 (F1), Patt\_9 (K4), Reptar3000\_9 (K4), SamScheppers\_7 (K4), UncleRicky\_3 (F1), Y10\_09 (K4), Y2\_09 (K4),

#### Start 221:

- Found in 150 of 1298 ( 11.6% ) of genes in pham
- Manual Annotations of this start: 3 of 1174
- Called 2.7% of time when present
- Phage (with cluster) where this start called: BrotherBLo\_5 (AK), Jumboset\_5 (AK), Kalizoi\_5 (AK), Scuttle\_5 (AK),

#### Start 223:

- Found in 190 of 1298 ( 14.6% ) of genes in pham
- Manual Annotations of this start: 13 of 1174
- Called 7.9% of time when present
- Phage (with cluster) where this start called: Ayotoya\_6 (DI), BetterKatz\_6 (DI), Bock\_6 (DI), Brylie\_6 (DI), Chop\_6 (DI), DelRio\_6 (DI), Francois\_6 (DI), GrandSlam\_6 (DI), Hamood\_6 (DI), Mulch\_6 (DI), Nadeem\_6 (DI), NancyRae\_6 (DI), Parada\_6 (DI), Pimento\_5 (DI), WheatThin\_6 (DI),

### Summary by clusters:

There are 96 clusters represented in this pham: I2, BU, BV, BW, BX, G5, G4, G3, G2, G1, GH, FB, K7, FE, FF, CZ2, CZ3, CZ6, CZ7, CZ4, CZ5, M1, M3, M2, P2, P3, P1, P6, P4, P5, EE, O, EB, EP, Z, FP, FQ, singleton, K3, K2, K1, AY, K6, K5, K4, K8, FN, FO, CU5, CU4, CU3, CU2, CU1, DN1, DN2, DU1, DU2, BB2, BB1, AS3, AS2, AS1, F, J, CF, CD, CZ, V, UNK, CV, F1, F2, F3, DN, DM, DH, DI, DB, DA, DY, DW, DP, CW1, CW3, CW2, AH, AK, AN, Q, L4, L2, L3, L1, Y, AX, N,

#### Info for manual annotations of cluster AH:

- Start number 34 was manually annotated 1 time for cluster AH.

#### Info for manual annotations of cluster AK:

- Start number 71 was manually annotated 75 times for cluster AK.
- Start number 200 was manually annotated 2 times for cluster AK.
- Start number 201 was manually annotated 2 times for cluster AK.
- Start number 221 was manually annotated 3 times for cluster AK.

#### Info for manual annotations of cluster AN:

- Start number 76 was manually annotated 1 time for cluster AN.
- Start number 86 was manually annotated 2 times for cluster AN.
- Start number 95 was manually annotated 38 times for cluster AN.

#### Info for manual annotations of cluster AS1:

- Start number 79 was manually annotated 2 times for cluster AS1.
- Start number 137 was manually annotated 8 times for cluster AS1.

#### Info for manual annotations of cluster AS2:



- Start number 79 was manually annotated 5 times for cluster AS2.
- Start number 147 was manually annotated 1 time for cluster AS2.
- Start number 201 was manually annotated 4 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 95 was manually annotated 4 times for cluster AS3.

Info for manual annotations of cluster AX:

- Start number 87 was manually annotated 2 times for cluster AX.
- Start number 124 was manually annotated 1 time for cluster AX.
- Start number 146 was manually annotated 1 time for cluster AX.

Info for manual annotations of cluster AY:

- Start number 219 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster BB1:

- Start number 114 was manually annotated 3 times for cluster BB1.
- Start number 124 was manually annotated 2 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 120 was manually annotated 3 times for cluster BB2.

Info for manual annotations of cluster BU:

- Start number 144 was manually annotated 38 times for cluster BU.
- Start number 158 was manually annotated 5 times for cluster BU.

Info for manual annotations of cluster BV:

- Start number 125 was manually annotated 3 times for cluster BV.

Info for manual annotations of cluster BW:

- Start number 154 was manually annotated 4 times for cluster BW.

Info for manual annotations of cluster CD:

- Start number 111 was manually annotated 7 times for cluster CD.

Info for manual annotations of cluster CF:

- Start number 138 was manually annotated 2 times for cluster CF.
- Start number 144 was manually annotated 1 time for cluster CF.

Info for manual annotations of cluster CU1:

- Start number 49 was manually annotated 2 times for cluster CU1.
- Start number 105 was manually annotated 6 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 49 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 59 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 62 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CV:

- Start number 89 was manually annotated 2 times for cluster CV.
- Start number 104 was manually annotated 1 time for cluster CV.
- Start number 113 was manually annotated 34 times for cluster CV.
- Start number 129 was manually annotated 5 times for cluster CV.

Info for manual annotations of cluster CW1:

- Start number 156 was manually annotated 2 times for cluster CW1.

Info for manual annotations of cluster CW2:

- Start number 156 was manually annotated 1 time for cluster CW2.
- Start number 197 was manually annotated 1 time for cluster CW2.

Info for manual annotations of cluster CW3:

- Start number 197 was manually annotated 1 time for cluster CW3.

Info for manual annotations of cluster CZ:

- Start number 89 was manually annotated 1 time for cluster CZ.
- Start number 186 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ2:

- Start number 89 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 89 was manually annotated 2 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 89 was manually annotated 19 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 89 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 159 was manually annotated 2 times for cluster CZ6.
- Start number 178 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 89 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DA:

- Start number 19 was manually annotated 3 times for cluster DA.

Info for manual annotations of cluster DB:

- Start number 80 was manually annotated 3 times for cluster DB.
- Start number 120 was manually annotated 12 times for cluster DB.

Info for manual annotations of cluster DH:

- Start number 127 was manually annotated 1 time for cluster DH.
- Start number 184 was manually annotated 2 times for cluster DH.

Info for manual annotations of cluster DI:

- Start number 223 was manually annotated 13 times for cluster DI.

Info for manual annotations of cluster DM:

- Start number 156 was manually annotated 2 times for cluster DM.
- Start number 209 was manually annotated 1 time for cluster DM.

Info for manual annotations of cluster DN:

- Start number 139 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 139 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 139 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DP:

- Start number 176 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster DU1:

- Start number 144 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 144 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster DW:

- Start number 134 was manually annotated 3 times for cluster DW.

Info for manual annotations of cluster DY:

- Start number 110 was manually annotated 5 times for cluster DY.

Info for manual annotations of cluster EB:

- Start number 119 was manually annotated 2 times for cluster EB.
- Start number 125 was manually annotated 58 times for cluster EB.

Info for manual annotations of cluster EE:

- Start number 117 was manually annotated 111 times for cluster EE.

Info for manual annotations of cluster EP:

- Start number 118 was manually annotated 4 times for cluster EP.
- Start number 121 was manually annotated 4 times for cluster EP.

Info for manual annotations of cluster F1:

- Start number 139 was manually annotated 45 times for cluster F1.
- Start number 219 was manually annotated 6 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 139 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 139 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster FB:

- Start number 148 was manually annotated 1 time for cluster FB.

- Start number 163 was manually annotated 2 times for cluster FB.
- Start number 184 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster FE:

- Start number 47 was manually annotated 3 times for cluster FE.
- Start number 53 was manually annotated 1 time for cluster FE.
- Start number 89 was manually annotated 3 times for cluster FE.

Info for manual annotations of cluster FF:

- Start number 110 was manually annotated 7 times for cluster FF.

Info for manual annotations of cluster FN:

- Start number 156 was manually annotated 2 times for cluster FN.

Info for manual annotations of cluster FO:

- Start number 110 was manually annotated 3 times for cluster FO.

Info for manual annotations of cluster FP:

- Start number 127 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster G1:

- Start number 72 was manually annotated 15 times for cluster G1.
- Start number 162 was manually annotated 39 times for cluster G1.
- Start number 168 was manually annotated 3 times for cluster G1.
- Start number 205 was manually annotated 1 time for cluster G1.

Info for manual annotations of cluster G2:

- Start number 51 was manually annotated 1 time for cluster G2.
- Start number 72 was manually annotated 1 time for cluster G2.
- Start number 158 was manually annotated 1 time for cluster G2.

Info for manual annotations of cluster G3:

- Start number 51 was manually annotated 1 time for cluster G3.
- Start number 129 was manually annotated 1 time for cluster G3.

Info for manual annotations of cluster G4:

- Start number 72 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 51 was manually annotated 1 time for cluster G5.

Info for manual annotations of cluster I2:

- Start number 150 was manually annotated 1 time for cluster I2.
- Start number 160 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster J:

- Start number 158 was manually annotated 12 times for cluster J.

Info for manual annotations of cluster K1:

- Start number 161 was manually annotated 100 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 161 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 143 was manually annotated 1 time for cluster K3.
- Start number 161 was manually annotated 7 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 161 was manually annotated 11 times for cluster K4.
- Start number 219 was manually annotated 8 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 166 was manually annotated 21 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 143 was manually annotated 1 time for cluster K6.
- Start number 161 was manually annotated 19 times for cluster K6.
- Start number 184 was manually annotated 1 time for cluster K6.

Info for manual annotations of cluster K7:

- Start number 161 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 161 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster L1:

- Start number 68 was manually annotated 12 times for cluster L1.
- Start number 71 was manually annotated 6 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 68 was manually annotated 28 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 68 was manually annotated 16 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 68 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster M1:

- Start number 93 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 93 was manually annotated 5 times for cluster M2.
- Start number 96 was manually annotated 1 time for cluster M2.

Info for manual annotations of cluster M3:

- Start number 93 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster N:

- Start number 152 was manually annotated 22 times for cluster N.
- Start number 156 was manually annotated 16 times for cluster N.
- Start number 166 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster O:

- Start number 72 was manually annotated 15 times for cluster O.
- Start number 74 was manually annotated 11 times for cluster O.

Info for manual annotations of cluster P1:

- Start number 42 was manually annotated 39 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 42 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 42 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 42 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 42 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 42 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:

- Start number 36 was manually annotated 19 times for cluster Q.
- Start number 74 was manually annotated 3 times for cluster Q.

Info for manual annotations of cluster V:

- Start number 80 was manually annotated 5 times for cluster V.

Info for manual annotations of cluster Y:

- Start number 70 was manually annotated 4 times for cluster Y.

Info for manual annotations of cluster Z:

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

### **Gene Information:**

Gene: 32HC\_3 Start: 878, Stop: 2545, Start Num: 46

Candidate Starts for 32HC\_3:

(32, 851), (37, 866), (Start: 46 @878 has 1 MA's), (Start: 223 @1085 has 13 MA's), (281, 1238), (283, 1244), (398, 1460), (401, 1472), (457, 1631), (479, 1676), (494, 1694), (541, 1781), (548, 1802), (561, 1823), (580, 1868), (619, 1931), (641, 1958), (738, 2120), (743, 2129), (786, 2192), (793, 2207), (821, 2252), (836, 2276), (914, 2378), (969, 2447),

Gene: ATCC29399BC\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for ATCC29399BC\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (456, 1044), (458, 1047),

(465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: ATCC29399BT\_2 Start: 385, Stop: 1896, Start Num: 144

Candidate Starts for ATCC29399BT\_2:

(Start: 144 @385 has 46 MA's), (182, 442), (195, 469), (204, 487), (220, 514), (Start: 221 @517 has 3 MA's), (260, 565), (265, 574), (267, 580), (276, 619), (278, 625), (294, 658), (300, 676), (310, 700), (313, 706), (332, 745), (338, 754), (341, 757), (359, 796), (361, 799), (395, 868), (408, 913), (409, 916), (414, 937), (420, 952), (422, 961), (424, 973), (437, 1012), (446, 1033), (454, 1048), (456, 1051), (458, 1054), (471, 1075), (508, 1141), (561, 1213), (572, 1234), (614, 1294), (619, 1300), (653, 1342), (666, 1363), (683, 1405), (728, 1483), (734, 1492), (742, 1504), (744, 1510), (758, 1537), (775, 1558), (778, 1561), (787, 1576), (807, 1606), (809, 1609), (823, 1633), (836, 1654), (850, 1678), (872, 1711), (874, 1714), (882, 1726), (893, 1738), (942, 1804), (950, 1813), (952, 1819), (960, 1828), (1005, 1882), (1008, 1888),

Gene: AbbyDaisy\_3 Start: 789, Stop: 2126, Start Num: 219

Candidate Starts for AbbyDaisy\_3:

(Start: 157 @669 has 1 MA's), (216, 786), (Start: 219 @789 has 15 MA's), (242, 837), (263, 882), (287, 966), (293, 972), (313, 1023), (317, 1032), (420, 1218), (422, 1227), (423, 1230), (436, 1269), (437, 1272), (468, 1335), (537, 1410), (566, 1467), (674, 1638), (679, 1653), (715, 1713), (722, 1722), (734, 1743), (789, 1821), (793, 1830), (823, 1875), (831, 1887), (839, 1902), (856, 1932), (877, 1953), (960, 2058),

Gene: Abidatro\_3 Start: 758, Stop: 2338, Start Num: 137

Candidate Starts for Abidatro\_3:

(Start: 79 @692 has 7 MA's), (Start: 137 @758 has 8 MA's), (Start: 201 @854 has 6 MA's), (206, 863), (263, 944), (276, 995), (281, 1010), (289, 1034), (300, 1055), (316, 1088), (392, 1193), (411, 1256), (425, 1307), (429, 1319), (432, 1331), (455, 1388), (481, 1448), (498, 1487), (501, 1496), (527, 1550), (658, 1766), (669, 1778), (684, 1817), (699, 1844), (711, 1859), (731, 1889), (765, 1928), (770, 1937), (774, 1946), (838, 2036), (851, 2063), (918, 2177), (974, 2246),

Gene: Abigail\_3 Start: 689, Stop: 2317, Start Num: 125

Candidate Starts for Abigail\_3:

(Start: 125 @689 has 61 MA's), (228, 845), (281, 953), (319, 1037), (346, 1079), (392, 1136), (409, 1187), (410, 1190), (425, 1250), (430, 1268), (439, 1298), (453, 1328), (699, 1784), (711, 1799), (941, 2150), (977, 2198), (1050, 2306),

Gene: Acquire49\_4 Start: 1052, Stop: 2635, Start Num: 68

Candidate Starts for Acquire49\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (407, 1646), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (856, 2402), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: ActinUp\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for ActinUp\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968),

(354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: Adaia\_3 Start: 651, Stop: 2057, Start Num: 146

Candidate Starts for Adaia\_3:

(Start: 146 @651 has 1 MA's), (174, 693), (202, 744), (Start: 209 @759 has 1 MA's), (265, 843), (273, 879), (276, 888), (277, 891), (283, 909), (348, 1017), (379, 1056), (408, 1128), (409, 1131), (422, 1176), (430, 1209), (438, 1233), (440, 1242), (452, 1266), (583, 1473), (622, 1533), (697, 1650), (812, 1797), (832, 1836), (833, 1839), (868, 1893), (892, 1917), (915, 1929), (948, 1974), (997, 2043),

Gene: Adelaide\_2 Start: 371, Stop: 1957, Start Num: 118

Candidate Starts for Adelaide\_2:

(Start: 118 @371 has 4 MA's), (Start: 121 @374 has 4 MA's), (126, 380), (232, 551), (263, 629), (266, 638), (340, 812), (404, 914), (407, 920), (410, 929), (411, 938), (428, 998), (442, 1046), (443, 1049), (505, 1112), (551, 1205), (581, 1271), (686, 1427), (696, 1445), (732, 1490), (755, 1532), (778, 1568), (786, 1583), (801, 1610), (803, 1613), (811, 1628), (826, 1661), (835, 1676), (865, 1724), (909, 1772), (965, 1847), (1016, 1922), (1032, 1946),

Gene: Adephagia\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for Adephagia\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: Adonis\_8 Start: 1604, Stop: 3025, Start Num: 161

Candidate Starts for Adonis\_8:

(85, 1532), (Start: 143 @1592 has 2 MA's), (Start: 161 @1604 has 150 MA's), (Start: 219 @1715 has 15 MA's), (222, 1721), (257, 1799), (265, 1808), (277, 1856), (284, 1874), (313, 1943), (348, 1985), (354, 1991), (376, 2018), (378, 2021), (420, 2138), (422, 2147), (451, 2228), (542, 2342), (566, 2390), (572, 2402), (585, 2432), (597, 2456), (605, 2468), (670, 2546), (672, 2552), (771, 2696), (789, 2729), (823, 2783), (960, 2960), (1009, 3014),

Gene: Adora\_2 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for Adora\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (273, 618), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (401, 855), (420, 912), (422, 921), (425, 936), (457, 1008), (466, 1020), (494, 1071), (548, 1137), (572, 1179), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (767, 1500), (787, 1536), (789, 1539), (810, 1575), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (964, 1785), (1002, 1827),

Gene: Agent47\_6 Start: 1331, Stop: 2758, Start Num: 166

Candidate Starts for Agent47\_6:

(Start: 166 @1331 has 22 MA's), (194, 1388), (Start: 205 @1409 has 1 MA's), (Start: 219 @1433 has 15 MA's), (257, 1517), (265, 1526), (267, 1532), (277, 1574), (284, 1592), (293, 1610), (313, 1661), (346, 1700), (376, 1736), (407, 1814), (420, 1856), (422, 1865), (423, 1868), (451, 1946), (542, 2060), (566, 2108), (572, 2120), (585, 2150), (605, 2186), (626, 2213), (672, 2270), (717, 2354), (733, 2378), (787, 2456), (823, 2513), (838, 2537), (856, 2561), (960, 2690), (1009, 2747),

Gene: Ageofdapage\_8 Start: 1536, Stop: 2957, Start Num: 161

Candidate Starts for Ageofdapage\_8:



(85, 1464), (Start: 143 @1524 has 2 MA's), (Start: 161 @1536 has 150 MA's), (Start: 219 @1647 has 15 MA's), (222, 1653), (257, 1731), (265, 1740), (277, 1788), (284, 1806), (293, 1824), (313, 1875), (348, 1917), (354, 1923), (376, 1950), (378, 1953), (407, 2028), (420, 2070), (422, 2079), (451, 2160), (542, 2274), (566, 2322), (572, 2334), (585, 2364), (597, 2388), (605, 2400), (617, 2415), (672, 2484), (771, 2628), (789, 2661), (823, 2715), (960, 2892), (1009, 2946),

Gene: Aggie\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Aggie\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Albanese\_5 Start: 3132, Stop: 4697, Start Num: 71

Candidate Starts for Albanese\_5:

(Start: 71 @3132 has 81 MA's), (Start: 201 @3306 has 6 MA's), (Start: 221 @3342 has 3 MA's), (263, 3396), (273, 3438), (281, 3462), (346, 3588), (402, 3702), (408, 3717), (410, 3723), (425, 3783), (443, 3843), (503, 3942), (520, 3972), (561, 4035), (574, 4068), (627, 4155), (684, 4230), (704, 4263), (728, 4299), (782, 4374), (793, 4395), (820, 4416), (868, 4485), (941, 4563), (973, 4602), (995, 4632), (1005, 4644), (1032, 4683), (1039, 4692),

Gene: Albedo\_3 Start: 677, Stop: 2305, Start Num: 125

Candidate Starts for Albedo\_3:

(Start: 125 @677 has 61 MA's), (228, 833), (281, 941), (319, 1025), (331, 1049), (346, 1067), (392, 1124), (409, 1175), (410, 1178), (425, 1238), (430, 1256), (439, 1286), (453, 1316), (699, 1772), (711, 1787), (941, 2138), (977, 2186), (1050, 2294),

Gene: Albright\_3 Start: 689, Stop: 2317, Start Num: 125

Candidate Starts for Albright\_3:

(Start: 125 @689 has 61 MA's), (228, 845), (281, 953), (319, 1037), (346, 1079), (392, 1136), (409, 1187), (410, 1190), (425, 1250), (430, 1268), (439, 1298), (453, 1328), (699, 1784), (711, 1799), (941, 2150), (977, 2198), (1050, 2306),

Gene: Aledel\_2 Start: 429, Stop: 1994, Start Num: 71

Candidate Starts for Aledel\_2:

(Start: 71 @429 has 81 MA's), (Start: 200 @600 has 2 MA's), (263, 693), (281, 759), (289, 783), (316, 837), (392, 966), (425, 1080), (443, 1140), (461, 1170), (520, 1269), (530, 1284), (574, 1365), (627, 1452), (684, 1527), (685, 1530), (704, 1560), (768, 1644), (793, 1692), (821, 1716), (903, 1806), (941, 1860), (1005, 1941), (1032, 1980),

Gene: Alexphander\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Alexphander\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: AlishaPH\_8 Start: 1592, Stop: 3016, Start Num: 161

Candidate Starts for AlishaPH\_8:

(85, 1520), (Start: 143 @1580 has 2 MA's), (Start: 161 @1592 has 150 MA's), (Start: 219 @1703 has 15 MA's), (222, 1709), (257, 1787), (265, 1796), (277, 1844), (284, 1862), (313, 1931), (348, 1973), (354, 1979), (376, 2006), (378, 2009), (420, 2126), (422, 2135), (451, 2216), (542, 2330), (566, 2378), (572, 2390), (585, 2420), (597, 2444), (605, 2456), (670, 2534), (672, 2540), (771, 2687), (789, 2720), (823, 2774), (960, 2951), (1009, 3005),

Gene: Alkhayr\_29 Start: 13437, Stop: 14951, Start Num: 72

Candidate Starts for Alkhayr\_29:

(Start: 72 @13437 has 33 MA's), (Start: 74 @13440 has 14 MA's), (Start: 205 @13620 has 1 MA's), (249, 13713), (276, 13788), (287, 13821), (300, 13848), (313, 13878), (407, 14031), (409, 14037), (420, 14073), (422, 14082), (451, 14163), (456, 14172), (458, 14175), (498, 14214), (538, 14271), (553, 14307), (554, 14310), (668, 14466), (672, 14475), (711, 14544), (717, 14553), (722, 14559), (742, 14592), (771, 14628), (823, 14715), (836, 14736), (891, 14799), (893, 14802), (896, 14805), (907, 14823), (920, 14844), (960, 14886), (985, 14919), (988, 14922), (1005, 14934),

Gene: AlleyCat\_6 Start: 1349, Stop: 2776, Start Num: 166

Candidate Starts for AlleyCat\_6:

(Start: 166 @1349 has 22 MA's), (194, 1406), (Start: 205 @1427 has 1 MA's), (Start: 219 @1451 has 15 MA's), (257, 1535), (265, 1544), (267, 1550), (276, 1589), (277, 1592), (284, 1610), (293, 1628), (313, 1679), (346, 1718), (376, 1754), (391, 1781), (407, 1832), (420, 1874), (422, 1883), (423, 1886), (451, 1964), (542, 2078), (566, 2126), (572, 2138), (585, 2168), (605, 2204), (626, 2231), (672, 2288), (717, 2372), (733, 2396), (787, 2474), (823, 2531), (838, 2555), (856, 2579), (960, 2708), (1009, 2765),

Gene: Alucard\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Alucard\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Amelia\_4 Start: 1013, Stop: 2494, Start Num: 201

Candidate Starts for Amelia\_4:

(Start: 79 @848 has 7 MA's), (Start: 201 @1013 has 6 MA's), (Start: 223 @1052 has 13 MA's), (263, 1103), (267, 1115), (275, 1151), (281, 1169), (392, 1352), (425, 1466), (429, 1478), (443, 1526), (455, 1547), (466, 1562), (485, 1619), (669, 1934), (699, 2000), (710, 2012), (731, 2045), (765, 2084), (770, 2093), (771, 2096), (820, 2162), (838, 2192), (860, 2237), (880, 2279), (903, 2306), (905, 2309), (974, 2402), (977, 2408), (995, 2429), (1005, 2441), (1032, 2480), (1034, 2483),

Gene: Amelie\_4 Start: 847, Stop: 2271, Start Num: 161

Candidate Starts for Amelie\_4:

(Start: 143 @835 has 2 MA's), (Start: 161 @847 has 150 MA's), (194, 913), (Start: 219 @958 has 15 MA's), (240, 1003), (257, 1042), (265, 1051), (277, 1099), (284, 1117), (293, 1135), (313, 1186), (354, 1234), (376, 1261), (420, 1381), (422, 1390), (434, 1426), (435, 1429), (451, 1471), (462, 1489), (542, 1585), (564, 1627), (566, 1633), (572, 1645), (585, 1675), (588, 1681), (597, 1699), (617, 1726), (672, 1795), (717, 1867), (771, 1939), (789, 1972), (793, 1981), (810, 2008), (823, 2026), (960, 2203), (1009, 2260), (1014, 2266),

Gene: Amgine\_6 Start: 1181, Stop: 2605, Start Num: 161

Candidate Starts for Amgine\_6:

(75, 1097), (Start: 143 @1169 has 2 MA's), (Start: 161 @1181 has 150 MA's), (Start: 205 @1268 has 1 MA's), (Start: 219 @1292 has 15 MA's), (257, 1376), (265, 1385), (277, 1433), (284, 1451), (293,

1469), (294, 1472), (313, 1520), (376, 1595), (378, 1598), (420, 1715), (422, 1724), (423, 1727), (433, 1757), (451, 1805), (542, 1919), (566, 1967), (572, 1979), (585, 2009), (597, 2033), (608, 2048), (617, 2060), (672, 2129), (690, 2171), (717, 2201), (771, 2273), (789, 2306), (793, 2315), (823, 2360), (1009, 2594), (1014, 2600),

Gene: Aminay\_6 Start: 1302, Stop: 2744, Start Num: 161

Candidate Starts for Aminay\_6:

(Start: 161 @1302 has 150 MA's), (213, 1401), (Start: 219 @1407 has 15 MA's), (257, 1491), (265, 1500), (277, 1548), (313, 1635), (317, 1644), (321, 1653), (354, 1683), (407, 1788), (422, 1839), (423, 1842), (435, 1878), (451, 1920), (456, 1929), (542, 2034), (566, 2082), (572, 2094), (585, 2124), (597, 2148), (608, 2163), (672, 2247), (688, 2289), (717, 2331), (770, 2400), (779, 2415), (808, 2466), (823, 2490), (954, 2661), (965, 2673), (1009, 2733),

Gene: Amochick\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Amochick\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Amohnition\_7 Start: 1387, Stop: 2811, Start Num: 161

Candidate Starts for Amohnition\_7:

(Start: 143 @1375 has 2 MA's), (Start: 161 @1387 has 150 MA's), (Start: 205 @1474 has 1 MA's), (Start: 219 @1498 has 15 MA's), (257, 1582), (265, 1591), (277, 1639), (284, 1657), (293, 1675), (313, 1726), (354, 1774), (420, 1921), (422, 1930), (423, 1933), (433, 1963), (451, 2011), (542, 2125), (572, 2185), (585, 2215), (617, 2266), (637, 2287), (672, 2335), (690, 2377), (717, 2407), (771, 2479), (823, 2566), (960, 2743), (1009, 2800), (1014, 2806),

Gene: Amymech\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Amymech\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Anatole\_3 Start: 1202, Stop: 2782, Start Num: 125

Candidate Starts for Anatole\_3:

(Start: 117 @1193 has 111 MA's), (Start: 119 @1196 has 2 MA's), (Start: 125 @1202 has 61 MA's), (Start: 147 @1229 has 1 MA's), (172, 1262), (190, 1292), (Start: 200 @1310 has 2 MA's), (Start: 201 @1313 has 6 MA's), (208, 1328), (Start: 221 @1349 has 3 MA's), (Start: 223 @1352 has 13 MA's), (271, 1439), (275, 1451), (281, 1469), (290, 1499), (291, 1502), (314, 1574), (317, 1580), (340, 1616), (345, 1622), (369, 1655), (396, 1712), (408, 1754), (410, 1760), (431, 1841), (442, 1877), (443, 1880), (459, 1907), (466, 1916), (477, 1952), (557, 2096), (572, 2126), (580, 2153), (588, 2168), (595, 2180), (625, 2222), (663, 2264), (669, 2273), (678, 2297), (704, 2345), (710, 2351), (724, 2372), (725, 2375), (768, 2429), (783, 2459), (820, 2498), (835, 2522), (851, 2555), (890, 2573), (908, 2600), (912, 2606), (918, 2618), (956, 2666), (977, 2696), (1034, 2771),

Gene: Anaya\_9 Start: 1616, Stop: 3037, Start Num: 161

Candidate Starts for Anaya\_9:

(85, 1544), (Start: 143 @1604 has 2 MA's), (Start: 161 @1616 has 150 MA's), (Start: 219 @1727 has 15 MA's), (222, 1733), (257, 1811), (265, 1820), (267, 1826), (277, 1868), (284, 1886), (313, 1955), (348, 1997), (354, 2003), (376, 2030), (420, 2150), (422, 2159), (451, 2240), (462, 2258), (542, 2354), (566, 2402), (572, 2414), (585, 2444), (597, 2468), (605, 2480), (617, 2495), (670, 2558), (672, 2564), (771, 2708), (789, 2741), (823, 2795), (960, 2972), (1009, 3026),

Gene: Andies\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Andies\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Andrew\_3 Start: 741, Stop: 2363, Start Num: 95

Candidate Starts for Andrew\_3:

(Start: 79 @720 has 7 MA's), (Start: 95 @741 has 42 MA's), (Start: 201 @882 has 6 MA's), (207, 894), (Start: 223 @921 has 13 MA's), (263, 972), (264, 975), (267, 984), (272, 1011), (275, 1020), (281, 1038), (316, 1116), (392, 1221), (411, 1284), (425, 1335), (429, 1347), (432, 1359), (443, 1395), (450, 1407), (455, 1416), (466, 1431), (485, 1491), (527, 1575), (658, 1791), (669, 1803), (699, 1869), (704, 1875), (731, 1914), (765, 1953), (782, 1986), (820, 2031), (880, 2148), (908, 2184), (918, 2202), (974, 2271), (977, 2277), (995, 2298), (1014, 2322), (1032, 2349), (1034, 2352),

Gene: Angel\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Angel\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Angelica\_8 Start: 1575, Stop: 2996, Start Num: 161

Candidate Starts for Angelica\_8:

(85, 1503), (Start: 143 @1563 has 2 MA's), (Start: 161 @1575 has 150 MA's), (Start: 219 @1686 has 15 MA's), (222, 1692), (257, 1770), (265, 1779), (277, 1827), (284, 1845), (313, 1914), (348, 1956), (354, 1962), (420, 2109), (422, 2118), (462, 2217), (542, 2313), (566, 2361), (572, 2373), (585, 2403), (597, 2427), (605, 2439), (617, 2454), (672, 2523), (771, 2667), (823, 2754), (960, 2931), (1009, 2985),

Gene: AnnaLie\_4 Start: 1038, Stop: 2663, Start Num: 125

Candidate Starts for AnnaLie\_4:

(Start: 125 @1038 has 61 MA's), (Start: 147 @1065 has 1 MA's), (228, 1194), (267, 1248), (281, 1302), (286, 1317), (311, 1371), (319, 1386), (392, 1485), (409, 1536), (410, 1539), (425, 1599), (453, 1677), (699, 2130), (711, 2145), (941, 2496), (1050, 2652),

Gene: Annalisa\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for Annalisa\_3:

(48, 760), (Start: 89 @820 has 52 MA's), (183, 928), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (327, 1246), (389, 1318), (391, 1321), (401, 1357), (420, 1414), (422, 1423), (425, 1438), (466, 1522), (494, 1573), (548, 1639), (572, 1681), (641, 1795), (672, 1846), (680,

1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (771, 1999), (850, 2122), (856, 2134), (888, 2173), (1034, 2362),

Gene: Annihilator\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Annihilator\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Anseraureola\_3 Start: 1098, Stop: 2558, Start Num: 117

Candidate Starts for Anseraureola\_3:

(Start: 117 @1098 has 111 MA's), (122, 1104), (Start: 223 @1266 has 13 MA's), (228, 1275), (264, 1335), (283, 1404), (294, 1425), (317, 1476), (424, 1680), (546, 1893), (551, 1908), (572, 1944), (589, 1986), (610, 2019), (622, 2037), (706, 2157), (708, 2160), (715, 2172), (774, 2247), (810, 2310), (821, 2328), (823, 2331), (958, 2493), (965, 2502), (970, 2511), (995, 2550),

Gene: Antsirabe\_2 Start: 354, Stop: 1925, Start Num: 51

Candidate Starts for Antsirabe\_2:

(Start: 51 @354 has 3 MA's), (194, 525), (277, 708), (293, 744), (317, 804), (405, 957), (407, 963), (409, 969), (420, 1005), (424, 1026), (436, 1056), (451, 1095), (456, 1104), (566, 1257), (579, 1287), (608, 1335), (672, 1413), (682, 1437), (771, 1563), (803, 1620), (810, 1632), (823, 1650), (878, 1722), (891, 1737), (960, 1830), (999, 1893), (1009, 1914),

Gene: Aoka\_3 Start: 1243, Stop: 2838, Start Num: 110

Candidate Starts for Aoka\_3:

(Start: 110 @1243 has 15 MA's), (273, 1501), (281, 1525), (283, 1531), (425, 1822), (434, 1852), (455, 1903), (461, 1912), (516, 2014), (521, 2026), (581, 2149), (678, 2278), (820, 2506), (845, 2548), (1034, 2827),

Gene: Apocalypse\_8 Start: 1571, Stop: 2992, Start Num: 161

Candidate Starts for Apocalypse\_8:

(85, 1499), (Start: 143 @1559 has 2 MA's), (Start: 161 @1571 has 150 MA's), (Start: 219 @1682 has 15 MA's), (222, 1688), (257, 1766), (265, 1775), (277, 1823), (284, 1841), (313, 1910), (348, 1952), (354, 1958), (376, 1985), (378, 1988), (420, 2105), (422, 2114), (451, 2195), (542, 2309), (566, 2357), (572, 2369), (585, 2399), (605, 2435), (670, 2513), (672, 2519), (771, 2663), (789, 2696), (823, 2750), (960, 2927), (1009, 2981),

Gene: AppleCider\_5 Start: 3069, Stop: 4637, Start Num: 71

Candidate Starts for AppleCider\_5:

(Start: 71 @3069 has 81 MA's), (206, 3255), (Start: 223 @3285 has 13 MA's), (263, 3336), (267, 3348), (273, 3378), (278, 3393), (289, 3426), (346, 3528), (392, 3609), (408, 3657), (425, 3723), (439, 3771), (442, 3780), (480, 3855), (503, 3882), (520, 3912), (544, 3951), (669, 4131), (704, 4203), (728, 4239), (793, 4335), (846, 4401), (889, 4431), (894, 4437), (941, 4503), (1032, 4623),

Gene: Appletree2\_4 Start: 1025, Stop: 2608, Start Num: 68

Candidate Starts for Appletree2\_4:

(Start: 68 @1025 has 59 MA's), (Start: 71 @1031 has 81 MA's), (191, 1202), (249, 1289), (262, 1307), (265, 1313), (273, 1349), (336, 1487), (338, 1490), (389, 1565), (408, 1622), (409, 1625), (478, 1793), (511, 1847), (515, 1856), (525, 1871), (535, 1892), (552, 1931), (568, 1952), (572, 1958), (586, 1985), (623, 2027), (654, 2051), (666, 2069), (670, 2078), (672, 2084), (685, 2117), (708, 2150), (731, 2189), (734, 2195), (736, 2198), (773, 2243), (810, 2309), (842, 2360), (865, 2384), (877, 2399), (878, 2402),

(976, 2504), (1005, 2531), (1034, 2582), (1036, 2585),

Gene: Aquarius\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for Aquarius\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (454, 1041), (456, 1044), (458, 1047), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (619, 1293), (648, 1326), (662, 1350), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: ArV2\_02 Start: 349, Stop: 1803, Start Num: 140

Candidate Starts for ArV2\_02:

(140, 349), (Start: 184 @394 has 5 MA's), (194, 415), (Start: 205 @436 has 1 MA's), (Start: 219 @457 has 15 MA's), (249, 526), (254, 541), (263, 550), (272, 589), (287, 634), (313, 691), (317, 700), (327, 718), (389, 790), (391, 793), (422, 895), (436, 937), (451, 976), (561, 1129), (564, 1132), (566, 1138), (585, 1180), (595, 1198), (665, 1297), (681, 1336), (694, 1366), (736, 1411), (771, 1453), (805, 1513), (808, 1516), (833, 1555), (954, 1711),

Gene: Arby\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Arby\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Archie\_4 Start: 1034, Stop: 2602, Start Num: 68

Candidate Starts for Archie\_4:

(Start: 68 @1034 has 59 MA's), (Start: 71 @1040 has 81 MA's), (84, 1058), (185, 1196), (208, 1244), (220, 1262), (283, 1388), (334, 1493), (338, 1499), (407, 1631), (409, 1637), (414, 1658), (450, 1757), (478, 1805), (511, 1859), (525, 1883), (535, 1904), (547, 1928), (549, 1934), (568, 1964), (572, 1970), (586, 1997), (591, 2006), (672, 2096), (715, 2174), (736, 2210), (773, 2255), (810, 2321), (842, 2372), (865, 2396), (878, 2414), (885, 2423), (1021, 2570), (1034, 2594), (1036, 2597),

Gene: Archimedes\_1 Start: 59, Stop: 1762, Start Num: 19

Candidate Starts for Archimedes\_1:

(14, 20), (Start: 19 @59 has 3 MA's), (94, 218), (100, 227), (115, 242), (185, 329), (266, 467), (281, 524), (294, 551), (317, 605), (411, 770), (430, 839), (442, 878), (450, 893), (549, 1034), (554, 1043), (556, 1052), (563, 1064), (584, 1112), (601, 1142), (620, 1166), (672, 1223), (711, 1298), (727, 1322), (736, 1334), (820, 1481), (821, 1484), (905, 1577), (917, 1598), (993, 1694), (1015, 1724), (1033, 1751), (1035, 1754),

Gene: Archis\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Archis\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761,

1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Arib1\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Arib1\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (720, 1622), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Ariel\_9 Start: 2909, Stop: 4441, Start Num: 158

Candidate Starts for Ariel\_9:

(Start: 121 @2867 has 4 MA's), (128, 2876), (Start: 158 @2909 has 20 MA's), (218, 3023), (266, 3119), (276, 3161), (278, 3167), (308, 3242), (313, 3251), (388, 3353), (390, 3356), (401, 3392), (412, 3425), (540, 3674), (572, 3737), (584, 3764), (614, 3809), (684, 3923), (708, 3959), (728, 3989), (734, 3998), (780, 4052), (792, 4076), (976, 4310), (988, 4322),

Gene: Arielagos\_2 Start: 424, Stop: 1926, Start Num: 86

Candidate Starts for Arielagos\_2:

(44, 361), (Start: 76 @412 has 1 MA's), (Start: 86 @424 has 2 MA's), (106, 448), (Start: 127 @472 has 3 MA's), (Start: 209 @583 has 1 MA's), (227, 610), (267, 673), (273, 703), (276, 712), (282, 730), (348, 841), (376, 874), (409, 955), (423, 1003), (447, 1084), (546, 1219), (560, 1246), (583, 1297), (603, 1330), (728, 1513), (800, 1606), (825, 1645), (829, 1651), (833, 1660), (852, 1699), (915, 1783), (926, 1798), (970, 1858), (988, 1888),

Gene: Aries55\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Aries55\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Armstrong\_2 Start: 593, Stop: 2155, Start Num: 125

Candidate Starts for Armstrong\_2:

(Start: 125 @593 has 61 MA's), (Start: 200 @701 has 2 MA's), (228, 749), (281, 857), (283, 863), (286, 872), (288, 878), (289, 881), (343, 977), (392, 1040), (425, 1154), (443, 1214), (453, 1232), (564, 1460), (580, 1505), (678, 1643), (908, 1970), (1039, 2144), (1043, 2147),

Gene: Aroostook\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Aroostook\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Arroyo\_4 Start: 1159, Stop: 2787, Start Num: 125

Candidate Starts for Arroyo\_4:

(Start: 125 @1159 has 61 MA's), (228, 1315), (281, 1423), (311, 1492), (319, 1507), (409, 1657), (410, 1660), (425, 1720), (439, 1768), (453, 1798), (699, 2254), (711, 2269), (941, 2620), (977, 2668), (1050, 2776),

Gene: Asapag\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for Asapag\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (244, 853), (259, 886), (274, 937), (277, 946), (293, 982), (308, 1024), (319, 1045), (326, 1057), (344, 1072), (355, 1090), (366, 1093), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (422, 1246), (424, 1258), (433, 1279), (437, 1291), (445, 1318), (452, 1330), (503, 1411), (542, 1483), (550, 1507), (572, 1543), (583, 1570), (601, 1603), (652, 1657), (721, 1759), (736, 1786), (834, 1933), (841, 1945), (856, 1963), (919, 2041), (922, 2044), (925, 2047), (969, 2101), (975, 2113),

Gene: Asayake\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Asayake\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Ashwin\_32 Start: 13447, Stop: 14961, Start Num: 72

Candidate Starts for Ashwin\_32:

(Start: 72 @13447 has 33 MA's), (Start: 74 @13450 has 14 MA's), (Start: 205 @13630 has 1 MA's), (249, 13723), (276, 13798), (287, 13831), (300, 13858), (313, 13888), (407, 14041), (409, 14047), (420, 14083), (422, 14092), (451, 14173), (456, 14182), (458, 14185), (538, 14281), (553, 14317), (554, 14320), (668, 14476), (672, 14485), (711, 14554), (717, 14563), (722, 14569), (742, 14602), (771, 14638), (823, 14725), (836, 14746), (891, 14809), (893, 14812), (896, 14815), (907, 14833), (920, 14854), (960, 14896), (985, 14929), (988, 14932), (1005, 14944),

Gene: Astro16\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Astro16\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Atcoo\_2 Start: 401, Stop: 2077, Start Num: 42

Candidate Starts for Atcoo\_2:

(Start: 42 @401 has 46 MA's), (194, 617), (215, 656), (248, 713), (252, 719), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (317, 887), (322, 899), (382, 989), (447, 1178), (524, 1274), (541, 1304), (548, 1325), (630, 1466), (640, 1478), (761, 1676), (771, 1685), (786, 1712), (810, 1754), (821, 1772), (885, 1856), (899, 1871), (1038, 2060),

Gene: Atiba\_8 Start: 1556, Stop: 2980, Start Num: 161

Candidate Starts for Atiba\_8:

(85, 1484), (Start: 143 @1544 has 2 MA's), (Start: 161 @1556 has 150 MA's), (Start: 219 @1667 has 15 MA's), (222, 1673), (257, 1751), (265, 1760), (277, 1808), (284, 1826), (313, 1895), (348, 1937), (354, 1943), (376, 1970), (378, 1973), (420, 2090), (422, 2099), (451, 2180), (542, 2294), (566, 2342), (572, 2354), (585, 2384), (597, 2408), (605, 2420), (670, 2498), (672, 2504), (771, 2651), (789, 2684), (823, 2738), (960, 2915), (1009, 2969),

Gene: Atraxa\_3 Start: 604, Stop: 2115, Start Num: 87

Candidate Starts for Atraxa\_3:

(58, 562), (Start: 87 @604 has 2 MA's), (Start: 209 @763 has 1 MA's), (239, 808), (265, 847), (267, 853), (273, 883), (277, 895), (283, 913), (341, 1009), (399, 1108), (408, 1132), (409, 1135), (423, 1183), (430, 1213), (435, 1228), (438, 1237), (440, 1246), (452, 1270), (560, 1426), (562, 1429), (583, 1477), (622, 1537), (630, 1546), (649, 1573), (682, 1624), (748, 1711), (760, 1729), (807, 1801), (832,



1843), (833, 1846), (848, 1876), (865, 1909), (868, 1912), (876, 1930),

Gene: Attacne\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for Attacne\_2:

(141, 370), (Start: 144 @373 has 46 MA's), (Start: 158 @385 has 20 MA's), (174, 412), (182, 430), (195, 457), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (273, 598), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (389, 847), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (446, 1021), (454, 1036), (456, 1039), (458, 1042), (465, 1048), (471, 1063), (508, 1129), (532, 1150), (546, 1174), (550, 1186), (561, 1201), (572, 1222), (619, 1288), (648, 1321), (666, 1351), (683, 1393), (728, 1471), (734, 1480), (742, 1492), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (810, 1600), (820, 1615), (823, 1621), (872, 1699), (874, 1702), (882, 1714), (942, 1792), (950, 1801), (952, 1807), (960, 1816), (1005, 1870), (1008, 1876),

Gene: Attis\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Attis\_2:

(Start: 89 @318 has 52 MA's), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Auspice\_14 Start: 4719, Stop: 6263, Start Num: 93

Candidate Starts for Auspice\_14:

(Start: 93 @4719 has 19 MA's), (133, 4767), (264, 4968), (313, 5106), (418, 5298), (525, 5508), (549, 5559), (591, 5631), (670, 5694), (679, 5718), (685, 5733), (724, 5793), (731, 5805), (770, 5865), (787, 5898), (808, 5931), (824, 5958), (857, 6006), (1008, 6192), (1021, 6213),

Gene: AustinPowers\_2 Start: 600, Stop: 1994, Start Num: 200

Candidate Starts for AustinPowers\_2:

(Start: 71 @429 has 81 MA's), (Start: 200 @600 has 2 MA's), (263, 693), (278, 750), (281, 759), (289, 783), (316, 837), (392, 966), (408, 1014), (425, 1080), (443, 1140), (461, 1170), (520, 1269), (530, 1284), (627, 1452), (684, 1527), (704, 1560), (768, 1644), (793, 1692), (821, 1716), (903, 1806), (941, 1860), (1005, 1941), (1032, 1980),

Gene: AvGardian\_3 Start: 755, Stop: 2380, Start Num: 125

Candidate Starts for AvGardian\_3:

(Start: 125 @755 has 61 MA's), (228, 911), (281, 1019), (286, 1034), (319, 1103), (343, 1139), (348, 1148), (409, 1253), (410, 1256), (425, 1316), (430, 1334), (431, 1337), (439, 1364), (453, 1394), (527, 1556), (622, 1736), (710, 1859), (711, 1862), (782, 1964), (941, 2213), (1032, 2330), (1050, 2369),

Gene: AvadaKedavra\_4 Start: 1052, Stop: 2635, Start Num: 68

Candidate Starts for AvadaKedavra\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (407, 1646), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (856, 2402), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: Avani\_3 Start: 663, Stop: 2183, Start Num: 139

Candidate Starts for Avani\_3:

(Start: 132 @651 has 1 MA's), (Start: 139 @663 has 74 MA's), (Start: 219 @789 has 15 MA's), (224, 798), (244, 843), (257, 873), (259, 876), (263, 882), (274, 927), (283, 951), (293, 972), (308, 1014), (319, 1035), (344, 1062), (355, 1080), (366, 1083), (376, 1107), (391, 1134), (409, 1191), (420, 1227), (422, 1236), (424, 1248), (426, 1254), (433, 1269), (437, 1281), (445, 1308), (449, 1314), (452, 1320), (472, 1356), (474, 1365), (500, 1395), (514, 1425), (516, 1428), (567, 1524), (572, 1533), (583, 1560), (646, 1644), (662, 1659), (731, 1770), (736, 1779), (742, 1788), (787, 1851), (834, 1926), (841, 1938), (856, 1956), (891, 1992), (919, 2034), (925, 2040), (960, 2082), (969, 2094), (975, 2106), (1017, 2172),

Gene: Avocado\_2 Start: 352, Stop: 1935, Start Num: 51

Candidate Starts for Avocado\_2:

(Start: 51 @352 has 3 MA's), (Start: 127 @436 has 3 MA's), (264, 652), (277, 703), (293, 739), (317, 799), (409, 964), (420, 1000), (424, 1021), (436, 1051), (451, 1090), (566, 1252), (597, 1315), (608, 1330), (642, 1375), (645, 1378), (672, 1426), (682, 1450), (736, 1525), (771, 1576), (787, 1606), (789, 1609), (793, 1618), (803, 1633), (808, 1639), (810, 1645), (836, 1684), (878, 1735), (891, 1750), (954, 1837), (960, 1843), (1009, 1924), (1014, 1930),

Gene: Avocadoman\_3 Start: 747, Stop: 2375, Start Num: 125

Candidate Starts for Avocadoman\_3:

(Start: 125 @747 has 61 MA's), (228, 903), (281, 1011), (319, 1095), (346, 1137), (392, 1194), (409, 1245), (410, 1248), (425, 1308), (430, 1326), (439, 1356), (453, 1386), (699, 1842), (711, 1857), (941, 2208), (977, 2256), (1050, 2364),

Gene: Avrafan\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Avrafan\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Avvas\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Avvas\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Awesomesauce\_3 Start: 674, Stop: 2161, Start Num: 139

Candidate Starts for Awesomesauce\_3:

(Start: 132 @662 has 1 MA's), (Start: 139 @674 has 74 MA's), (Start: 219 @800 has 15 MA's), (222, 806), (242, 848), (244, 854), (259, 887), (263, 893), (265, 899), (274, 938), (283, 962), (293, 983), (308, 1025), (344, 1073), (349, 1082), (355, 1091), (366, 1094), (391, 1145), (409, 1202), (414, 1223), (422, 1247), (424, 1259), (433, 1280), (437, 1292), (449, 1325), (452, 1331), (498, 1400), (500, 1406), (516, 1439), (537, 1475), (567, 1535), (572, 1544), (583, 1571), (640, 1649), (670, 1682), (694, 1745), (736, 1790), (787, 1862), (810, 1901), (834, 1937), (837, 1943), (856, 1967), (882, 1997), (891, 2003), (919, 2045), (922, 2048), (925, 2051), (960, 2093), (969, 2105), (975, 2117),

Gene: Ayotoya\_6 Start: 2230, Stop: 3660, Start Num: 223

Candidate Starts for Ayotoya\_6:

(Start: 119 @2062 has 2 MA's), (122, 2065), (Start: 125 @2068 has 61 MA's), (Start: 129 @2074 has 6 MA's), (Start: 223 @2230 has 13 MA's), (231, 2248), (281, 2371), (289, 2389), (304, 2428), (308, 2437), (367, 2521), (409, 2605), (413, 2620), (423, 2653), (447, 2719), (489, 2788), (517, 2851), (621,

3040), (634, 3052), (666, 3100), (683, 3142), (715, 3193), (770, 3268), (771, 3271), (786, 3298), (821, 3358), (842, 3391), (856, 3406), (885, 3442), (914, 3484), (935, 3511), (964, 3547), (969, 3553), (1003, 3592),

Gene: Azathoth\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Azathoth\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Aziz\_18 Start: 5321, Stop: 6862, Start Num: 93

Candidate Starts for Aziz\_18:

(Start: 93 @5321 has 19 MA's), (Start: 96 @5324 has 1 MA's), (218, 5507), (235, 5525), (258, 5558), (264, 5567), (313, 5705), (407, 5858), (418, 5897), (453, 5990), (467, 6011), (549, 6158), (585, 6218), (708, 6365), (724, 6392), (773, 6470), (808, 6530), (824, 6557), (1021, 6812),

Gene: Azizam\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Azizam\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (504, 1791), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Azrael100\_25 Start: 8124, Stop: 9737, Start Num: 80

Candidate Starts for Azrael100\_25:

(Start: 80 @8124 has 9 MA's), (191, 8274), (Start: 201 @8292 has 6 MA's), (220, 8325), (233, 8337), (266, 8388), (267, 8391), (279, 8439), (281, 8445), (297, 8484), (299, 8487), (313, 8520), (353, 8589), (395, 8655), (398, 8673), (407, 8697), (409, 8703), (441, 8808), (467, 8850), (476, 8868), (490, 8877), (602, 9081), (606, 9087), (635, 9120), (731, 9285), (736, 9294), (741, 9300), (742, 9303), (787, 9378), (808, 9411), (817, 9426), (877, 9507), (1005, 9660), (1018, 9681), (1019, 9684),

Gene: Aztec\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Aztec\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Azula\_2 Start: 361, Stop: 1959, Start Num: 113

Candidate Starts for Azula\_2:

(Start: 89 @334 has 52 MA's), (Start: 113 @361 has 34 MA's), (198, 475), (202, 484), (225, 517), (233, 535), (241, 550), (252, 571), (264, 592), (278, 646), (281, 655), (294, 691), (306, 727), (313, 739), (338, 781), (341, 784), (440, 1003), (449, 1018), (457, 1033), (459, 1036), (524, 1111), (548, 1162), (641, 1318), (657, 1339), (659, 1342), (703, 1429), (711, 1441), (734, 1474), (736, 1477), (761, 1516), (770, 1522), (771, 1525), (810, 1594), (814, 1597), (854, 1657), (856, 1660), (865, 1669), (914, 1738), (924, 1753), (1049, 1942),

Gene: B22\_3 Start: 956, Stop: 2410, Start Num: 154

Candidate Starts for B22\_3:

(Start: 154 @956 has 4 MA's), (Start: 157 @959 has 1 MA's), (Start: 205 @1058 has 1 MA's), (222, 1085), (234, 1112), (238, 1121), (254, 1163), (265, 1178), (275, 1220), (293, 1262), (317, 1322), (345, 1349), (405, 1460), (422, 1517), (426, 1535), (433, 1550), (437, 1562), (468, 1625), (566, 1760), (567, 1763), (570, 1769), (585, 1802), (686, 1952), (742, 2036), (743, 2039), (751, 2045), (803, 2126), (814, 2138), (830, 2165), (1005, 2396),

Gene: B3\_3 Start: 1202, Stop: 2782, Start Num: 125

Candidate Starts for B3\_3:

(Start: 117 @1193 has 111 MA's), (Start: 119 @1196 has 2 MA's), (Start: 125 @1202 has 61 MA's), (Start: 147 @1229 has 1 MA's), (172, 1262), (190, 1292), (Start: 200 @1310 has 2 MA's), (Start: 201 @1313 has 6 MA's), (208, 1328), (Start: 221 @1349 has 3 MA's), (Start: 223 @1352 has 13 MA's), (271, 1439), (275, 1451), (281, 1469), (290, 1499), (291, 1502), (314, 1574), (317, 1580), (340, 1616), (345, 1622), (369, 1655), (396, 1712), (408, 1754), (410, 1760), (431, 1841), (442, 1877), (443, 1880), (459, 1907), (466, 1916), (477, 1952), (557, 2096), (572, 2126), (580, 2153), (588, 2168), (595, 2180), (625, 2222), (663, 2264), (669, 2273), (678, 2297), (704, 2345), (710, 2351), (724, 2372), (725, 2375), (768, 2429), (783, 2459), (820, 2498), (835, 2522), (851, 2555), (890, 2573), (908, 2600), (912, 2606), (918, 2618), (956, 2666), (977, 2696), (1034, 2771),

Gene: BAjuniper\_3 Start: 781, Stop: 2379, Start Num: 125

Candidate Starts for BAjuniper\_3:

(Start: 125 @781 has 61 MA's), (Start: 147 @808 has 1 MA's), (193, 877), (Start: 200 @889 has 2 MA's), (228, 937), (264, 982), (281, 1045), (283, 1051), (319, 1129), (331, 1153), (348, 1174), (392, 1228), (409, 1279), (425, 1342), (443, 1402), (453, 1420), (475, 1471), (580, 1693), (658, 1795), (660, 1798), (678, 1831), (770, 1966), (962, 2260), (985, 2296), (1040, 2368), (1043, 2371),

Gene: BBQValindra\_2 Start: 522, Stop: 2105, Start Num: 120

Candidate Starts for BBQValindra\_2:

(90, 489), (98, 498), (101, 501), (Start: 120 @522 has 15 MA's), (193, 624), (294, 840), (313, 888), (348, 948), (362, 960), (408, 1050), (440, 1155), (524, 1299), (596, 1446), (641, 1506), (679, 1578), (734, 1665), (786, 1743), (792, 1755), (810, 1785), (821, 1803), (874, 1872), (885, 1887), (896, 1899), (904, 1911),

Gene: BEEST\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for BEEST\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: BENtherdunthat\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for BENtherdunthat\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (244, 853), (259, 886), (274, 937), (277, 946), (293, 982), (308, 1024), (319, 1045), (326, 1057), (344, 1072), (355, 1090), (366, 1093), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (422, 1246), (424, 1258), (433, 1279), (437, 1291), (445, 1318), (452, 1330), (503, 1411), (542, 1483), (550, 1507), (572, 1543), (583, 1570), (601, 1603), (652, 1657), (721, 1759), (736, 1786), (834, 1933), (841, 1945), (856, 1963), (919, 2041), (922, 2044), (925, 2047), (969, 2101), (975, 2113),

Gene: BFK20\_ORF2 Start: 538, Stop: 2166, Start Num: 121

Candidate Starts for BFK20\_ORF2:

(41, 427), (Start: 96 @508 has 1 MA's), (Start: 121 @538 has 4 MA's), (266, 763), (273, 796), (301, 901), (318, 937), (324, 949), (332, 964), (343, 976), (372, 1024), (380, 1042), (385, 1054), (396, 1072),

(409, 1120), (424, 1180), (443, 1243), (464, 1270), (527, 1387), (543, 1417), (672, 1609), (820, 1831), (835, 1855), (905, 1927), (991, 2044), (1045, 2146), (1046, 2152),

Gene: BGlluviae\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for BGlluviae\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: BPs\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for BPs\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: BQuat\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for BQuat\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: BabeRuth\_2 Start: 527, Stop: 2044, Start Num: 166

Candidate Starts for BabeRuth\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: BabyDaisy\_4 Start: 944, Stop: 2572, Start Num: 125

Candidate Starts for BabyDaisy\_4:

(Start: 125 @944 has 61 MA's), (228, 1100), (281, 1208), (300, 1253), (319, 1292), (346, 1334), (392, 1391), (409, 1442), (410, 1445), (425, 1505), (430, 1523), (439, 1553), (453, 1583), (711, 2054), (782, 2156), (941, 2405), (977, 2453), (1000, 2477), (1032, 2522),

Gene: BabyYoda\_3 Start: 958, Stop: 2583, Start Num: 125

Candidate Starts for BabyYoda\_3:

(Start: 125 @958 has 61 MA's), (228, 1114), (267, 1168), (281, 1222), (286, 1237), (319, 1306), (348, 1351), (409, 1456), (410, 1459), (425, 1519), (430, 1537), (431, 1540), (439, 1567), (453, 1597), (527, 1759), (660, 1975), (699, 2050), (710, 2062), (941, 2416), (977, 2464),

Gene: Bachaco\_3 Start: 938, Stop: 2503, Start Num: 125

Candidate Starts for Bachaco\_3:

(Start: 125 @938 has 61 MA's), (228, 1094), (281, 1202), (316, 1280), (320, 1289), (335, 1316), (392, 1385), (409, 1436), (425, 1499), (453, 1577), (580, 1850), (678, 1988), (766, 2117), (768, 2120), (985, 2420), (1010, 2450), (1043, 2495),

Gene: BackstagePass\_2 Start: 474, Stop: 2078, Start Num: 101

Candidate Starts for BackstagePass\_2:

(90, 462), (98, 471), (101, 474), (Start: 120 @495 has 15 MA's), (313, 861), (348, 921), (362, 933), (408, 1023), (440, 1128), (479, 1203), (524, 1272), (596, 1419), (641, 1479), (679, 1551), (734, 1638), (786, 1716), (792, 1728), (810, 1758), (821, 1776), (874, 1845), (896, 1872), (904, 1884),

Gene: BaghaKamala\_8 Start: 1563, Stop: 2987, Start Num: 161

Candidate Starts for BaghaKamala\_8:

(85, 1491), (Start: 143 @1551 has 2 MA's), (Start: 161 @1563 has 150 MA's), (Start: 219 @1674 has 15 MA's), (222, 1680), (257, 1758), (265, 1767), (277, 1815), (284, 1833), (313, 1902), (348, 1944), (354, 1950), (376, 1977), (378, 1980), (420, 2097), (422, 2106), (451, 2187), (542, 2301), (566, 2349), (572, 2361), (585, 2391), (597, 2415), (605, 2427), (617, 2442), (670, 2505), (672, 2511), (771, 2658), (789, 2691), (823, 2745), (960, 2922), (1009, 2976),

Gene: BaileyBlu\_2 Start: 464, Stop: 1966, Start Num: 127

Candidate Starts for BaileyBlu\_2:

(103, 437), (Start: 127 @464 has 3 MA's), (190, 569), (206, 599), (235, 635), (306, 806), (310, 812), (395, 929), (420, 1013), (423, 1025), (424, 1034), (441, 1091), (490, 1163), (532, 1250), (561, 1307), (612, 1385), (684, 1499), (687, 1508), (771, 1622), (809, 1688), (885, 1793), (1029, 1955),

Gene: Baine\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Baine\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (970, 2484), (995, 2523),

Gene: Banquo\_11 Start: 4530, Stop: 6218, Start Num: 49

Candidate Starts for Banquo\_11:

(Start: 49 @4530 has 3 MA's), (102, 4608), (230, 4800), (275, 4881), (294, 4926), (300, 4944), (309, 4965), (325, 4995), (351, 5034), (392, 5103), (410, 5157), (432, 5241), (433, 5244), (434, 5247), (442, 5274), (443, 5277), (527, 5382), (580, 5499), (587, 5514), (650, 5607), (653, 5613), (667, 5637), (683, 5679), (689, 5694), (711, 5724), (721, 5736), (759, 5787), (768, 5799), (793, 5847), (800, 5856), (840, 5922), (868, 5976), (894, 6009), (979, 6126), (1000, 6144), (1006, 6156), (1039, 6204), (1044, 6210),

Gene: Baoshan\_3 Start: 901, Stop: 2469, Start Num: 68

Candidate Starts for Baoshan\_3:

(Start: 68 @901 has 59 MA's), (Start: 71 @907 has 81 MA's), (Start: 77 @916 has 1 MA's), (185, 1063), (249, 1165), (283, 1255), (334, 1360), (407, 1498), (409, 1504), (422, 1549), (450, 1624), (478, 1672), (511, 1726), (525, 1750), (535, 1771), (547, 1795), (549, 1801), (568, 1831), (572, 1837), (591, 1873), (654, 1930), (666, 1948), (672, 1963), (713, 2038), (715, 2041), (736, 2077), (742, 2086), (773, 2122), (810, 2188), (865, 2263), (878, 2281), (885, 2290), (1021, 2437), (1034, 2461), (1036, 2464),

Gene: BarBear\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for BarBear\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Barco\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Barco\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Barkley26\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Barkley26\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: BarrelRoll\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for BarrelRoll\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: Bartholomew\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Bartholomew\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Basilisk\_3 Start: 961, Stop: 2607, Start Num: 79

Candidate Starts for Basilisk\_3:

(64, 937), (Start: 79 @961 has 7 MA's), (Start: 137 @1027 has 8 MA's), (Start: 201 @1123 has 6 MA's), (206, 1132), (267, 1225), (276, 1264), (281, 1279), (289, 1303), (346, 1405), (425, 1576), (429, 1588), (430, 1594), (443, 1636), (455, 1657), (481, 1717), (493, 1747), (498, 1756), (527, 1819), (581, 1936), (658, 2035), (669, 2047), (699, 2113), (711, 2128), (731, 2158), (765, 2197), (770, 2206), (774, 2215), (793, 2251), (838, 2305), (974, 2515), (1006, 2557), (1034, 2596),

Gene: Bauer\_4 Start: 1485, Stop: 2990, Start Num: 156

Candidate Starts for Bauer\_4:

(Start: 156 @1485 has 23 MA's), (235, 1629), (267, 1680), (280, 1731), (357, 1869), (378, 1911), (387, 1929), (433, 2073), (437, 2085), (460, 2130), (465, 2136), (505, 2214), (524, 2235), (594, 2364), (671, 2466), (673, 2472), (682, 2493), (712, 2544), (769, 2631), (803, 2691), (833, 2739), (850, 2772), (950, 2904),

Gene: BaxterFox\_2 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for BaxterFox\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (494, 1071), (572, 1179), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (767, 1500), (771, 1506), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (1002, 1827), (1022, 1857),

Gene: Bazzle\_4 Start: 1010, Stop: 2578, Start Num: 68

Candidate Starts for Bazzle\_4:

(Start: 68 @1010 has 59 MA's), (Start: 71 @1016 has 81 MA's), (185, 1172), (208, 1220), (220, 1238), (334, 1469), (407, 1607), (409, 1613), (450, 1733), (478, 1781), (525, 1859), (535, 1880), (547, 1904), (549, 1910), (568, 1940), (572, 1946), (586, 1973), (591, 1982), (672, 2072), (715, 2150), (736, 2186), (773, 2231), (810, 2297), (842, 2348), (865, 2372), (878, 2390), (885, 2399), (1021, 2546), (1034, 2570), (1036, 2573),

Gene: Beakin\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Beakin\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Beenie\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for Beenie\_3:

(Start: 89 @820 has 52 MA's), (183, 928), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (319, 1228), (389, 1318), (391, 1321), (420, 1414), (422, 1423), (425, 1438), (466, 1522), (494, 1573), (548, 1639), (572, 1681), (607, 1750), (611, 1756), (641, 1795), (655, 1816), (670, 1840), (672, 1846), (680, 1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (850, 2122), (888, 2173), (983, 2302), (1034, 2362),

Gene: Beethoven\_5 Start: 3076, Stop: 4641, Start Num: 71

Candidate Starts for Beethoven\_5:

(Start: 71 @3076 has 81 MA's), (Start: 221 @3286 has 3 MA's), (263, 3340), (281, 3406), (289, 3430), (402, 3646), (408, 3661), (410, 3667), (425, 3727), (503, 3886), (520, 3916), (530, 3931), (574, 4012), (620, 4090), (627, 4099), (669, 4135), (684, 4174), (704, 4207), (711, 4216), (728, 4243), (771, 4297), (793, 4339), (835, 4384), (846, 4405), (868, 4429), (941, 4507), (1032, 4627),

Gene: Beezoo\_8 Start: 1616, Stop: 3037, Start Num: 161

Candidate Starts for Beezoo\_8:

(85, 1544), (Start: 143 @1604 has 2 MA's), (Start: 161 @1616 has 150 MA's), (Start: 219 @1727 has 15 MA's), (222, 1733), (257, 1811), (265, 1820), (277, 1868), (284, 1886), (313, 1955), (348, 1997), (354, 2003), (376, 2030), (378, 2033), (420, 2150), (422, 2159), (542, 2354), (566, 2402), (572, 2414), (585, 2444), (597, 2468), (605, 2480), (670, 2558), (672, 2564), (771, 2708), (789, 2741), (823, 2795), (960, 2972), (1009, 3026),

Gene: Begonia\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Begonia\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (338, 783), (346, 795), (367, 816), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (657, 1341), (667, 1359), (670, 1365), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911),

Gene: Bella96\_8 Start: 1545, Stop: 2966, Start Num: 161

Candidate Starts for Bella96\_8:

(85, 1473), (Start: 127 @1512 has 3 MA's), (Start: 143 @1533 has 2 MA's), (Start: 161 @1545 has 150 MA's), (Start: 219 @1656 has 15 MA's), (222, 1662), (257, 1740), (265, 1749), (277, 1797), (284,



1815), (313, 1884), (348, 1926), (354, 1932), (376, 1959), (420, 2079), (422, 2088), (451, 2169), (462, 2187), (542, 2283), (566, 2331), (572, 2343), (585, 2373), (597, 2397), (605, 2409), (670, 2487), (672, 2493), (771, 2637), (789, 2670), (823, 2724), (960, 2901), (1009, 2955),

Gene: Belladonna\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Belladonna\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Bellis\_5 Start: 1186, Stop: 2751, Start Num: 68

Candidate Starts for Bellis\_5:

(Start: 68 @1186 has 59 MA's), (Start: 71 @1192 has 81 MA's), (191, 1363), (262, 1468), (267, 1480), (327, 1636), (334, 1645), (336, 1648), (338, 1651), (389, 1726), (407, 1780), (408, 1783), (409, 1786), (515, 2017), (552, 2092), (568, 2113), (572, 2119), (623, 2188), (654, 2212), (666, 2230), (672, 2245), (736, 2359), (770, 2398), (773, 2404), (810, 2470), (877, 2560), (885, 2572), (933, 2611), (1008, 2698), (1034, 2743), (1036, 2746),

Gene: BelmontSKP\_4 Start: 1038, Stop: 2663, Start Num: 125

Candidate Starts for BelmontSKP\_4:

(Start: 125 @1038 has 61 MA's), (Start: 147 @1065 has 1 MA's), (228, 1194), (267, 1248), (281, 1302), (286, 1317), (311, 1371), (319, 1386), (392, 1485), (409, 1536), (410, 1539), (425, 1599), (453, 1677), (699, 2130), (711, 2145), (941, 2496), (1050, 2652),

Gene: Belthelas\_3 Start: 1125, Stop: 2585, Start Num: 117

Candidate Starts for Belthelas\_3:

(Start: 117 @1125 has 111 MA's), (122, 1131), (Start: 223 @1293 has 13 MA's), (228, 1302), (264, 1362), (283, 1431), (294, 1452), (317, 1503), (424, 1707), (504, 1842), (546, 1920), (551, 1935), (572, 1971), (589, 2013), (610, 2046), (622, 2064), (706, 2184), (708, 2187), (715, 2199), (774, 2274), (810, 2337), (821, 2355), (823, 2358), (958, 2520), (965, 2529), (995, 2577),

Gene: Bennie\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Bennie\_2:

(Start: 71 @426 has 81 MA's), (Start: 221 @636 has 3 MA's), (265, 696), (273, 732), (281, 756), (283, 762), (289, 780), (379, 942), (392, 963), (425, 1077), (443, 1137), (477, 1203), (503, 1236), (520, 1266), (530, 1281), (574, 1362), (620, 1440), (627, 1449), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (846, 1755), (941, 1857),

Gene: Berka\_4 Start: 780, Stop: 2345, Start Num: 53

Candidate Starts for Berka\_4:

(Start: 53 @780 has 1 MA's), (63, 798), (94, 840), (135, 885), (155, 909), (Start: 163 @921 has 2 MA's), (Start: 201 @987 has 6 MA's), (206, 996), (227, 1032), (265, 1083), (273, 1119), (289, 1167), (313, 1212), (316, 1218), (317, 1221), (423, 1428), (427, 1446), (428, 1449), (503, 1566), (571, 1701), (578, 1719), (628, 1797), (660, 1836), (672, 1848), (682, 1875), (684, 1881), (711, 1923), (748, 1965), (753, 1974), (850, 2133), (900, 2205), (920, 2235), (946, 2268), (949, 2271), (983, 2322),

Gene: Bernstein\_2 Start: 653, Stop: 2215, Start Num: 125

Candidate Starts for Bernstein\_2:

(Start: 125 @653 has 61 MA's), (Start: 200 @761 has 2 MA's), (228, 809), (281, 917), (283, 923), (286, 932), (288, 938), (289, 941), (343, 1037), (392, 1100), (425, 1214), (443, 1274), (453, 1292), (564, 1520), (580, 1565), (678, 1703), (908, 2030), (1039, 2204), (1043, 2207),

Gene: BetterKatz\_6 Start: 2231, Stop: 3661, Start Num: 223

Candidate Starts for BetterKatz\_6:

(Start: 119 @2063 has 2 MA's), (122, 2066), (Start: 125 @2069 has 61 MA's), (Start: 129 @2075 has 6 MA's), (Start: 223 @2231 has 13 MA's), (231, 2249), (281, 2372), (289, 2390), (304, 2429), (308, 2438), (367, 2522), (409, 2606), (413, 2621), (423, 2654), (424, 2663), (447, 2720), (489, 2789), (517, 2852), (621, 3041), (634, 3053), (666, 3101), (683, 3143), (715, 3194), (770, 3269), (771, 3272), (786, 3299), (821, 3359), (842, 3392), (856, 3407), (885, 3443), (914, 3485), (935, 3512), (964, 3548), (969, 3554), (1003, 3593),

Gene: BigBoyz\_1 Start: 31, Stop: 1653, Start Num: 97

Candidate Starts for BigBoyz\_1:

(97, 31), (198, 169), (233, 238), (237, 247), (261, 280), (276, 334), (277, 337), (289, 373), (296, 385), (330, 451), (398, 565), (416, 622), (422, 640), (428, 664), (502, 766), (529, 811), (537, 829), (551, 865), (588, 946), (630, 1009), (683, 1090), (722, 1150), (757, 1192), (806, 1264), (815, 1276), (828, 1297), (859, 1360), (869, 1375), (905, 1414), (928, 1447), (930, 1450), (932, 1453),

Gene: BigCheese\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for BigCheese\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: BigMack\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for BigMack\_2:

(Start: 71 @426 has 81 MA's), (Start: 221 @636 has 3 MA's), (263, 690), (281, 756), (289, 780), (379, 942), (425, 1077), (444, 1140), (503, 1236), (520, 1266), (574, 1362), (620, 1440), (627, 1449), (669, 1485), (704, 1557), (771, 1647), (793, 1689), (846, 1755), (941, 1857),

Gene: BigNuz\_2 Start: 392, Stop: 2065, Start Num: 42

Candidate Starts for BigNuz\_2:

(7, 179), (16, 275), (Start: 42 @392 has 46 MA's), (108, 485), (Start: 124 @503 has 3 MA's), (194, 608), (215, 647), (274, 773), (281, 794), (283, 800), (284, 803), (306, 857), (322, 890), (382, 980), (447, 1169), (524, 1265), (548, 1316), (630, 1457), (640, 1469), (670, 1514), (761, 1667), (771, 1676), (786, 1703), (793, 1718), (810, 1745), (821, 1763), (850, 1799), (899, 1862), (950, 1934), (1038, 2048),

Gene: BigPhil\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for BigPhil\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Biglebops\_4 Start: 847, Stop: 2271, Start Num: 161

Candidate Starts for Biglebops\_4:

(Start: 143 @835 has 2 MA's), (Start: 161 @847 has 150 MA's), (194, 913), (Start: 219 @958 has 15 MA's), (240, 1003), (257, 1042), (265, 1051), (277, 1099), (284, 1117), (293, 1135), (313, 1186), (354,

1234), (376, 1261), (420, 1381), (422, 1390), (434, 1426), (435, 1429), (451, 1471), (462, 1489), (542, 1585), (564, 1627), (566, 1633), (572, 1645), (585, 1675), (588, 1681), (597, 1699), (617, 1726), (672, 1795), (717, 1867), (771, 1939), (789, 1972), (793, 1981), (810, 2008), (823, 2026), (960, 2203), (1009, 2260), (1014, 2266),

Gene: BinkBonk\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for BinkBonk\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Bintii\_3 Start: 1104, Stop: 2564, Start Num: 117

Candidate Starts for Bintii\_3:

(Start: 117 @1104 has 111 MA's), (122, 1110), (Start: 223 @1272 has 13 MA's), (228, 1281), (264, 1341), (283, 1410), (294, 1431), (317, 1482), (424, 1686), (504, 1821), (546, 1899), (551, 1914), (564, 1932), (572, 1950), (589, 1992), (610, 2025), (622, 2043), (706, 2163), (708, 2166), (715, 2178), (724, 2190), (731, 2202), (774, 2253), (808, 2310), (810, 2316), (817, 2325), (821, 2334), (823, 2337), (958, 2499), (965, 2508), (970, 2517), (995, 2556),

Gene: Bipper\_9 Start: 4723, Stop: 6342, Start Num: 70

Candidate Starts for Bipper\_9:

(Start: 70 @4723 has 4 MA's), (Start: 157 @4831 has 1 MA's), (Start: 221 @4942 has 3 MA's), (293, 5119), (294, 5122), (320, 5182), (365, 5248), (367, 5251), (402, 5311), (404, 5317), (442, 5449), (443, 5452), (459, 5479), (541, 5581), (568, 5650), (573, 5662), (588, 5698), (593, 5707), (601, 5722), (605, 5728), (660, 5785), (672, 5803), (684, 5836), (695, 5860), (711, 5878), (763, 5947), (801, 6016), (803, 6019), (821, 6061), (895, 6139), (914, 6169), (946, 6211), (977, 6253), (987, 6268),

Gene: Biscayne\_3 Start: 1101, Stop: 2561, Start Num: 117

Candidate Starts for Biscayne\_3:

(Start: 117 @1101 has 111 MA's), (122, 1107), (Start: 223 @1269 has 13 MA's), (264, 1338), (283, 1407), (294, 1428), (317, 1479), (424, 1683), (564, 1929), (572, 1947), (589, 1989), (610, 2022), (622, 2040), (706, 2160), (708, 2163), (715, 2175), (724, 2187), (774, 2250), (808, 2307), (810, 2313), (817, 2322), (821, 2331), (823, 2334), (955, 2493), (958, 2496), (965, 2505),

Gene: Bjaner7\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Bjaner7\_2:

(Start: 89 @318 has 52 MA's), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: BlackSpider\_2 Start: 495, Stop: 2000, Start Num: 156

Candidate Starts for BlackSpider\_2:

(Start: 156 @495 has 23 MA's), (220, 624), (235, 639), (280, 741), (357, 879), (378, 921), (387, 939), (433, 1083), (437, 1095), (460, 1140), (465, 1146), (505, 1224), (524, 1245), (594, 1374), (671, 1476), (673, 1482), (712, 1554), (803, 1701), (833, 1749), (835, 1752), (850, 1782), (882, 1830),

Gene: Blair\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Blair\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (227, 974), (263, 1025), (267, 1037), (273, 1067), (277, 1079), (282, 1094), (313, 1160), (348, 1205), (399,

1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (429, 1391), (431, 1400), (463, 1466), (516, 1529), (521, 1541), (546, 1583), (555, 1601), (583, 1661), (622, 1718), (635, 1730), (649, 1754), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (806, 1979), (848, 2054), (852, 2063), (868, 2090), (915, 2147), (955, 2201), (1004, 2273),

Gene: Blarby\_4 Start: 1188, Stop: 2708, Start Num: 139

Candidate Starts for Blarby\_4:

(Start: 132 @1176 has 1 MA's), (Start: 139 @1188 has 74 MA's), (Start: 219 @1314 has 15 MA's), (224, 1323), (244, 1368), (257, 1398), (259, 1401), (263, 1407), (274, 1452), (283, 1476), (293, 1497), (308, 1539), (319, 1560), (344, 1587), (355, 1605), (366, 1608), (376, 1632), (391, 1659), (409, 1716), (420, 1752), (422, 1761), (424, 1773), (426, 1779), (433, 1794), (437, 1806), (449, 1839), (452, 1845), (472, 1881), (474, 1890), (500, 1920), (514, 1950), (516, 1953), (567, 2049), (572, 2058), (583, 2085), (646, 2169), (662, 2184), (731, 2295), (736, 2304), (742, 2313), (787, 2376), (834, 2451), (841, 2463), (856, 2481), (891, 2517), (919, 2559), (925, 2565), (960, 2607), (969, 2619), (975, 2631), (1017, 2697),

Gene: Blessica\_31 Start: 13473, Stop: 14984, Start Num: 74

Candidate Starts for Blessica\_31:

(Start: 72 @13470 has 33 MA's), (Start: 74 @13473 has 14 MA's), (Start: 205 @13653 has 1 MA's), (249, 13746), (276, 13821), (287, 13854), (300, 13881), (313, 13911), (407, 14064), (409, 14070), (420, 14106), (422, 14115), (451, 14196), (456, 14205), (458, 14208), (498, 14247), (538, 14304), (553, 14340), (554, 14343), (668, 14499), (672, 14508), (711, 14577), (717, 14586), (722, 14592), (742, 14625), (771, 14661), (823, 14748), (836, 14769), (891, 14832), (893, 14835), (896, 14838), (907, 14856), (920, 14877), (960, 14919), (988, 14955), (1005, 14967),

Gene: BlingBling\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for BlingBling\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (405, 891), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Blino\_2 Start: 361, Stop: 1959, Start Num: 113

Candidate Starts for Blino\_2:

(Start: 89 @334 has 52 MA's), (107, 355), (Start: 113 @361 has 34 MA's), (198, 475), (202, 484), (225, 517), (233, 535), (241, 550), (252, 571), (264, 592), (281, 655), (294, 691), (306, 727), (313, 739), (327, 769), (338, 781), (341, 784), (440, 1003), (449, 1018), (457, 1033), (459, 1036), (524, 1111), (548, 1162), (641, 1318), (657, 1339), (659, 1342), (703, 1429), (711, 1441), (734, 1474), (736, 1477), (761, 1516), (771, 1525), (810, 1594), (814, 1597), (854, 1657), (856, 1660), (865, 1669), (914, 1738), (1049, 1942),

Gene: Blizzard\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Blizzard\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: BlueFeather\_1 Start: 75, Stop: 1616, Start Num: 89

Candidate Starts for BlueFeather\_1:

(Start: 89 @75 has 52 MA's), (Start: 132 @129 has 1 MA's), (Start: 201 @237 has 6 MA's), (202, 240), (227, 282), (275, 396), (278, 405), (289, 438), (294, 441), (313, 483), (316, 489), (321, 501), (328, 513), (408, 663), (423, 714), (428, 735), (449, 798), (534, 897), (541, 906), (583, 1002), (688, 1158), (710, 1188), (711, 1191), (770, 1260), (791, 1299), (825, 1353), (829, 1359), (844, 1386), (891, 1461), (931, 1515), (935, 1521), (943, 1533), (949, 1539), (965, 1557),

Gene: Blueberry\_2 Start: 361, Stop: 1959, Start Num: 113

Candidate Starts for Blueberry\_2:

(Start: 89 @334 has 52 MA's), (Start: 113 @361 has 34 MA's), (198, 475), (202, 484), (225, 517), (233, 535), (241, 550), (252, 571), (264, 592), (278, 646), (281, 655), (294, 691), (306, 727), (313, 739), (338, 781), (341, 784), (440, 1003), (449, 1018), (457, 1033), (459, 1036), (524, 1111), (548, 1162), (641, 1318), (657, 1339), (659, 1342), (703, 1429), (711, 1441), (734, 1474), (736, 1477), (761, 1516), (770, 1522), (771, 1525), (810, 1594), (814, 1597), (854, 1657), (856, 1660), (865, 1669), (914, 1738), (924, 1753), (1049, 1942),

Gene: Bobby\_11 Start: 3839, Stop: 5371, Start Num: 158

Candidate Starts for Bobby\_11:

(Start: 121 @3797 has 4 MA's), (128, 3806), (Start: 158 @3839 has 20 MA's), (218, 3953), (247, 4016), (266, 4049), (278, 4097), (308, 4172), (327, 4208), (388, 4283), (390, 4286), (401, 4322), (412, 4355), (540, 4604), (572, 4667), (584, 4694), (684, 4853), (708, 4889), (724, 4910), (728, 4919), (734, 4928), (780, 4982), (792, 5006), (855, 5087), (976, 5240), (988, 5252),

Gene: Bobi\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Bobi\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: BobsGarage\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for BobsGarage\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Bock\_6 Start: 1981, Stop: 3411, Start Num: 223

Candidate Starts for Bock\_6:

(Start: 119 @1813 has 2 MA's), (122, 1816), (Start: 125 @1819 has 61 MA's), (Start: 129 @1825 has 6 MA's), (Start: 223 @1981 has 13 MA's), (231, 1999), (281, 2122), (289, 2140), (304, 2179), (308, 2188), (367, 2272), (409, 2356), (413, 2371), (423, 2404), (447, 2470), (489, 2539), (517, 2602), (549, 2668), (621, 2791), (634, 2803), (666, 2851), (683, 2893), (715, 2944), (770, 3019), (771, 3022), (786, 3049), (821, 3109), (842, 3142), (856, 3157), (885, 3193), (914, 3235), (935, 3262), (964, 3298), (969, 3304), (1003, 3343),

Gene: Bodacious\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Bodacious\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (266, 699), (273, 732), (278, 747), (281, 756), (289, 780), (379, 942), (425,

1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: Bodhi17\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Bodhi17\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (431, 1677), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (995, 2523),

Gene: Bogie\_2 Start: 401, Stop: 2077, Start Num: 42

Candidate Starts for Bogie\_2:

(Start: 42 @401 has 46 MA's), (194, 617), (215, 656), (248, 713), (252, 719), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (317, 887), (322, 899), (382, 989), (447, 1178), (524, 1274), (548, 1325), (640, 1478), (761, 1676), (771, 1685), (786, 1712), (810, 1754), (821, 1772), (885, 1856), (899, 1871), (1038, 2060),

Gene: Boiiii\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Boiiii\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Boilgate\_5 Start: 1550, Stop: 2998, Start Num: 161

Candidate Starts for Boilgate\_5:

(91, 1493), (Start: 129 @1523 has 6 MA's), (Start: 161 @1550 has 150 MA's), (Start: 219 @1655 has 15 MA's), (249, 1724), (257, 1739), (265, 1748), (276, 1793), (277, 1796), (281, 1805), (283, 1811), (285, 1820), (289, 1832), (293, 1838), (313, 1889), (321, 1907), (354, 1937), (368, 1943), (405, 2036), (407, 2042), (414, 2069), (422, 2093), (423, 2096), (451, 2174), (456, 2183), (458, 2186), (500, 2231), (534, 2276), (542, 2288), (564, 2330), (566, 2336), (572, 2348), (585, 2378), (605, 2414), (617, 2429), (672, 2495), (688, 2537), (770, 2654), (803, 2714), (823, 2744), (856, 2792), (891, 2828), (960, 2921), (965, 2927), (1009, 2987),

Gene: BonaeVitae\_3 Start: 778, Stop: 2235, Start Num: 117

Candidate Starts for BonaeVitae\_3:

(Start: 117 @778 has 111 MA's), (Start: 223 @943 has 13 MA's), (283, 1081), (294, 1102), (310, 1138), (317, 1153), (406, 1294), (424, 1357), (431, 1381), (572, 1621), (589, 1663), (610, 1696), (622, 1714), (706, 1834), (715, 1849), (738, 1885), (774, 1924), (810, 1987), (823, 2008), (958, 2170), (970, 2188),

Gene: Bongo\_14 Start: 4719, Stop: 6263, Start Num: 93

Candidate Starts for Bongo\_14:

(Start: 93 @4719 has 19 MA's), (133, 4767), (264, 4968), (313, 5106), (418, 5298), (525, 5508), (549, 5559), (591, 5631), (670, 5694), (679, 5718), (685, 5733), (724, 5793), (731, 5805), (770, 5865), (787, 5898), (808, 5931), (824, 5958), (857, 6006), (1008, 6192), (1021, 6213),

Gene: BoomRoasted\_3 Start: 1125, Stop: 2585, Start Num: 117

Candidate Starts for BoomRoasted\_3:

(Start: 117 @1125 has 111 MA's), (122, 1131), (Start: 223 @1293 has 13 MA's), (228, 1302), (264, 1362), (283, 1431), (294, 1452), (317, 1503), (424, 1707), (504, 1842), (546, 1920), (551, 1935), (572,

1971), (589, 2013), (610, 2046), (622, 2064), (706, 2184), (708, 2187), (715, 2199), (774, 2274), (810, 2337), (821, 2355), (823, 2358), (958, 2520), (965, 2529), (970, 2538), (995, 2577),

Gene: Boomer\_3 Start: 797, Stop: 2158, Start Num: 219

Candidate Starts for Boomer\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: BoostSeason\_4 Start: 652, Stop: 2073, Start Num: 161

Candidate Starts for BoostSeason\_4:

(75, 574), (85, 586), (91, 595), (Start: 161 @652 has 150 MA's), (194, 712), (Start: 205 @733 has 1 MA's), (216, 754), (257, 838), (265, 847), (277, 895), (293, 931), (313, 982), (348, 1024), (354, 1030), (376, 1057), (420, 1177), (422, 1186), (423, 1189), (451, 1267), (456, 1276), (458, 1279), (542, 1381), (566, 1429), (572, 1441), (585, 1471), (597, 1495), (608, 1510), (672, 1588), (690, 1630), (717, 1660), (770, 1729), (779, 1744), (808, 1795), (823, 1819), (856, 1867), (954, 1990), (960, 1996), (1009, 2062),

Gene: Bora\_28 Start: 12903, Stop: 14414, Start Num: 74

Candidate Starts for Bora\_28:

(Start: 72 @12900 has 33 MA's), (Start: 74 @12903 has 14 MA's), (Start: 205 @13083 has 1 MA's), (249, 13176), (276, 13251), (287, 13284), (300, 13311), (313, 13341), (407, 13494), (409, 13500), (420, 13536), (422, 13545), (451, 13626), (456, 13635), (458, 13638), (498, 13677), (538, 13734), (553, 13770), (554, 13773), (668, 13929), (672, 13938), (711, 14007), (717, 14016), (722, 14022), (742, 14055), (771, 14091), (823, 14178), (836, 14199), (891, 14262), (893, 14265), (896, 14268), (907, 14286), (920, 14307), (960, 14349), (985, 14382), (988, 14385), (1005, 14397),

Gene: Bosection6\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Bosection6\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Bowser\_2 Start: 522, Stop: 2105, Start Num: 120

Candidate Starts for Bowser\_2:

(90, 489), (98, 498), (Start: 120 @522 has 15 MA's), (193, 624), (294, 840), (313, 888), (336, 930), (348, 948), (362, 960), (408, 1050), (440, 1155), (524, 1299), (548, 1350), (641, 1506), (670, 1554), (679, 1578), (734, 1665), (792, 1755), (810, 1785), (821, 1803), (874, 1872), (885, 1887), (896, 1899), (904, 1911), (952, 1980),

Gene: Bradley2\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Bradley2\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (192, 1188), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Brahms\_2 Start: 593, Stop: 2155, Start Num: 125

Candidate Starts for Brahms\_2:

(Start: 125 @593 has 61 MA's), (Start: 200 @701 has 2 MA's), (228, 749), (281, 857), (283, 863), (286, 872), (288, 878), (289, 881), (343, 977), (392, 1040), (425, 1154), (443, 1214), (453, 1232), (564, 1460), (580, 1505), (678, 1643), (908, 1970), (1039, 2144), (1043, 2147),

Gene: Bran\_2 Start: 373, Stop: 1959, Start Num: 118

Candidate Starts for Bran\_2:

(Start: 118 @373 has 4 MA's), (Start: 121 @376 has 4 MA's), (126, 382), (172, 442), (232, 553), (263, 631), (266, 640), (340, 814), (404, 916), (408, 925), (410, 931), (411, 940), (428, 1000), (442, 1048), (443, 1051), (505, 1114), (551, 1207), (686, 1429), (696, 1447), (755, 1534), (778, 1570), (786, 1585), (801, 1612), (803, 1615), (811, 1630), (813, 1636), (826, 1663), (835, 1678), (865, 1726), (909, 1774), (965, 1849), (1016, 1924), (1032, 1948),

Gene: BrayBeast\_2 Start: 311, Stop: 1759, Start Num: 148

Candidate Starts for BrayBeast\_2:

(45, 170), (48, 173), (55, 185), (Start: 104 @257 has 1 MA's), (Start: 148 @311 has 1 MA's), (Start: 184 @371 has 5 MA's), (194, 392), (Start: 205 @413 has 1 MA's), (226, 446), (242, 482), (263, 527), (264, 530), (272, 566), (277, 581), (287, 611), (300, 638), (354, 716), (422, 872), (423, 875), (468, 980), (561, 1106), (566, 1115), (667, 1256), (670, 1262), (672, 1268), (707, 1328), (711, 1334), (736, 1373), (755, 1400), (762, 1409), (810, 1487), (823, 1505), (865, 1562), (965, 1682), (981, 1703), (1009, 1748),

Gene: Breezona\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Breezona\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Bri160\_3 Start: 1125, Stop: 2585, Start Num: 117

Candidate Starts for Bri160\_3:

(Start: 117 @1125 has 111 MA's), (122, 1131), (Start: 223 @1293 has 13 MA's), (228, 1302), (264, 1362), (283, 1431), (294, 1452), (317, 1503), (424, 1707), (504, 1842), (546, 1920), (551, 1935), (572, 1971), (589, 2013), (610, 2046), (622, 2064), (706, 2184), (708, 2187), (715, 2199), (774, 2274), (810, 2337), (821, 2355), (823, 2358), (958, 2520), (965, 2529), (970, 2538), (995, 2577),

Gene: Bricole\_14 Start: 4718, Stop: 6262, Start Num: 93

Candidate Starts for Bricole\_14:

(Start: 93 @4718 has 19 MA's), (133, 4766), (218, 4907), (264, 4967), (313, 5105), (418, 5297), (525, 5507), (549, 5558), (591, 5630), (670, 5693), (679, 5717), (685, 5732), (724, 5792), (731, 5804), (770, 5864), (787, 5897), (808, 5930), (824, 5957), (857, 6005), (1008, 6191), (1021, 6212),

Gene: BrokMonster\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for BrokMonster\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (970, 2484), (995, 2523),

Gene: Bromden\_4 Start: 815, Stop: 2377, Start Num: 68



Candidate Starts for Bromden\_4:

(Start: 68 @815 has 59 MA's), (Start: 71 @821 has 81 MA's), (185, 971), (208, 1019), (220, 1037), (249, 1073), (278, 1148), (334, 1268), (338, 1274), (407, 1406), (409, 1412), (414, 1433), (450, 1532), (478, 1580), (525, 1658), (535, 1679), (547, 1703), (549, 1709), (568, 1739), (572, 1745), (586, 1772), (591, 1781), (654, 1838), (670, 1865), (672, 1871), (708, 1937), (731, 1976), (736, 1985), (754, 2009), (773, 2030), (810, 2096), (814, 2099), (1005, 2318), (1008, 2324), (1021, 2345), (1034, 2369),

Gene: BrotherBLo\_5 Start: 3292, Stop: 4647, Start Num: 221

Candidate Starts for BrotherBLo\_5:

(Start: 71 @3082 has 81 MA's), (Start: 221 @3292 has 3 MA's), (263, 3346), (278, 3403), (281, 3412), (402, 3652), (408, 3667), (410, 3673), (425, 3733), (443, 3793), (503, 3892), (520, 3922), (530, 3937), (574, 4018), (620, 4096), (627, 4105), (669, 4141), (684, 4180), (704, 4213), (711, 4222), (728, 4249), (771, 4303), (793, 4345), (835, 4390), (846, 4411), (868, 4435), (941, 4513), (1032, 4633),

Gene: BruceB\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for BruceB\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: BruceLethal\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for BruceLethal\_2:

(Start: 144 @373 has 46 MA's), (165, 397), (182, 430), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (389, 847), (395, 856), (409, 904), (414, 925), (422, 949), (424, 961), (454, 1036), (456, 1039), (546, 1174), (561, 1201), (572, 1222), (619, 1288), (653, 1330), (659, 1339), (666, 1351), (683, 1393), (708, 1435), (715, 1447), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (809, 1597), (820, 1615), (823, 1621), (848, 1663), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (938, 1786), (942, 1792), (950, 1801), (952, 1807), (973, 1828), (1005, 1870), (1008, 1876),

Gene: Brusacoram\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for Brusacoram\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (252, 718), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (630, 1465), (640, 1477), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: Bryler\_7 Start: 1509, Stop: 2936, Start Num: 161

Candidate Starts for Bryler\_7:

(Start: 161 @1509 has 150 MA's), (Start: 205 @1599 has 1 MA's), (Start: 219 @1623 has 15 MA's), (222, 1629), (257, 1707), (265, 1716), (277, 1764), (284, 1782), (313, 1851), (346, 1890), (354, 1899), (376, 1926), (407, 2004), (420, 2046), (422, 2055), (451, 2136), (496, 2184), (542, 2250), (564, 2292), (566, 2298), (572, 2310), (575, 2316), (585, 2340), (597, 2364), (601, 2370), (617, 2391), (672, 2460), (690, 2502), (762, 2595), (770, 2601), (771, 2604), (789, 2637), (808, 2667), (823, 2691), (856, 2739), (960, 2868), (1009, 2925), (1014, 2931),

Gene: Brylie\_6 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for Brylie\_6:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (304, 2176), (308, 2185), (367, 2269), (409, 2353),

(413, 2368), (423, 2401), (447, 2467), (517, 2599), (621, 2788), (634, 2800), (666, 2848), (683, 2890), (715, 2941), (770, 3016), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: Brynnie\_3 Start: 689, Stop: 2335, Start Num: 79

Candidate Starts for Brynnie\_3:

(Start: 79 @689 has 7 MA's), (Start: 137 @755 has 8 MA's), (Start: 201 @851 has 6 MA's), (206, 860), (267, 953), (276, 992), (281, 1007), (289, 1031), (346, 1133), (402, 1223), (425, 1304), (429, 1316), (430, 1322), (443, 1364), (455, 1385), (481, 1445), (493, 1475), (498, 1484), (527, 1547), (581, 1664), (658, 1763), (669, 1775), (699, 1841), (711, 1856), (731, 1886), (765, 1925), (770, 1934), (774, 1943), (793, 1979), (838, 2033), (974, 2243), (1006, 2285), (1034, 2324),

Gene: BubbaBear\_3 Start: 677, Stop: 2305, Start Num: 125

Candidate Starts for BubbaBear\_3:

(Start: 125 @677 has 61 MA's), (228, 833), (281, 941), (319, 1025), (331, 1049), (346, 1067), (392, 1124), (409, 1175), (410, 1178), (425, 1238), (430, 1256), (439, 1286), (453, 1316), (699, 1772), (711, 1787), (941, 2138), (977, 2186), (1050, 2294),

Gene: Budski\_3 Start: 671, Stop: 2188, Start Num: 139

Candidate Starts for Budski\_3:

(Start: 134 @662 has 3 MA's), (Start: 139 @671 has 74 MA's), (211, 788), (Start: 219 @797 has 15 MA's), (224, 806), (244, 851), (250, 869), (259, 884), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (321, 1049), (344, 1070), (355, 1088), (366, 1091), (368, 1094), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (424, 1256), (426, 1262), (433, 1277), (437, 1289), (452, 1328), (503, 1409), (526, 1451), (567, 1532), (572, 1541), (583, 1568), (626, 1634), (652, 1655), (721, 1757), (736, 1784), (834, 1931), (841, 1943), (856, 1961), (919, 2039), (922, 2042), (925, 2045), (960, 2087), (969, 2099), (975, 2111),

Gene: Buldak\_3 Start: 997, Stop: 2574, Start Num: 125

Candidate Starts for Buldak\_3:

(Start: 125 @997 has 61 MA's), (228, 1153), (267, 1207), (281, 1261), (300, 1306), (392, 1444), (409, 1495), (425, 1558), (442, 1615), (453, 1636), (464, 1651), (492, 1723), (595, 1936), (610, 1960), (658, 2011), (660, 2014), (669, 2023), (678, 2047), (862, 2317), (908, 2389), (974, 2476), (985, 2494), (1043, 2566),

Gene: Bullzi2019\_3 Start: 1095, Stop: 2555, Start Num: 117

Candidate Starts for Bullzi2019\_3:

(Start: 117 @1095 has 111 MA's), (122, 1101), (Start: 223 @1263 has 13 MA's), (228, 1272), (264, 1332), (283, 1401), (294, 1422), (317, 1473), (424, 1677), (504, 1812), (546, 1890), (551, 1905), (564, 1923), (572, 1941), (589, 1983), (610, 2016), (622, 2034), (706, 2154), (708, 2157), (715, 2169), (724, 2181), (731, 2193), (774, 2244), (808, 2301), (810, 2307), (817, 2316), (821, 2325), (823, 2328), (958, 2490), (965, 2499), (970, 2508), (995, 2547),

Gene: Bunker\_2 Start: 522, Stop: 2105, Start Num: 120

Candidate Starts for Bunker\_2:

(90, 489), (98, 498), (101, 501), (Start: 120 @522 has 15 MA's), (313, 888), (348, 948), (362, 960), (408, 1050), (440, 1155), (524, 1299), (596, 1446), (641, 1506), (679, 1578), (734, 1665), (786, 1743), (792, 1755), (810, 1785), (821, 1803), (874, 1872), (885, 1887), (896, 1899), (904, 1911),

Gene: Bunnies\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Bunnies\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524,

1286), (541, 1316), (548, 1337), (630, 1478), (640, 1490), (670, 1535), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Burgy\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Burgy\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Burritobowl\_3 Start: 687, Stop: 2315, Start Num: 125

Candidate Starts for Burritobowl\_3:

(Start: 125 @687 has 61 MA's), (228, 843), (281, 951), (319, 1035), (346, 1077), (392, 1134), (409, 1185), (410, 1188), (425, 1248), (430, 1266), (439, 1296), (453, 1326), (699, 1782), (711, 1797), (941, 2148), (977, 2196), (1050, 2304),

Gene: BurtonThePup\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for BurtonThePup\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Butters\_2 Start: 498, Stop: 2030, Start Num: 156

Candidate Starts for Butters\_2:

(Start: 152 @495 has 22 MA's), (Start: 156 @498 has 23 MA's), (Start: 166 @513 has 22 MA's), (190, 570), (Start: 200 @588 has 2 MA's), (206, 600), (256, 672), (272, 720), (275, 729), (300, 792), (336, 864), (367, 912), (408, 1011), (423, 1062), (450, 1134), (459, 1149), (469, 1167), (528, 1275), (540, 1299), (572, 1362), (631, 1446), (670, 1503), (675, 1518), (708, 1575), (719, 1593), (735, 1620), (780, 1689), (814, 1746), (827, 1755), (849, 1776), (873, 1809), (902, 1845), (911, 1860), (976, 1941), (982, 1947),

Gene: BuzzLyseyear\_3 Start: 670, Stop: 2157, Start Num: 139

Candidate Starts for BuzzLyseyear\_3:

(Start: 132 @658 has 1 MA's), (Start: 139 @670 has 74 MA's), (Start: 219 @796 has 15 MA's), (222, 802), (242, 844), (244, 850), (259, 883), (263, 889), (265, 895), (274, 934), (283, 958), (292, 976), (293, 979), (308, 1021), (319, 1042), (344, 1069), (349, 1078), (355, 1087), (366, 1090), (391, 1141), (409, 1198), (414, 1219), (422, 1243), (424, 1255), (433, 1276), (437, 1288), (449, 1321), (452, 1327), (498, 1396), (500, 1402), (516, 1435), (537, 1471), (567, 1531), (572, 1540), (583, 1567), (640, 1645), (694, 1741), (736, 1786), (787, 1858), (810, 1897), (834, 1933), (837, 1939), (856, 1963), (882, 1993), (891, 1999), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101), (975, 2113),

Gene: CGermain\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for CGermain\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: CLED96\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for CLED96\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: CREW\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for CREW\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: CabbageMan\_2 Start: 437, Stop: 1996, Start Num: 47

Candidate Starts for CabbageMan\_2:

(35, 419), (Start: 47 @437 has 3 MA's), (126, 533), (128, 536), (Start: 152 @563 has 22 MA's), (Start: 201 @644 has 6 MA's), (206, 653), (Start: 221 @680 has 3 MA's), (263, 734), (265, 740), (276, 785), (308, 860), (310, 863), (313, 869), (316, 875), (317, 878), (330, 896), (364, 929), (407, 1031), (428, 1106), (435, 1130), (502, 1220), (503, 1223), (516, 1250), (518, 1253), (532, 1277), (537, 1286), (560, 1337), (571, 1358), (586, 1394), (610, 1430), (628, 1454), (672, 1505), (677, 1520), (682, 1532), (711, 1577), (721, 1589), (819, 1730), (847, 1781), (850, 1787), (958, 1934), (965, 1943), (970, 1952),

Gene: CactusJack\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for CactusJack\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (252, 718), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (630, 1465), (640, 1477), (670, 1522), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: Cain\_7 Start: 1509, Stop: 2936, Start Num: 161

Candidate Starts for Cain\_7:

(Start: 161 @1509 has 150 MA's), (Start: 205 @1599 has 1 MA's), (Start: 219 @1623 has 15 MA's), (222, 1629), (257, 1707), (265, 1716), (277, 1764), (284, 1782), (313, 1851), (346, 1890), (354, 1899), (376, 1926), (407, 2004), (420, 2046), (422, 2055), (451, 2136), (496, 2184), (542, 2250), (564, 2292), (566, 2298), (572, 2310), (575, 2316), (585, 2340), (597, 2364), (601, 2370), (617, 2391), (672, 2460), (690, 2502), (762, 2595), (770, 2601), (771, 2604), (789, 2637), (808, 2667), (823, 2691), (856, 2739), (960, 2868), (1009, 2925), (1014, 2931),

Gene: CallieOMalley\_5 Start: 3069, Stop: 4637, Start Num: 71

Candidate Starts for CallieOMalley\_5:

(Start: 71 @3069 has 81 MA's), (206, 3255), (Start: 223 @3285 has 13 MA's), (263, 3336), (267, 3348), (278, 3393), (289, 3426), (346, 3528), (392, 3609), (408, 3657), (425, 3723), (439, 3771), (442, 3780), (480, 3855), (503, 3882), (520, 3912), (544, 3951), (669, 4131), (704, 4203), (728, 4239), (793, 4335), (846, 4401), (889, 4431), (894, 4437), (941, 4503), (1032, 4623),

Gene: CallinAllBarbz\_2 Start: 466, Stop: 1968, Start Num: 127

Candidate Starts for CallinAllBarbz\_2:

(Start: 127 @466 has 3 MA's), (145, 490), (190, 571), (206, 601), (306, 808), (310, 814), (395, 931), (420, 1015), (423, 1027), (424, 1036), (441, 1093), (490, 1165), (532, 1252), (561, 1309), (684, 1501), (687, 1510), (771, 1624), (809, 1690), (885, 1795), (940, 1837), (1029, 1957),

Gene: Calm\_4 Start: 1058, Stop: 2635, Start Num: 71

Candidate Starts for Calm\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (407, 1646), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (856, 2402), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: Cambiare\_3 Start: 925, Stop: 2397, Start Num: 158

Candidate Starts for Cambiare\_3:

(64, 826), (Start: 72 @841 has 33 MA's), (Start: 158 @925 has 20 MA's), (Start: 178 @940 has 1 MA's), (264, 1114), (277, 1165), (293, 1201), (317, 1261), (409, 1426), (420, 1462), (424, 1483), (436, 1513), (451, 1552), (566, 1714), (597, 1777), (608, 1792), (642, 1837), (645, 1840), (672, 1888), (682, 1912), (736, 1987), (771, 2038), (787, 2068), (789, 2071), (793, 2080), (803, 2095), (808, 2101), (810, 2107), (836, 2146), (878, 2197), (891, 2212), (954, 2299), (960, 2305), (1009, 2386), (1014, 2392),

Gene: Camri\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Camri\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Camster\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Camster\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Canowicakte\_5 Start: 3104, Stop: 4672, Start Num: 71

Candidate Starts for Canowicakte\_5:

(Start: 71 @3104 has 81 MA's), (206, 3290), (Start: 223 @3320 has 13 MA's), (263, 3371), (267, 3383), (273, 3413), (278, 3428), (289, 3461), (346, 3563), (392, 3644), (408, 3692), (425, 3758), (439, 3806), (442, 3815), (444, 3821), (480, 3890), (503, 3917), (520, 3947), (544, 3986), (669, 4166), (704, 4238), (728, 4274), (793, 4370), (846, 4436), (889, 4466), (894, 4472), (941, 4538), (1032, 4658),

Gene: Capricorn\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Capricorn\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: CaptainKirk2\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for CaptainKirk2\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924,

1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Carcharodon\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Carcharodon\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: CarolAnn\_2 Start: 333, Stop: 1958, Start Num: 89

Candidate Starts for CarolAnn\_2:

(Start: 89 @333 has 52 MA's), (107, 354), (Start: 113 @360 has 34 MA's), (198, 474), (202, 483), (225, 516), (233, 534), (241, 549), (252, 570), (264, 591), (281, 654), (294, 690), (306, 726), (313, 738), (327, 768), (338, 780), (341, 783), (440, 1002), (449, 1017), (457, 1032), (459, 1035), (524, 1110), (548, 1161), (641, 1317), (657, 1338), (659, 1341), (703, 1428), (711, 1440), (734, 1473), (736, 1476), (761, 1515), (771, 1524), (810, 1593), (814, 1596), (854, 1656), (856, 1659), (865, 1668), (914, 1737), (1049, 1941),

Gene: Carpal\_5 Start: 3082, Stop: 4647, Start Num: 71

Candidate Starts for Carpal\_5:

(Start: 71 @3082 has 81 MA's), (Start: 221 @3292 has 3 MA's), (263, 3346), (278, 3403), (281, 3412), (402, 3652), (408, 3667), (410, 3673), (425, 3733), (443, 3793), (503, 3892), (520, 3922), (530, 3937), (574, 4018), (620, 4096), (627, 4105), (669, 4141), (684, 4180), (704, 4213), (711, 4222), (728, 4249), (771, 4303), (793, 4345), (835, 4390), (846, 4411), (868, 4435), (941, 4513), (1032, 4633),

Gene: CaseJules\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for CaseJules\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Cashington\_3 Start: 677, Stop: 2305, Start Num: 125

Candidate Starts for Cashington\_3:

(Start: 125 @677 has 61 MA's), (228, 833), (281, 941), (300, 986), (307, 1004), (319, 1025), (331, 1049), (346, 1067), (392, 1124), (409, 1175), (410, 1178), (411, 1187), (425, 1238), (430, 1256), (439, 1286), (453, 1316), (699, 1772), (711, 1787), (941, 2138), (977, 2186), (1050, 2294),

Gene: CassieYates\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for CassieYates\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Catdawg\_30 Start: 13079, Stop: 14590, Start Num: 74

Candidate Starts for Catdawg\_30:

(Start: 72 @13076 has 33 MA's), (Start: 74 @13079 has 14 MA's), (Start: 205 @13259 has 1 MA's), (249, 13352), (276, 13427), (287, 13460), (300, 13487), (313, 13517), (407, 13670), (409, 13676),

(420, 13712), (422, 13721), (451, 13802), (456, 13811), (458, 13814), (498, 13853), (538, 13910), (553, 13946), (554, 13949), (668, 14105), (672, 14114), (711, 14183), (717, 14192), (722, 14198), (742, 14231), (771, 14267), (823, 14354), (836, 14375), (891, 14438), (893, 14441), (896, 14444), (907, 14462), (920, 14483), (960, 14525), (988, 14561), (1005, 14573),

Gene: Catfish\_6 Start: 2518, Stop: 4161, Start Num: 62

Candidate Starts for Catfish\_6:

(Start: 62 @2518 has 1 MA's), (278, 2854), (294, 2890), (300, 2908), (392, 3046), (404, 3085), (410, 3100), (432, 3184), (433, 3187), (434, 3190), (443, 3220), (574, 3424), (688, 3634), (701, 3655), (711, 3667), (736, 3706), (768, 3742), (771, 3748), (868, 3919), (894, 3952), (941, 4018), (977, 4066), (1044, 4153),

Gene: Cayde6\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Cayde6\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (970, 2484), (995, 2523),

Gene: Cazares\_3 Start: 1068, Stop: 2522, Start Num: 122

Candidate Starts for Cazares\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (504, 1779), (546, 1857), (551, 1872), (564, 1890), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (724, 2148), (731, 2160), (774, 2211), (808, 2268), (810, 2274), (817, 2283), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: Cedasite\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Cedasite\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Celaena\_3 Start: 875, Stop: 2440, Start Num: 125

Candidate Starts for Celaena\_3:

(Start: 125 @875 has 61 MA's), (228, 1031), (281, 1139), (316, 1217), (320, 1226), (335, 1253), (392, 1322), (409, 1373), (425, 1436), (453, 1514), (580, 1787), (766, 2054), (768, 2057), (985, 2357), (1010, 2387), (1043, 2432),

Gene: Cerasum\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Cerasum\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Chance64\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Chance64\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Chancellor\_9 Start: 2478, Stop: 3920, Start Num: 161

Candidate Starts for Chancellor\_9:

(Start: 161 @2478 has 150 MA's), (Start: 219 @2583 has 15 MA's), (257, 2667), (265, 2676), (273, 2712), (277, 2724), (283, 2739), (293, 2766), (313, 2817), (321, 2835), (354, 2865), (376, 2892), (407, 2970), (422, 3021), (423, 3024), (451, 3102), (456, 3111), (496, 3150), (542, 3216), (566, 3264), (585, 3306), (672, 3423), (688, 3465), (717, 3510), (770, 3579), (793, 3624), (808, 3645), (823, 3669), (960, 3846), (1009, 3909), (1014, 3915),

Gene: Charbie\_3 Start: 1062, Stop: 2522, Start Num: 117

Candidate Starts for Charbie\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (546, 1857), (551, 1872), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (774, 2211), (810, 2274), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: Charlie\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Charlie\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Chaser\_4 Start: 816, Stop: 2378, Start Num: 68

Candidate Starts for Chaser\_4:

(Start: 68 @816 has 59 MA's), (Start: 71 @822 has 81 MA's), (185, 972), (220, 1038), (246, 1068), (262, 1092), (267, 1104), (278, 1149), (338, 1275), (409, 1413), (422, 1458), (450, 1533), (478, 1581), (525, 1659), (535, 1680), (547, 1704), (549, 1710), (568, 1740), (572, 1746), (591, 1782), (654, 1839), (672, 1872), (731, 1977), (736, 1986), (754, 2010), (773, 2031), (810, 2097), (885, 2199), (1005, 2319), (1008, 2325), (1021, 2346), (1034, 2370),

Gene: Chatham\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Chatham\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Che9c\_2 Start: 500, Stop: 2047, Start Num: 160

Candidate Starts for Che9c\_2:

(Start: 150 @488 has 1 MA's), (Start: 160 @500 has 1 MA's), (190, 566), (Start: 200 @584 has 2 MA's), (264, 677), (281, 740), (300, 785), (315, 818), (351, 881), (372, 914), (389, 950), (401, 989), (408, 1004), (420, 1043), (423, 1055), (427, 1073), (434, 1088), (450, 1127), (472, 1166), (528, 1268), (540, 1292), (644, 1454), (670, 1496), (685, 1535), (735, 1610), (750, 1640), (827, 1754), (883, 1844), (911, 1880), (920, 1895), (972, 1961), (976, 1970), (982, 1976), (994, 1988), (1006, 1997), (1026, 2024),



Gene: Che9d\_3 Start: 673, Stop: 2193, Start Num: 139

Candidate Starts for Che9d\_3:

(Start: 132 @661 has 1 MA's), (Start: 139 @673 has 74 MA's), (Start: 219 @799 has 15 MA's), (224, 808), (244, 853), (257, 883), (259, 886), (263, 892), (274, 937), (283, 961), (344, 1072), (355, 1090), (366, 1093), (376, 1117), (409, 1201), (420, 1237), (422, 1246), (424, 1258), (426, 1264), (433, 1279), (437, 1291), (445, 1318), (449, 1324), (452, 1330), (472, 1366), (474, 1375), (500, 1405), (514, 1435), (516, 1438), (567, 1534), (572, 1543), (583, 1570), (646, 1654), (662, 1669), (731, 1780), (736, 1789), (742, 1798), (787, 1861), (834, 1936), (841, 1948), (856, 1966), (891, 2002), (919, 2044), (925, 2050), (960, 2092), (969, 2104), (975, 2116), (1017, 2182),

Gene: CheeseTouch\_3 Start: 671, Stop: 2188, Start Num: 139

Candidate Starts for CheeseTouch\_3:

(Start: 134 @662 has 3 MA's), (Start: 139 @671 has 74 MA's), (211, 788), (Start: 219 @797 has 15 MA's), (224, 806), (244, 851), (250, 869), (259, 884), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (321, 1049), (344, 1070), (355, 1088), (366, 1091), (368, 1094), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (424, 1256), (426, 1262), (433, 1277), (437, 1289), (452, 1328), (503, 1409), (526, 1451), (567, 1532), (572, 1541), (583, 1568), (626, 1634), (652, 1655), (721, 1757), (736, 1784), (834, 1931), (841, 1943), (856, 1961), (919, 2039), (922, 2042), (925, 2045), (960, 2087), (969, 2099), (975, 2111),

Gene: Cheesecake\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Cheesecake\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: CheetoDust\_8 Start: 1613, Stop: 3034, Start Num: 161

Candidate Starts for CheetoDust\_8:

(85, 1541), (Start: 143 @1601 has 2 MA's), (Start: 161 @1613 has 150 MA's), (Start: 219 @1724 has 15 MA's), (222, 1730), (257, 1808), (265, 1817), (277, 1865), (284, 1883), (313, 1952), (348, 1994), (354, 2000), (376, 2027), (378, 2030), (420, 2147), (422, 2156), (451, 2237), (542, 2351), (566, 2399), (572, 2411), (585, 2441), (597, 2465), (605, 2477), (670, 2555), (672, 2561), (771, 2705), (789, 2738), (823, 2792), (960, 2969), (1009, 3023),

Gene: Cheetobro\_9 Start: 2478, Stop: 3920, Start Num: 161

Candidate Starts for Cheetobro\_9:

(Start: 161 @2478 has 150 MA's), (Start: 219 @2583 has 15 MA's), (257, 2667), (265, 2676), (273, 2712), (277, 2724), (283, 2739), (293, 2766), (313, 2817), (321, 2835), (354, 2865), (376, 2892), (407, 2970), (422, 3021), (423, 3024), (451, 3102), (456, 3111), (496, 3150), (542, 3216), (566, 3264), (585, 3306), (672, 3423), (688, 3465), (717, 3510), (770, 3579), (793, 3624), (808, 3645), (823, 3669), (960, 3846), (1009, 3909), (1014, 3915),

Gene: Cherrybomb426\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Cherrybomb426\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Chestnut\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Chestnut\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: ChewChew\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for ChewChew\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (273, 732), (278, 747), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: Chewbacca\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Chewbacca\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Chickaboom\_2 Start: 410, Stop: 1990, Start Num: 137

Candidate Starts for Chickaboom\_2:

(64, 320), (Start: 79 @344 has 7 MA's), (Start: 137 @410 has 8 MA's), (Start: 201 @506 has 6 MA's), (206, 515), (267, 608), (276, 647), (281, 662), (425, 959), (429, 971), (430, 977), (443, 1019), (455, 1040), (481, 1100), (493, 1130), (498, 1139), (527, 1202), (658, 1418), (669, 1430), (699, 1496), (711, 1511), (731, 1541), (765, 1580), (770, 1589), (774, 1598), (838, 1688), (974, 1898), (1034, 1979),

Gene: ChickenDinner\_3 Start: 674, Stop: 2161, Start Num: 139

Candidate Starts for ChickenDinner\_3:

(Start: 132 @662 has 1 MA's), (Start: 139 @674 has 74 MA's), (Start: 219 @800 has 15 MA's), (222, 806), (242, 848), (244, 854), (259, 887), (263, 893), (265, 899), (274, 938), (283, 962), (292, 980), (293, 983), (308, 1025), (344, 1073), (349, 1082), (355, 1091), (366, 1094), (391, 1145), (414, 1223), (422, 1247), (424, 1259), (433, 1280), (437, 1292), (449, 1325), (452, 1331), (498, 1400), (500, 1406), (516, 1439), (537, 1475), (567, 1535), (572, 1544), (583, 1571), (640, 1649), (694, 1745), (736, 1790), (787, 1862), (810, 1901), (834, 1937), (837, 1943), (856, 1967), (882, 1997), (891, 2003), (919, 2045), (922, 2048), (925, 2051), (960, 2093), (969, 2105), (975, 2117),

Gene: ChiliPepper\_3 Start: 944, Stop: 2563, Start Num: 125

Candidate Starts for ChiliPepper\_3:

(1, 410), (Start: 119 @938 has 2 MA's), (Start: 125 @944 has 61 MA's), (228, 1100), (275, 1190), (281, 1208), (286, 1223), (319, 1292), (330, 1313), (331, 1316), (346, 1334), (392, 1391), (409, 1442), (410, 1445), (425, 1505), (431, 1526), (439, 1553), (453, 1583), (622, 1922), (710, 2045), (912, 2360), (941, 2399), (1032, 2516),

Gene: Cholula\_5 Start: 3127, Stop: 4692, Start Num: 71

Candidate Starts for Cholula\_5:

(Start: 71 @3127 has 81 MA's), (Start: 221 @3337 has 3 MA's), (263, 3391), (281, 3457), (289, 3481), (402, 3697), (408, 3712), (410, 3718), (425, 3778), (443, 3838), (503, 3937), (520, 3967), (530, 3982),

(574, 4063), (620, 4141), (627, 4150), (669, 4186), (684, 4225), (704, 4258), (711, 4267), (728, 4294), (771, 4348), (793, 4390), (835, 4435), (846, 4456), (941, 4558), (1032, 4678),

Gene: Chop\_6 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for Chop\_6:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (304, 2176), (308, 2185), (367, 2269), (409, 2353), (413, 2368), (423, 2401), (447, 2467), (517, 2599), (621, 2788), (666, 2848), (683, 2890), (715, 2941), (770, 3016), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: Chridison\_2 Start: 429, Stop: 1994, Start Num: 71

Candidate Starts for Chridison\_2:

(Start: 71 @429 has 81 MA's), (Start: 200 @600 has 2 MA's), (263, 693), (278, 750), (281, 759), (289, 783), (316, 837), (392, 966), (408, 1014), (425, 1080), (443, 1140), (461, 1170), (520, 1269), (530, 1284), (627, 1452), (684, 1527), (704, 1560), (768, 1644), (793, 1692), (821, 1716), (903, 1806), (941, 1860), (1005, 1941), (1032, 1980),

Gene: Chris\_7 Start: 1525, Stop: 2949, Start Num: 161

Candidate Starts for Chris\_7:

(Start: 161 @1525 has 150 MA's), (194, 1591), (Start: 205 @1612 has 1 MA's), (Start: 219 @1636 has 15 MA's), (240, 1681), (257, 1720), (265, 1729), (277, 1777), (284, 1795), (293, 1813), (313, 1864), (376, 1939), (407, 2017), (420, 2059), (422, 2068), (451, 2149), (542, 2263), (564, 2305), (566, 2311), (572, 2323), (585, 2353), (617, 2404), (672, 2473), (690, 2515), (771, 2617), (787, 2647), (789, 2650), (810, 2686), (823, 2704), (844, 2737), (965, 2887), (1009, 2938),

Gene: Christian\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Christian\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (273, 732), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (820, 1710), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: CicholasNage\_4 Start: 1059, Stop: 2636, Start Num: 71

Candidate Starts for CicholasNage\_4:

(Start: 68 @1053 has 59 MA's), (Start: 71 @1059 has 81 MA's), (191, 1230), (249, 1317), (262, 1335), (265, 1341), (273, 1377), (336, 1515), (338, 1518), (389, 1593), (407, 1647), (408, 1650), (409, 1653), (478, 1821), (511, 1875), (515, 1884), (525, 1899), (535, 1920), (552, 1959), (568, 1980), (572, 1986), (586, 2013), (623, 2055), (654, 2079), (666, 2097), (670, 2106), (672, 2112), (685, 2145), (708, 2178), (731, 2217), (734, 2223), (736, 2226), (773, 2271), (810, 2337), (842, 2388), (856, 2403), (865, 2412), (877, 2427), (878, 2430), (976, 2532), (1005, 2559), (1034, 2610), (1036, 2613),

Gene: Ciel\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Ciel\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Clap\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Clap\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Clark\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for Clark\_3:

(Start: 89 @820 has 52 MA's), (183, 928), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (319, 1228), (389, 1318), (391, 1321), (420, 1414), (422, 1423), (425, 1438), (466, 1522), (494, 1573), (548, 1639), (572, 1681), (607, 1750), (611, 1756), (641, 1795), (655, 1816), (670, 1840), (672, 1846), (680, 1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (850, 2122), (888, 2173), (983, 2302), (1034, 2362),

Gene: Claus\_4 Start: 1081, Stop: 2649, Start Num: 68

Candidate Starts for Claus\_4:

(Start: 68 @1081 has 59 MA's), (Start: 71 @1087 has 81 MA's), (Start: 77 @1096 has 1 MA's), (84, 1105), (185, 1243), (249, 1345), (283, 1435), (334, 1540), (407, 1678), (409, 1684), (414, 1705), (422, 1729), (450, 1804), (478, 1852), (511, 1906), (525, 1930), (535, 1951), (547, 1975), (549, 1981), (568, 2011), (572, 2017), (591, 2053), (654, 2110), (666, 2128), (672, 2143), (715, 2221), (736, 2257), (742, 2266), (773, 2302), (810, 2368), (814, 2371), (865, 2443), (878, 2461), (885, 2470), (1021, 2617), (1034, 2641), (1036, 2644),

Gene: Clautastrophe\_5 Start: 1190, Stop: 2755, Start Num: 68

Candidate Starts for Clautastrophe\_5:

(Start: 36 @1139 has 19 MA's), (40, 1148), (Start: 68 @1190 has 59 MA's), (Start: 71 @1196 has 81 MA's), (191, 1367), (207, 1397), (262, 1472), (265, 1478), (267, 1484), (327, 1640), (334, 1649), (336, 1652), (338, 1655), (389, 1730), (407, 1784), (408, 1787), (409, 1790), (515, 2021), (552, 2096), (568, 2117), (572, 2123), (623, 2192), (654, 2216), (666, 2234), (672, 2249), (736, 2363), (770, 2402), (773, 2408), (810, 2474), (850, 2528), (877, 2564), (885, 2576), (933, 2615), (1008, 2702), (1034, 2747), (1036, 2750),

Gene: Clayda5\_2 Start: 593, Stop: 2155, Start Num: 125

Candidate Starts for Clayda5\_2:

(Start: 125 @593 has 61 MA's), (Start: 200 @701 has 2 MA's), (228, 749), (281, 857), (283, 863), (286, 872), (288, 878), (289, 881), (343, 977), (392, 1040), (425, 1154), (443, 1214), (453, 1232), (564, 1460), (580, 1505), (678, 1643), (908, 1970), (1039, 2144), (1043, 2147),

Gene: Clownery\_3 Start: 1179, Stop: 2639, Start Num: 117

Candidate Starts for Clownery\_3:

(Start: 117 @1179 has 111 MA's), (122, 1185), (Start: 223 @1347 has 13 MA's), (228, 1356), (264, 1416), (283, 1485), (294, 1506), (317, 1557), (424, 1761), (504, 1896), (546, 1974), (551, 1989), (564, 2007), (572, 2025), (589, 2067), (610, 2100), (622, 2118), (706, 2238), (708, 2241), (715, 2253), (724, 2265), (731, 2277), (774, 2328), (808, 2385), (810, 2391), (817, 2400), (821, 2409), (823, 2412), (958, 2574), (965, 2583), (970, 2592), (995, 2631),

Gene: Coco12\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Coco12\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568),

(640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Coeur\_2 Start: 583, Stop: 1917, Start Num: 197

Candidate Starts for Coeur\_2:

(Start: 156 @517 has 23 MA's), (Start: 197 @583 has 2 MA's), (Start: 209 @610 has 1 MA's), (264, 685), (267, 694), (272, 721), (273, 724), (277, 736), (283, 754), (312, 814), (316, 823), (317, 826), (423, 1027), (615, 1351), (658, 1399), (672, 1414), (680, 1438), (683, 1444), (687, 1453), (695, 1471), (773, 1561), (815, 1627), (840, 1672), (868, 1723), (906, 1768), (923, 1795), (970, 1858), (998, 1900),

Gene: Cole\_4 Start: 1595, Stop: 3295, Start Num: 110

Candidate Starts for Cole\_4:

(92, 1574), (Start: 110 @1595 has 15 MA's), (190, 1718), (Start: 201 @1739 has 6 MA's), (208, 1754), (228, 1787), (264, 1832), (265, 1835), (275, 1877), (278, 1886), (281, 1895), (282, 1898), (283, 1901), (294, 1922), (316, 1973), (348, 2024), (392, 2078), (410, 2132), (425, 2192), (443, 2252), (455, 2273), (546, 2504), (574, 2570), (580, 2585), (678, 2756), (704, 2804), (711, 2813), (738, 2855), (768, 2888), (789, 2927), (821, 2969), (903, 3059), (918, 3086), (921, 3089), (974, 3158), (1027, 3236), (1050, 3284),

Gene: Coleslaw\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Coleslaw\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Collard\_6 Start: 1324, Stop: 2751, Start Num: 166

Candidate Starts for Collard\_6:

(Start: 166 @1324 has 22 MA's), (194, 1381), (Start: 205 @1402 has 1 MA's), (Start: 219 @1426 has 15 MA's), (257, 1510), (265, 1519), (267, 1525), (277, 1567), (284, 1585), (293, 1603), (313, 1654), (320, 1669), (376, 1729), (407, 1807), (420, 1849), (422, 1858), (423, 1861), (451, 1939), (542, 2053), (566, 2101), (585, 2143), (597, 2167), (605, 2179), (626, 2206), (667, 2251), (672, 2263), (762, 2410), (787, 2449), (823, 2506), (838, 2530), (856, 2554), (878, 2578), (954, 2677), (960, 2683), (1009, 2740),

Gene: Coltrane\_2 Start: 593, Stop: 2155, Start Num: 125

Candidate Starts for Coltrane\_2:

(Start: 125 @593 has 61 MA's), (Start: 200 @701 has 2 MA's), (228, 749), (281, 857), (283, 863), (286, 872), (288, 878), (289, 881), (343, 977), (392, 1040), (425, 1154), (443, 1214), (453, 1232), (564, 1460), (580, 1505), (678, 1643), (908, 1970), (1039, 2144), (1043, 2147),

Gene: Concrete\_3 Start: 1125, Stop: 2585, Start Num: 117

Candidate Starts for Concrete\_3:

(Start: 117 @1125 has 111 MA's), (122, 1131), (Start: 223 @1293 has 13 MA's), (228, 1302), (264, 1362), (283, 1431), (294, 1452), (317, 1503), (424, 1707), (504, 1842), (546, 1920), (551, 1935), (572, 1971), (589, 2013), (610, 2046), (622, 2064), (706, 2184), (708, 2187), (715, 2199), (774, 2274), (810, 2337), (821, 2355), (823, 2358), (958, 2520), (965, 2529), (995, 2577),

Gene: Copper\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Copper\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094),

(341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Coral\_3 Start: 684, Stop: 2330, Start Num: 79

Candidate Starts for Coral\_3:

(Start: 79 @684 has 7 MA's), (Start: 201 @849 has 6 MA's), (Start: 223 @888 has 13 MA's), (263, 939), (267, 951), (275, 987), (281, 1005), (392, 1188), (425, 1302), (429, 1314), (430, 1320), (443, 1362), (455, 1383), (466, 1398), (485, 1455), (669, 1770), (699, 1836), (731, 1881), (765, 1920), (771, 1932), (782, 1953), (820, 1998), (838, 2028), (860, 2073), (880, 2115), (903, 2142), (905, 2145), (974, 2238), (977, 2244), (995, 2265), (1005, 2277), (1032, 2316), (1034, 2319),

Gene: Corgi\_4 Start: 607, Stop: 2163, Start Num: 47

Candidate Starts for Corgi\_4:

(Start: 47 @607 has 3 MA's), (56, 619), (90, 658), (126, 700), (128, 703), (Start: 152 @730 has 22 MA's), (Start: 201 @811 has 6 MA's), (206, 820), (Start: 221 @847 has 3 MA's), (263, 901), (265, 907), (276, 952), (308, 1027), (310, 1030), (313, 1036), (316, 1042), (317, 1045), (330, 1063), (428, 1273), (502, 1387), (503, 1390), (516, 1417), (518, 1420), (532, 1444), (537, 1453), (560, 1504), (571, 1525), (610, 1597), (628, 1621), (672, 1672), (677, 1687), (682, 1699), (711, 1744), (721, 1756), (847, 1948), (850, 1954), (958, 2101), (965, 2110), (970, 2119),

Gene: Coriander\_2 Start: 586, Stop: 2193, Start Num: 120

Candidate Starts for Coriander\_2:

(Start: 120 @586 has 15 MA's), (239, 769), (283, 886), (294, 904), (313, 952), (362, 1024), (425, 1177), (440, 1219), (494, 1312), (518, 1354), (524, 1363), (548, 1414), (566, 1444), (567, 1447), (596, 1510), (619, 1543), (641, 1570), (679, 1648), (734, 1735), (749, 1759), (809, 1852), (810, 1855), (821, 1873), (885, 1957),

Gene: Corndog\_32 Start: 13529, Stop: 15040, Start Num: 74

Candidate Starts for Corndog\_32:

(Start: 72 @13526 has 33 MA's), (Start: 74 @13529 has 14 MA's), (Start: 205 @13709 has 1 MA's), (249, 13802), (276, 13877), (287, 13910), (300, 13937), (313, 13967), (407, 14120), (409, 14126), (420, 14162), (422, 14171), (451, 14252), (456, 14261), (458, 14264), (498, 14303), (538, 14360), (553, 14396), (554, 14399), (668, 14555), (672, 14564), (711, 14633), (717, 14642), (722, 14648), (742, 14681), (771, 14717), (823, 14804), (836, 14825), (891, 14888), (893, 14891), (896, 14894), (907, 14912), (920, 14933), (960, 14975), (988, 15011), (1005, 15023),

Gene: Cornucopia\_3 Start: 672, Stop: 2159, Start Num: 139

Candidate Starts for Cornucopia\_3:

(Start: 132 @660 has 1 MA's), (Start: 139 @672 has 74 MA's), (Start: 219 @798 has 15 MA's), (222, 804), (242, 846), (257, 882), (259, 885), (263, 891), (265, 897), (274, 936), (277, 945), (293, 981), (308, 1023), (344, 1071), (355, 1089), (366, 1092), (391, 1143), (409, 1200), (414, 1221), (422, 1245), (424, 1257), (433, 1278), (437, 1290), (449, 1323), (452, 1329), (498, 1398), (500, 1404), (516, 1437), (537, 1473), (567, 1533), (572, 1542), (583, 1569), (640, 1647), (694, 1743), (736, 1788), (787, 1860), (810, 1899), (834, 1935), (837, 1941), (856, 1965), (882, 1995), (891, 2001), (919, 2043), (922, 2046), (925, 2049), (960, 2091), (969, 2103),

Gene: Cosmo\_26 Start: 8131, Stop: 9744, Start Num: 80

Candidate Starts for Cosmo\_26:

(Start: 80 @8131 has 9 MA's), (191, 8281), (Start: 201 @8299 has 6 MA's), (220, 8332), (233, 8344), (266, 8395), (267, 8398), (279, 8446), (281, 8452), (297, 8491), (299, 8494), (313, 8527), (353, 8596), (395, 8662), (398, 8680), (407, 8704), (409, 8710), (441, 8815), (467, 8857), (476, 8875), (490, 8884),

(602, 9088), (606, 9094), (635, 9127), (731, 9292), (736, 9301), (741, 9307), (742, 9310), (787, 9385), (808, 9418), (817, 9433), (877, 9514), (1005, 9667), (1018, 9688), (1019, 9691),

Gene: Cota\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for Cota\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (243, 528), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (561, 1206), (572, 1227), (619, 1293), (636, 1314), (666, 1356), (683, 1398), (724, 1467), (734, 1485), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (809, 1602), (823, 1626), (872, 1704), (874, 1707), (882, 1719), (942, 1797), (950, 1806), (970, 1827), (1005, 1875), (1008, 1881),

Gene: Cote\_4 Start: 1013, Stop: 2494, Start Num: 201

Candidate Starts for Cote\_4:

(Start: 79 @848 has 7 MA's), (Start: 201 @1013 has 6 MA's), (Start: 223 @1052 has 13 MA's), (263, 1103), (267, 1115), (275, 1151), (281, 1169), (392, 1352), (425, 1466), (429, 1478), (443, 1526), (455, 1547), (466, 1562), (485, 1619), (669, 1934), (699, 2000), (710, 2012), (731, 2045), (765, 2084), (770, 2093), (771, 2096), (820, 2162), (838, 2192), (860, 2237), (880, 2279), (903, 2306), (905, 2309), (974, 2402), (977, 2408), (995, 2429), (1005, 2441), (1032, 2480), (1034, 2483),

Gene: Courthouse\_10 Start: 3708, Stop: 5240, Start Num: 158

Candidate Starts for Courthouse\_10:

(Start: 121 @3666 has 4 MA's), (128, 3675), (Start: 158 @3708 has 20 MA's), (218, 3822), (247, 3885), (266, 3918), (278, 3966), (308, 4041), (327, 4077), (388, 4152), (390, 4155), (401, 4191), (412, 4224), (540, 4473), (572, 4536), (584, 4563), (684, 4722), (708, 4758), (728, 4788), (734, 4797), (780, 4851), (792, 4875), (976, 5109), (988, 5121),

Gene: Courtney3\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Courtney3\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Cracklewink\_9 Start: 4723, Stop: 6342, Start Num: 70

Candidate Starts for Cracklewink\_9:

(Start: 70 @4723 has 4 MA's), (Start: 157 @4831 has 1 MA's), (Start: 221 @4942 has 3 MA's), (293, 5119), (294, 5122), (320, 5182), (365, 5248), (367, 5251), (402, 5311), (404, 5317), (442, 5449), (443, 5452), (459, 5479), (541, 5581), (568, 5650), (573, 5662), (588, 5698), (593, 5707), (601, 5722), (605, 5728), (660, 5785), (672, 5803), (684, 5836), (695, 5860), (704, 5869), (711, 5878), (763, 5947), (801, 6016), (803, 6019), (821, 6061), (895, 6139), (914, 6169), (946, 6211), (977, 6253), (987, 6268),

Gene: Crespo\_2 Start: 456, Stop: 1892, Start Num: 162

Candidate Starts for Crespo\_2:

(Start: 72 @360 has 33 MA's), (Start: 162 @456 has 39 MA's), (Start: 168 @459 has 3 MA's), (Start: 186 @495 has 1 MA's), (Start: 205 @534 has 1 MA's), (277, 696), (313, 783), (317, 792), (327, 810), (346, 822), (409, 942), (420, 978), (424, 999), (433, 1020), (451, 1068), (456, 1077), (566, 1230), (595, 1290), (608, 1308), (656, 1359), (672, 1386), (678, 1401), (679, 1404), (736, 1485), (768, 1530), (810,

1605), (823, 1623), (836, 1644), (874, 1689), (888, 1707), (891, 1710), (960, 1803), (1012, 1884),

Gene: CrimD\_8 Start: 1562, Stop: 2983, Start Num: 161

Candidate Starts for CrimD\_8:

(85, 1490), (Start: 143 @1550 has 2 MA's), (Start: 161 @1562 has 150 MA's), (Start: 219 @1673 has 15 MA's), (222, 1679), (257, 1757), (265, 1766), (277, 1814), (284, 1832), (313, 1901), (348, 1943), (354, 1949), (376, 1976), (378, 1979), (420, 2096), (422, 2105), (451, 2186), (542, 2300), (566, 2348), (572, 2360), (585, 2390), (597, 2414), (605, 2426), (670, 2504), (672, 2510), (771, 2654), (789, 2687), (823, 2741), (960, 2918), (1009, 2972),

Gene: CristinaYang\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for CristinaYang\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (266, 699), (273, 732), (278, 747), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: CroZenni\_3 Start: 689, Stop: 2317, Start Num: 125

Candidate Starts for CroZenni\_3:

(Start: 125 @689 has 61 MA's), (228, 845), (281, 953), (319, 1037), (331, 1061), (346, 1079), (392, 1136), (409, 1187), (410, 1190), (425, 1250), (430, 1268), (439, 1298), (453, 1328), (699, 1784), (711, 1799), (941, 2150), (977, 2198), (1050, 2306),

Gene: Crossroads\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Crossroads\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Curiosium\_9 Start: 1962, Stop: 3389, Start Num: 161

Candidate Starts for Curiosium\_9:

(75, 1878), (Start: 127 @1929 has 3 MA's), (Start: 143 @1950 has 2 MA's), (Start: 161 @1962 has 150 MA's), (Start: 219 @2073 has 15 MA's), (222, 2079), (240, 2118), (257, 2157), (265, 2166), (267, 2172), (277, 2214), (284, 2232), (293, 2250), (313, 2301), (376, 2376), (378, 2379), (420, 2496), (422, 2505), (496, 2634), (542, 2700), (566, 2748), (572, 2760), (585, 2790), (597, 2814), (601, 2820), (672, 2910), (736, 3012), (770, 3051), (771, 3054), (789, 3087), (810, 3123), (823, 3141), (893, 3228), (960, 3318), (1009, 3378), (1014, 3384),

Gene: Cynthia\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Cynthia\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: CyranoPS\_2 Start: 351, Stop: 1808, Start Num: 92

Candidate Starts for CyranoPS\_2:

(92, 351), (98, 360), (Start: 104 @366 has 1 MA's), (316, 699), (329, 717), (407, 849), (423, 903), (440, 966), (549, 1119), (582, 1191), (615, 1239), (657, 1287), (691, 1350), (695, 1359), (774, 1461), (810,



1518), (840, 1569), (846, 1581), (970, 1755), (974, 1764), (998, 1797),

Gene: DMoney\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for DMoney\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: DNAIII\_002 Start: 368, Stop: 1900, Start Num: 72

Candidate Starts for DNAIII\_002:

(Start: 72 @368 has 33 MA's), (Start: 162 @464 has 39 MA's), (Start: 168 @467 has 3 MA's), (Start: 186 @503 has 1 MA's), (Start: 205 @542 has 1 MA's), (277, 704), (313, 791), (317, 800), (327, 818), (346, 830), (409, 950), (420, 986), (424, 1007), (433, 1028), (451, 1076), (456, 1085), (566, 1238), (595, 1298), (608, 1316), (656, 1367), (672, 1394), (678, 1409), (679, 1412), (736, 1493), (768, 1538), (810, 1613), (823, 1631), (836, 1652), (874, 1697), (888, 1715), (891, 1718), (960, 1811), (1012, 1892),

Gene: DaWorst\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for DaWorst\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Dadosky\_6 Start: 1349, Stop: 2776, Start Num: 166

Candidate Starts for Dadosky\_6:

(Start: 166 @1349 has 22 MA's), (194, 1406), (Start: 205 @1427 has 1 MA's), (Start: 219 @1451 has 15 MA's), (257, 1535), (265, 1544), (267, 1550), (276, 1589), (277, 1592), (284, 1610), (293, 1628), (313, 1679), (346, 1718), (376, 1754), (391, 1781), (407, 1832), (420, 1874), (422, 1883), (423, 1886), (451, 1964), (542, 2078), (566, 2126), (572, 2138), (585, 2168), (605, 2204), (626, 2231), (672, 2288), (717, 2372), (733, 2396), (787, 2474), (823, 2531), (838, 2555), (856, 2579), (960, 2708), (1009, 2765),

Gene: Daegal\_6 Start: 2134, Stop: 3768, Start Num: 36

Candidate Starts for Daegal\_6:

(Start: 36 @2134 has 19 MA's), (Start: 74 @2173 has 14 MA's), (135, 2221), (241, 2392), (262, 2431), (336, 2611), (343, 2620), (348, 2629), (389, 2692), (393, 2698), (417, 2782), (418, 2785), (420, 2788), (457, 2884), (459, 2887), (466, 2896), (524, 2962), (541, 2992), (550, 3019), (570, 3052), (576, 3073), (577, 3076), (641, 3172), (657, 3193), (703, 3283), (733, 3325), (743, 3343), (747, 3349), (789, 3412), (792, 3418), (793, 3421), (821, 3466), (826, 3472), (842, 3499), (856, 3514), (899, 3565), (904, 3574), (912, 3589), (914, 3592), (942, 3631), (952, 3646), (964, 3661), (967, 3664), (1030, 3742), (1035, 3748),

Gene: DaftyDuck\_3 Start: 1092, Stop: 2546, Start Num: 122

Candidate Starts for DaftyDuck\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821,

2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Daiboju\_2 Start: 428, Stop: 1993, Start Num: 71

Candidate Starts for Daiboju\_2:

(Start: 71 @428 has 81 MA's), (Start: 200 @599 has 2 MA's), (266, 701), (273, 734), (278, 749), (281, 758), (289, 782), (316, 836), (381, 947), (408, 1013), (410, 1019), (425, 1079), (443, 1139), (461, 1169), (520, 1268), (620, 1442), (627, 1451), (669, 1487), (672, 1493), (685, 1529), (710, 1565), (731, 1598), (762, 1637), (768, 1643), (886, 1784), (941, 1859), (1005, 1940), (1032, 1979),

Gene: Dalmuri\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Dalmuri\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Danimal\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Danimal\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Danno\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Danno\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Daob\_4 Start: 1013, Stop: 2494, Start Num: 201

Candidate Starts for Daob\_4:

(Start: 79 @848 has 7 MA's), (Start: 201 @1013 has 6 MA's), (Start: 223 @1052 has 13 MA's), (263, 1103), (267, 1115), (275, 1151), (281, 1169), (392, 1352), (425, 1466), (429, 1478), (430, 1484), (443, 1526), (455, 1547), (466, 1562), (485, 1619), (669, 1934), (699, 2000), (731, 2045), (765, 2084), (771, 2096), (782, 2117), (820, 2162), (838, 2192), (860, 2237), (880, 2279), (903, 2306), (905, 2309), (974, 2402), (977, 2408), (995, 2429), (1005, 2441), (1032, 2480), (1034, 2483),

Gene: Dardanus\_9 Start: 3554, Stop: 5239, Start Num: 49

Candidate Starts for Dardanus\_9:

(Start: 49 @3554 has 3 MA's), (Start: 132 @3656 has 1 MA's), (275, 3896), (283, 3920), (294, 3941), (300, 3959), (309, 3980), (371, 4076), (392, 4124), (408, 4172), (410, 4178), (422, 4223), (432, 4262), (433, 4265), (434, 4268), (442, 4295), (527, 4403), (574, 4505), (655, 4637), (710, 4742), (759, 4808), (789, 4859), (800, 4877), (868, 4997), (894, 5030), (921, 5072), (949, 5105), (985, 5156), (1039, 5225), (1044, 5231),

Gene: Darionha\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Darionha\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810,

1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: DarthP\_7 Start: 1387, Stop: 2811, Start Num: 161

Candidate Starts for DarthP\_7:

(Start: 143 @1375 has 2 MA's), (Start: 161 @1387 has 150 MA's), (Start: 205 @1474 has 1 MA's), (Start: 219 @1498 has 15 MA's), (257, 1582), (265, 1591), (277, 1639), (284, 1657), (293, 1675), (313, 1726), (354, 1774), (420, 1921), (422, 1930), (423, 1933), (433, 1963), (451, 2011), (542, 2125), (572, 2185), (585, 2215), (617, 2266), (637, 2287), (672, 2335), (690, 2377), (717, 2407), (771, 2479), (823, 2566), (960, 2743), (1009, 2800), (1014, 2806),

Gene: Deby\_8 Start: 1575, Stop: 2996, Start Num: 161

Candidate Starts for Deby\_8:

(85, 1503), (Start: 143 @1563 has 2 MA's), (Start: 161 @1575 has 150 MA's), (Start: 219 @1686 has 15 MA's), (222, 1692), (257, 1770), (265, 1779), (277, 1827), (284, 1845), (313, 1914), (348, 1956), (354, 1962), (420, 2109), (422, 2118), (462, 2217), (542, 2313), (566, 2361), (572, 2373), (585, 2403), (597, 2427), (605, 2439), (617, 2454), (672, 2523), (771, 2667), (823, 2754), (960, 2931), (1009, 2985),

Gene: Decurro\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Decurro\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (239, 992), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: DeepSoil15\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for DeepSoil15\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: DelRio\_6 Start: 2230, Stop: 3660, Start Num: 223

Candidate Starts for DelRio\_6:

(43, 1960), (Start: 119 @2062 has 2 MA's), (122, 2065), (Start: 125 @2068 has 61 MA's), (Start: 129 @2074 has 6 MA's), (Start: 223 @2230 has 13 MA's), (231, 2248), (281, 2371), (289, 2389), (304, 2428), (308, 2437), (367, 2521), (409, 2605), (413, 2620), (423, 2653), (447, 2719), (489, 2788), (517, 2851), (621, 3040), (634, 3052), (666, 3100), (715, 3193), (749, 3244), (770, 3268), (771, 3271), (786, 3298), (821, 3358), (842, 3391), (856, 3406), (885, 3442), (914, 3484), (935, 3511), (964, 3547), (969, 3553), (1003, 3592),

Gene: Delian\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Delian\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924,

1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Demsculpinboyz\_3 Start: 664, Stop: 2184, Start Num: 139

Candidate Starts for Demsculpinboyz\_3:

(Start: 132 @652 has 1 MA's), (Start: 139 @664 has 74 MA's), (Start: 219 @790 has 15 MA's), (224, 799), (244, 844), (257, 874), (259, 877), (263, 883), (274, 928), (283, 952), (344, 1063), (355, 1081), (366, 1084), (376, 1108), (409, 1192), (420, 1228), (422, 1237), (424, 1249), (426, 1255), (433, 1270), (437, 1282), (445, 1309), (449, 1315), (452, 1321), (472, 1357), (474, 1366), (500, 1396), (514, 1426), (516, 1429), (567, 1525), (572, 1534), (583, 1561), (646, 1645), (662, 1660), (731, 1771), (736, 1780), (742, 1789), (834, 1927), (841, 1939), (856, 1957), (891, 1993), (919, 2035), (925, 2041), (960, 2083), (969, 2095), (975, 2107), (1017, 2173),

Gene: Denise\_2 Start: 318, Stop: 1895, Start Num: 89

Candidate Starts for Denise\_2:

(73, 300), (Start: 89 @318 has 52 MA's), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (336, 753), (389, 816), (391, 819), (401, 855), (420, 912), (425, 936), (440, 978), (457, 1008), (473, 1038), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (609, 1251), (641, 1293), (655, 1314), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (747, 1476), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1878),

Gene: Devera\_8 Start: 1604, Stop: 3025, Start Num: 161

Candidate Starts for Devera\_8:

(85, 1532), (Start: 143 @1592 has 2 MA's), (Start: 161 @1604 has 150 MA's), (Start: 219 @1715 has 15 MA's), (222, 1721), (257, 1799), (265, 1808), (277, 1856), (284, 1874), (313, 1943), (348, 1985), (354, 1991), (376, 2018), (378, 2021), (407, 2096), (420, 2138), (422, 2147), (451, 2228), (542, 2342), (566, 2390), (572, 2402), (585, 2432), (597, 2456), (605, 2468), (617, 2483), (672, 2552), (687, 2591), (771, 2696), (789, 2729), (823, 2783), (960, 2960), (1009, 3014),

Gene: Dewayne\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Dewayne\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Dewey\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Dewey\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: DickRichards\_3 Start: 1160, Stop: 2782, Start Num: 125

Candidate Starts for DickRichards\_3:

(Start: 125 @1160 has 61 MA's), (228, 1316), (281, 1424), (286, 1439), (300, 1469), (311, 1493), (319, 1508), (340, 1541), (392, 1607), (409, 1658), (410, 1661), (425, 1721), (453, 1799), (699, 2249), (711, 2264), (941, 2615), (977, 2663), (1050, 2771),

Gene: Didgeridoo\_4 Start: 944, Stop: 2572, Start Num: 125

Candidate Starts for Didgeridoo\_4:

(Start: 125 @944 has 61 MA's), (228, 1100), (281, 1208), (300, 1253), (319, 1292), (346, 1334), (392, 1391), (409, 1442), (410, 1445), (425, 1505), (430, 1523), (439, 1553), (453, 1583), (699, 2039), (711, 2054), (782, 2156), (941, 2405), (977, 2453), (1000, 2477), (1032, 2522),

Gene: Diminimus\_15 Start: 4718, Stop: 6262, Start Num: 93

Candidate Starts for Diminimus\_15:

(Start: 93 @4718 has 19 MA's), (133, 4766), (264, 4967), (313, 5105), (418, 5297), (525, 5507), (549, 5558), (591, 5630), (670, 5693), (679, 5717), (685, 5732), (724, 5792), (731, 5804), (770, 5864), (787, 5897), (808, 5930), (824, 5957), (857, 6005), (1008, 6191), (1021, 6212),

Gene: Dina\_2 Start: 371, Stop: 1957, Start Num: 118

Candidate Starts for Dina\_2:

(Start: 118 @371 has 4 MA's), (Start: 121 @374 has 4 MA's), (126, 380), (232, 551), (263, 629), (266, 638), (340, 812), (404, 914), (407, 920), (410, 929), (411, 938), (428, 998), (442, 1046), (443, 1049), (505, 1112), (551, 1205), (581, 1271), (686, 1427), (696, 1445), (732, 1490), (755, 1532), (778, 1568), (786, 1583), (801, 1610), (803, 1613), (811, 1628), (826, 1661), (835, 1676), (865, 1724), (898, 1754), (909, 1772), (965, 1847), (1016, 1922), (1032, 1946),

Gene: Dino\_5 Start: 3082, Stop: 4647, Start Num: 71

Candidate Starts for Dino\_5:

(Start: 71 @3082 has 81 MA's), (Start: 221 @3292 has 3 MA's), (263, 3346), (278, 3403), (281, 3412), (402, 3652), (408, 3667), (410, 3673), (425, 3733), (443, 3793), (503, 3892), (520, 3922), (530, 3937), (574, 4018), (620, 4096), (627, 4105), (669, 4141), (684, 4180), (704, 4213), (711, 4222), (728, 4249), (771, 4303), (793, 4345), (835, 4390), (846, 4411), (868, 4435), (941, 4513), (1032, 4633),

Gene: DinoDaryn\_9 Start: 3697, Stop: 5304, Start Num: 105

Candidate Starts for DinoDaryn\_9:

(Start: 49 @3619 has 3 MA's), (Start: 105 @3697 has 6 MA's), (265, 3925), (275, 3967), (300, 4030), (309, 4051), (392, 4189), (410, 4243), (432, 4327), (433, 4330), (434, 4333), (443, 4363), (574, 4570), (650, 4693), (689, 4780), (699, 4795), (711, 4810), (759, 4873), (800, 4942), (825, 4984), (865, 5059), (868, 5062), (894, 5095), (941, 5161), (979, 5212), (1039, 5290), (1044, 5296),

Gene: DirkDirk\_4 Start: 1053, Stop: 2636, Start Num: 68

Candidate Starts for DirkDirk\_4:

(Start: 68 @1053 has 59 MA's), (Start: 71 @1059 has 81 MA's), (191, 1230), (249, 1317), (262, 1335), (265, 1341), (273, 1377), (336, 1515), (338, 1518), (389, 1593), (408, 1650), (409, 1653), (478, 1821), (511, 1875), (515, 1884), (525, 1899), (535, 1920), (552, 1959), (568, 1980), (572, 1986), (586, 2013), (623, 2055), (654, 2079), (666, 2097), (670, 2106), (672, 2112), (685, 2145), (708, 2178), (731, 2217), (734, 2223), (736, 2226), (773, 2271), (810, 2337), (842, 2388), (865, 2412), (877, 2427), (878, 2430), (976, 2532), (1005, 2559), (1034, 2610), (1036, 2613),

Gene: DirtMcgirt\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for DirtMcgirt\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102),

Gene: DirtyBoi\_2 Start: 586, Stop: 2196, Start Num: 120

Candidate Starts for DirtyBoi\_2:

(Start: 120 @586 has 15 MA's), (239, 769), (255, 802), (294, 904), (313, 952), (362, 1024), (425, 1177), (440, 1219), (457, 1249), (494, 1312), (518, 1354), (524, 1363), (566, 1444), (567, 1447), (574, 1465), (596, 1510), (619, 1543), (641, 1570), (679, 1648), (734, 1735), (749, 1759), (809, 1852), (810, 1855), (821, 1873), (885, 1957),

Gene: DirtyBubble\_3 Start: 957, Stop: 2582, Start Num: 125

Candidate Starts for DirtyBubble\_3:

(Start: 125 @957 has 61 MA's), (228, 1113), (267, 1167), (281, 1221), (286, 1236), (319, 1305), (348, 1350), (392, 1404), (409, 1455), (410, 1458), (425, 1518), (430, 1536), (431, 1539), (439, 1566), (453, 1596), (527, 1758), (660, 1974), (699, 2049), (710, 2061), (941, 2415), (977, 2463),

Gene: DismalFunk\_4 Start: 652, Stop: 2076, Start Num: 161

Candidate Starts for DismalFunk\_4:

(75, 574), (85, 586), (91, 595), (Start: 161 @652 has 150 MA's), (194, 712), (Start: 205 @733 has 1 MA's), (216, 754), (257, 838), (265, 847), (277, 895), (293, 931), (313, 982), (348, 1024), (376, 1057), (408, 1138), (420, 1177), (422, 1186), (423, 1189), (451, 1267), (456, 1276), (542, 1381), (566, 1429), (572, 1441), (585, 1471), (597, 1495), (667, 1576), (672, 1588), (690, 1630), (717, 1660), (734, 1687), (770, 1729), (779, 1744), (808, 1795), (823, 1819), (856, 1867), (954, 1990), (1009, 2065),

Gene: DismalStressor\_4 Start: 652, Stop: 2076, Start Num: 161

Candidate Starts for DismalStressor\_4:

(75, 574), (85, 586), (91, 595), (Start: 161 @652 has 150 MA's), (194, 712), (Start: 205 @733 has 1 MA's), (216, 754), (257, 838), (265, 847), (277, 895), (293, 931), (313, 982), (348, 1024), (376, 1057), (408, 1138), (420, 1177), (422, 1186), (423, 1189), (451, 1267), (456, 1276), (542, 1381), (566, 1429), (572, 1441), (585, 1471), (597, 1495), (667, 1576), (672, 1588), (690, 1630), (717, 1660), (734, 1687), (770, 1729), (779, 1744), (808, 1795), (823, 1819), (856, 1867), (954, 1990), (1009, 2065),

Gene: Dismas\_3 Start: 938, Stop: 2563, Start Num: 119

Candidate Starts for Dismas\_3:

(Start: 119 @938 has 2 MA's), (Start: 125 @944 has 61 MA's), (228, 1100), (275, 1190), (281, 1208), (286, 1223), (319, 1292), (331, 1316), (346, 1334), (392, 1391), (409, 1442), (410, 1445), (425, 1505), (431, 1526), (439, 1553), (453, 1583), (622, 1922), (710, 2045), (912, 2360), (941, 2399), (1032, 2516),

Gene: Dmitri\_2 Start: 586, Stop: 2193, Start Num: 120

Candidate Starts for Dmitri\_2:

(Start: 120 @586 has 15 MA's), (239, 769), (283, 886), (294, 904), (313, 952), (362, 1024), (425, 1177), (440, 1219), (457, 1249), (494, 1312), (518, 1354), (524, 1363), (548, 1414), (567, 1447), (574, 1465), (596, 1510), (619, 1543), (641, 1570), (679, 1648), (734, 1735), (749, 1759), (792, 1825), (809, 1852), (810, 1855), (821, 1873), (950, 2044),

Gene: DobbysSock\_2 Start: 318, Stop: 1877, Start Num: 89

Candidate Starts for DobbysSock\_2:

(48, 258), (Start: 89 @318 has 52 MA's), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (572, 1179), (641, 1293), (672, 1344), (680, 1365), (703, 1404), (708, 1410), (733, 1446), (734, 1449), (767, 1491), (771, 1497), (850, 1620), (856, 1632), (888, 1671), (934, 1734), (1034, 1860),

Gene: DocMcStuffins\_3 Start: 662, Stop: 2161, Start Num: 132

Candidate Starts for DocMcStuffins\_3:

(Start: 132 @662 has 1 MA's), (Start: 139 @674 has 74 MA's), (Start: 219 @800 has 15 MA's), (222, 806), (242, 848), (244, 854), (259, 887), (263, 893), (265, 899), (274, 938), (283, 962), (292, 980), (293, 983), (308, 1025), (344, 1073), (349, 1082), (355, 1091), (366, 1094), (391, 1145), (414, 1223), (422, 1247), (424, 1259), (433, 1280), (437, 1292), (449, 1325), (452, 1331), (498, 1400), (500, 1406), (516, 1439), (537, 1475), (567, 1535), (572, 1544), (583, 1571), (640, 1649), (694, 1745), (736, 1790), (787, 1862), (810, 1901), (834, 1937), (837, 1943), (856, 1967), (882, 1997), (891, 2003), (919, 2045), (922, 2048), (925, 2051), (960, 2093), (969, 2105), (975, 2117),

Gene: Doggs\_2 Start: 586, Stop: 2193, Start Num: 120

Candidate Starts for Doggs\_2:

(Start: 120 @586 has 15 MA's), (239, 769), (283, 886), (294, 904), (313, 952), (348, 1012), (362, 1024), (425, 1177), (440, 1219), (457, 1249), (494, 1312), (518, 1354), (524, 1363), (548, 1414), (566, 1444), (567, 1447), (574, 1465), (596, 1510), (619, 1543), (641, 1570), (679, 1648), (734, 1735), (749, 1759), (809, 1852), (810, 1855), (821, 1873), (885, 1957),

Gene: Dole\_8 Start: 1604, Stop: 3025, Start Num: 161

Candidate Starts for Dole\_8:

(85, 1532), (Start: 143 @1592 has 2 MA's), (Start: 161 @1604 has 150 MA's), (Start: 219 @1715 has 15 MA's), (222, 1721), (257, 1799), (265, 1808), (277, 1856), (284, 1874), (313, 1943), (348, 1985), (354, 1991), (376, 2018), (378, 2021), (407, 2096), (420, 2138), (422, 2147), (451, 2228), (542, 2342), (566, 2390), (572, 2402), (585, 2432), (597, 2456), (605, 2468), (617, 2483), (672, 2552), (687, 2591), (771, 2696), (789, 2729), (823, 2783), (960, 2960), (1009, 3014),

Gene: Dolores\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for Dolores\_3:

(48, 760), (Start: 89 @820 has 52 MA's), (183, 928), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (319, 1228), (389, 1318), (391, 1321), (420, 1414), (425, 1438), (457, 1510), (494, 1573), (548, 1639), (572, 1681), (607, 1750), (611, 1756), (641, 1795), (655, 1816), (670, 1840), (672, 1846), (680, 1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (850, 2122), (888, 2173), (983, 2302), (1034, 2362),

Gene: Dongwon\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Dongwon\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: DonkeyMan\_2 Start: 512, Stop: 2101, Start Num: 110

Candidate Starts for DonkeyMan\_2:

(Start: 110 @512 has 15 MA's), (206, 647), (208, 653), (230, 695), (265, 734), (273, 770), (289, 818), (319, 878), (346, 920), (348, 923), (365, 947), (367, 950), (392, 977), (411, 1040), (431, 1112), (440, 1142), (442, 1148), (443, 1151), (574, 1418), (580, 1433), (581, 1436), (588, 1448), (630, 1508), (672, 1553), (678, 1571), (695, 1610), (771, 1703), (782, 1724), (787, 1733), (820, 1793), (835, 1817), (858, 1853), (908, 1925), (977, 2018), (993, 2036), (1034, 2090),

Gene: Donovan\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Donovan\_2:

(Start: 42 @413 has 46 MA's), (Start: 124 @524 has 3 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (720, 1622), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Doobus\_3 Start: 911, Stop: 2539, Start Num: 125

Candidate Starts for Doobus\_3:

(Start: 125 @911 has 61 MA's), (228, 1067), (281, 1175), (319, 1259), (346, 1301), (392, 1358), (409, 1409), (410, 1412), (425, 1472), (430, 1490), (439, 1520), (453, 1550), (699, 2006), (711, 2021), (941, 2372), (977, 2420), (1050, 2528),

Gene: Dooby\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Dooby\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Dorito\_2 Start: 318, Stop: 1877, Start Num: 89

Candidate Starts for Dorito\_2:

(48, 258), (Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (327, 744), (389, 816), (391, 819), (401, 855), (420, 912), (422, 921), (425, 936), (466, 1020), (494, 1071), (548, 1137), (572, 1179), (641, 1293), (672, 1344), (680, 1365), (708, 1410), (733, 1446), (734, 1449), (767, 1491), (771, 1497), (850, 1620), (856, 1632), (888, 1671), (1034, 1860),

Gene: DosHalletts\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for DosHalletts\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Doucette\_3 Start: 956, Stop: 2410, Start Num: 154

Candidate Starts for Doucette\_3:

(Start: 154 @956 has 4 MA's), (Start: 157 @959 has 1 MA's), (Start: 205 @1058 has 1 MA's), (222, 1085), (234, 1112), (238, 1121), (254, 1163), (265, 1178), (275, 1220), (293, 1262), (317, 1322), (327, 1340), (345, 1349), (405, 1460), (422, 1517), (426, 1535), (437, 1562), (566, 1760), (567, 1763), (570, 1769), (585, 1802), (670, 1907), (803, 2126), (809, 2132), (830, 2165), (1005, 2396),

Gene: Douge\_4 Start: 771, Stop: 2333, Start Num: 68

Candidate Starts for Douge\_4:

(Start: 68 @771 has 59 MA's), (Start: 71 @777 has 81 MA's), (185, 927), (220, 993), (246, 1023), (262, 1047), (268, 1062), (278, 1104), (338, 1230), (409, 1368), (414, 1389), (422, 1413), (450, 1488), (478, 1536), (525, 1614), (535, 1635), (547, 1659), (549, 1665), (568, 1695), (572, 1701), (591, 1737), (654, 1794), (672, 1827), (731, 1932), (736, 1941), (754, 1965), (773, 1986), (810, 2052), (885, 2154), (1005, 2274), (1008, 2280), (1021, 2301), (1034, 2325),

Gene: Douggie\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Douggie\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (431, 1677), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (995, 2523),



Gene: DrHayes\_8 Start: 1566, Stop: 2987, Start Num: 161

Candidate Starts for DrHayes\_8:

(85, 1494), (Start: 127 @1533 has 3 MA's), (Start: 143 @1554 has 2 MA's), (Start: 161 @1566 has 150 MA's), (Start: 219 @1677 has 15 MA's), (222, 1683), (257, 1761), (265, 1770), (277, 1818), (284, 1836), (313, 1905), (348, 1947), (354, 1953), (376, 1980), (378, 1983), (391, 2007), (420, 2100), (422, 2109), (451, 2190), (462, 2208), (542, 2304), (566, 2352), (572, 2364), (585, 2394), (597, 2418), (605, 2430), (670, 2508), (672, 2514), (771, 2658), (789, 2691), (823, 2745), (960, 2922), (1009, 2976),

Gene: DrParker\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for DrParker\_2:

(Start: 144 @378 has 46 MA's), (165, 402), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (619, 1293), (648, 1326), (683, 1398), (728, 1476), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (823, 1626), (836, 1647), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005, 1875), (1008, 1881),

Gene: DrRobert\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for DrRobert\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (273, 732), (278, 747), (281, 756), (283, 762), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: DrSeegs\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for DrSeegs\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Drago\_3 Start: 797, Stop: 2158, Start Num: 219

Candidate Starts for Drago\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: DreamTeam\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for DreamTeam\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (263, 690), (265, 696), (276, 741), (281, 756), (283, 762), (289, 780), (408, 1011), (410, 1017), (425, 1077), (503, 1236), (520, 1266), (530, 1281), (581, 1380), (620, 1440), (627, 1449), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (846, 1755), (941, 1857), (1032, 1977),

Gene: Dulcita\_15 Start: 4718, Stop: 6262, Start Num: 93

Candidate Starts for Dulcita\_15:

(Start: 93 @4718 has 19 MA's), (133, 4766), (264, 4967), (313, 5105), (418, 5297), (525, 5507), (549, 5558), (591, 5630), (670, 5693), (679, 5717), (685, 5732), (724, 5792), (731, 5804), (770, 5864), (787, 5897), (808, 5930), (824, 5957), (857, 6005), (1008, 6191), (1021, 6212),

Gene: DumpsterDude\_2 Start: 434, Stop: 1993, Start Num: 134

Candidate Starts for DumpsterDude\_2:

(28, 278), (33, 302), (55, 335), (73, 365), (Start: 134 @434 has 3 MA's), (185, 500), (225, 569), (245, 608), (281, 707), (303, 758), (313, 779), (315, 782), (341, 824), (387, 878), (422, 986), (455, 1070), (457, 1073), (494, 1136), (512, 1166), (521, 1184), (524, 1187), (627, 1376), (666, 1430), (670, 1439), (703, 1502), (736, 1550), (742, 1559), (747, 1568), (770, 1595), (771, 1598), (786, 1625), (821, 1685), (835, 1706), (914, 1811), (937, 1844), (989, 1913), (1035, 1973),

Gene: DuncansLeg\_5 Start: 1193, Stop: 2758, Start Num: 68

Candidate Starts for DuncansLeg\_5:

(21, 1085), (22, 1091), (Start: 36 @1142 has 19 MA's), (40, 1151), (Start: 68 @1193 has 59 MA's), (Start: 71 @1199 has 81 MA's), (191, 1370), (208, 1403), (262, 1475), (265, 1481), (267, 1487), (327, 1643), (334, 1652), (336, 1655), (338, 1658), (389, 1733), (407, 1787), (408, 1790), (409, 1793), (515, 2024), (552, 2099), (568, 2120), (572, 2126), (586, 2153), (623, 2195), (654, 2219), (666, 2237), (670, 2246), (672, 2252), (736, 2366), (770, 2405), (773, 2411), (810, 2477), (850, 2531), (856, 2543), (877, 2567), (885, 2579), (933, 2618), (1008, 2705), (1034, 2750), (1036, 2753),

Gene: Duplicity\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Duplicity\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Durfee\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Durfee\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Dylan\_30 Start: 13252, Stop: 14766, Start Num: 72

Candidate Starts for Dylan\_30:

(Start: 72 @13252 has 33 MA's), (Start: 74 @13255 has 14 MA's), (Start: 205 @13435 has 1 MA's), (249, 13528), (276, 13603), (287, 13636), (300, 13663), (313, 13693), (407, 13846), (409, 13852), (420, 13888), (422, 13897), (451, 13978), (456, 13987), (458, 13990), (538, 14086), (553, 14122), (554, 14125), (668, 14281), (672, 14290), (711, 14359), (717, 14368), (722, 14374), (742, 14407), (771, 14443), (823, 14530), (836, 14551), (891, 14614), (893, 14617), (896, 14620), (907, 14638), (920, 14659), (960, 14701), (985, 14734), (988, 14737), (1005, 14749),

Gene: Dynamo\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Dynamo\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821,

1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: DyoEdafos\_5 Start: 958, Stop: 2520, Start Num: 68

Candidate Starts for DyoEdafos\_5:

(Start: 68 @958 has 59 MA's), (Start: 71 @964 has 81 MA's), (185, 1114), (220, 1180), (246, 1210), (262, 1234), (267, 1246), (268, 1249), (278, 1291), (338, 1417), (422, 1600), (450, 1675), (525, 1801), (535, 1822), (547, 1846), (549, 1852), (568, 1882), (572, 1888), (591, 1924), (623, 1957), (654, 1981), (672, 2014), (708, 2080), (736, 2128), (742, 2137), (754, 2152), (773, 2173), (810, 2239), (885, 2341), (1005, 2461), (1008, 2467), (1021, 2488), (1034, 2512),

Gene: E1\_3 Start: 1202, Stop: 2782, Start Num: 125

Candidate Starts for E1\_3:

(Start: 117 @1193 has 111 MA's), (Start: 119 @1196 has 2 MA's), (Start: 125 @1202 has 61 MA's), (Start: 147 @1229 has 1 MA's), (172, 1262), (190, 1292), (Start: 200 @1310 has 2 MA's), (Start: 201 @1313 has 6 MA's), (208, 1328), (Start: 221 @1349 has 3 MA's), (Start: 223 @1352 has 13 MA's), (271, 1439), (275, 1451), (281, 1469), (290, 1499), (291, 1502), (314, 1574), (317, 1580), (340, 1616), (345, 1622), (369, 1655), (396, 1712), (408, 1754), (410, 1760), (431, 1841), (442, 1877), (443, 1880), (459, 1907), (466, 1916), (477, 1952), (557, 2096), (572, 2126), (580, 2153), (588, 2168), (595, 2180), (625, 2222), (663, 2264), (669, 2273), (678, 2297), (704, 2345), (710, 2351), (724, 2372), (725, 2375), (768, 2429), (783, 2459), (820, 2498), (835, 2522), (851, 2555), (890, 2573), (908, 2600), (912, 2606), (918, 2618), (956, 2666), (977, 2696), (1034, 2771),

Gene: E6\_3 Start: 957, Stop: 2411, Start Num: 154

Candidate Starts for E6\_3:

(Start: 154 @957 has 4 MA's), (Start: 157 @960 has 1 MA's), (Start: 205 @1059 has 1 MA's), (222, 1086), (234, 1113), (238, 1122), (254, 1164), (265, 1179), (275, 1221), (293, 1263), (317, 1323), (345, 1350), (405, 1461), (422, 1518), (426, 1536), (437, 1563), (566, 1761), (567, 1764), (570, 1770), (585, 1803), (686, 1953), (742, 2037), (743, 2040), (751, 2046), (803, 2127), (814, 2139), (830, 2166), (1005, 2397),

Gene: ECartman\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for ECartman\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Easley\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for Easley\_3:

(Start: 89 @820 has 52 MA's), (183, 928), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (319, 1228), (389, 1318), (391, 1321), (420, 1414), (422, 1423), (425, 1438), (466, 1522), (494, 1573), (548, 1639), (572, 1681), (607, 1750), (611, 1756), (641, 1795), (655, 1816), (670, 1840), (672, 1846), (680, 1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (850, 2122), (888, 2173), (983, 2302), (1034, 2362),

Gene: Ebert\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Ebert\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Ecliptus\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for Ecliptus\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (224, 808), (250, 871), (259, 886), (265, 898), (274, 937), (292, 979), (293, 982), (308, 1024), (321, 1051), (344, 1072), (355, 1090), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (414, 1222), (424, 1258), (426, 1264), (433, 1279), (437, 1291), (452, 1330), (503, 1411), (567, 1534), (572, 1543), (583, 1570), (605, 1609), (626, 1636), (652, 1657), (721, 1759), (736, 1786), (834, 1933), (841, 1945), (856, 1963), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101), (975, 2113),

Gene: EdElric\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for EdElric\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Eden\_2 Start: 659, Stop: 2224, Start Num: 125

Candidate Starts for Eden\_2:

(Start: 125 @659 has 61 MA's), (Start: 147 @686 has 1 MA's), (228, 815), (281, 923), (283, 929), (286, 938), (319, 1007), (346, 1049), (392, 1106), (409, 1157), (425, 1220), (567, 1535), (678, 1709), (683, 1721), (941, 2081), (1000, 2153), (1043, 2216),

Gene: EdnaMode\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for EdnaMode\_2:

(Start: 89 @318 has 52 MA's), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Edugator\_5 Start: 1349, Stop: 2776, Start Num: 166

Candidate Starts for Edugator\_5:

(Start: 166 @1349 has 22 MA's), (194, 1406), (Start: 205 @1427 has 1 MA's), (Start: 219 @1451 has 15 MA's), (257, 1535), (265, 1544), (267, 1550), (276, 1589), (277, 1592), (284, 1610), (293, 1628), (313, 1679), (346, 1718), (376, 1754), (391, 1781), (407, 1832), (420, 1874), (422, 1883), (423, 1886), (451, 1964), (542, 2078), (566, 2126), (572, 2138), (585, 2168), (605, 2204), (626, 2231), (672, 2288), (717, 2372), (733, 2396), (787, 2474), (793, 2486), (823, 2531), (838, 2555), (856, 2579), (960, 2708), (1009, 2765),

Gene: Eesa\_3 Start: 958, Stop: 2538, Start Num: 137

Candidate Starts for Eesa\_3:

(Start: 79 @892 has 7 MA's), (Start: 137 @958 has 8 MA's), (Start: 201 @1054 has 6 MA's), (206, 1063), (233, 1117), (263, 1144), (267, 1156), (276, 1195), (281, 1210), (289, 1234), (300, 1255), (425, 1507), (443, 1567), (455, 1588), (481, 1648), (493, 1678), (498, 1687), (527, 1750), (669, 1978), (684, 2017), (699, 2044), (711, 2059), (731, 2089), (765, 2128), (820, 2206), (838, 2236), (846, 2251), (851, 2263), (918, 2377), (974, 2446), (977, 2452), (985, 2464), (995, 2473), (1005, 2485), (1006, 2488), (1034, 2527),

Gene: Efeke\_4 Start: 928, Stop: 2388, Start Num: 117

Candidate Starts for Efeke\_4:

(Start: 117 @928 has 111 MA's), (194, 1048), (Start: 221 @1096 has 3 MA's), (263, 1165), (283, 1237), (294, 1258), (295, 1264), (317, 1309), (410, 1459), (423, 1504), (431, 1537), (546, 1726), (567,

1768), (572, 1777), (610, 1852), (620, 1867), (622, 1870), (684, 1951), (715, 2005), (738, 2041), (750, 2047), (808, 2134), (823, 2161), (841, 2191), (958, 2323), (970, 2341), (995, 2380),

Gene: Efra2\_8 Start: 1571, Stop: 2995, Start Num: 161

Candidate Starts for Efra2\_8:

(85, 1499), (Start: 143 @1559 has 2 MA's), (Start: 161 @1571 has 150 MA's), (Start: 205 @1658 has 1 MA's), (Start: 219 @1682 has 15 MA's), (222, 1688), (240, 1727), (257, 1766), (265, 1775), (267, 1781), (277, 1823), (284, 1841), (293, 1859), (313, 1910), (346, 1949), (376, 1985), (378, 1988), (420, 2105), (422, 2114), (496, 2243), (542, 2309), (566, 2357), (572, 2369), (585, 2399), (597, 2423), (601, 2429), (617, 2450), (672, 2519), (717, 2591), (770, 2660), (771, 2663), (789, 2696), (823, 2750), (838, 2774), (893, 2837), (960, 2927), (1009, 2984), (1014, 2990),

Gene: Eightball\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Eightball\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Ein37\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Ein37\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Ekdilam\_5 Start: 1122, Stop: 2546, Start Num: 161

Candidate Starts for Ekdilam\_5:

(Start: 143 @1110 has 2 MA's), (Start: 161 @1122 has 150 MA's), (Start: 205 @1209 has 1 MA's), (Start: 219 @1233 has 15 MA's), (257, 1317), (265, 1326), (277, 1374), (284, 1392), (293, 1410), (313, 1461), (354, 1509), (376, 1536), (420, 1656), (422, 1665), (423, 1668), (433, 1698), (451, 1746), (572, 1920), (585, 1950), (617, 2001), (637, 2022), (672, 2070), (690, 2112), (717, 2142), (771, 2214), (823, 2301), (1009, 2535), (1014, 2541),

Gene: Ekko14\_3 Start: 1062, Stop: 2522, Start Num: 117

Candidate Starts for Ekko14\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (504, 1779), (546, 1857), (551, 1872), (564, 1890), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (724, 2148), (731, 2160), (774, 2211), (808, 2268), (810, 2274), (817, 2283), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: Elesar\_5 Start: 1971, Stop: 3668, Start Num: 110

Candidate Starts for Elesar\_5:

(Start: 66 @1911 has 1 MA's), (Start: 110 @1971 has 15 MA's), (190, 2091), (Start: 201 @2112 has 6 MA's), (228, 2160), (264, 2205), (265, 2208), (275, 2250), (281, 2268), (282, 2271), (289, 2292), (348, 2397), (392, 2451), (425, 2565), (455, 2646), (546, 2877), (574, 2943), (580, 2958), (630, 3033), (670, 3105), (678, 3129), (682, 3138), (695, 3168), (711, 3186), (738, 3228), (789, 3300), (820, 3339), (846, 3384), (903, 3432), (918, 3459), (921, 3462), (927, 3468), (941, 3489), (968, 3519), (974, 3531), (1027, 3609), (1050, 3657),

Gene: Elkhorn\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Elkhorn\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (227, 974), (263, 1025), (267, 1037), (273, 1067), (277, 1079), (282, 1094), (313, 1160), (348, 1205), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (429, 1391), (431, 1400), (463, 1466), (516, 1529), (521, 1541), (546, 1583), (555, 1601), (583, 1661), (622, 1718), (635, 1730), (649, 1754), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (806, 1979), (848, 2054), (852, 2063), (868, 2090), (915, 2147), (955, 2201), (1004, 2273),

Gene: Ellie\_5 Start: 1213, Stop: 2637, Start Num: 161

Candidate Starts for Ellie\_5:

(75, 1129), (Start: 143 @1201 has 2 MA's), (Start: 161 @1213 has 150 MA's), (Start: 205 @1300 has 1 MA's), (Start: 219 @1324 has 15 MA's), (257, 1408), (265, 1417), (277, 1465), (284, 1483), (293, 1501), (313, 1552), (376, 1627), (378, 1630), (420, 1747), (422, 1756), (423, 1759), (433, 1789), (451, 1837), (542, 1951), (566, 1999), (572, 2011), (585, 2041), (597, 2065), (605, 2077), (608, 2080), (617, 2092), (672, 2161), (690, 2203), (717, 2233), (771, 2305), (789, 2338), (793, 2347), (823, 2392), (960, 2569), (1009, 2626), (1014, 2632),

Gene: Ellson\_5 Start: 1202, Stop: 2767, Start Num: 68

Candidate Starts for Ellson\_5:

(Start: 36 @1151 has 19 MA's), (40, 1160), (Start: 68 @1202 has 59 MA's), (Start: 71 @1208 has 81 MA's), (191, 1379), (262, 1484), (265, 1490), (267, 1496), (327, 1652), (334, 1661), (336, 1664), (338, 1667), (389, 1742), (407, 1796), (408, 1799), (409, 1802), (515, 2033), (552, 2108), (568, 2129), (572, 2135), (586, 2162), (623, 2204), (654, 2228), (666, 2246), (672, 2261), (736, 2375), (770, 2414), (773, 2420), (810, 2486), (850, 2540), (877, 2576), (885, 2588), (933, 2627), (1008, 2714), (1034, 2759), (1036, 2762),

Gene: Elspeth\_3 Start: 1062, Stop: 2522, Start Num: 117

Candidate Starts for Elspeth\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (504, 1779), (546, 1857), (551, 1872), (564, 1890), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (724, 2148), (731, 2160), (774, 2211), (808, 2268), (810, 2274), (817, 2283), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: Elva\_4 Start: 1014, Stop: 2639, Start Num: 125

Candidate Starts for Elva\_4:

(Start: 125 @1014 has 61 MA's), (228, 1170), (267, 1224), (281, 1278), (319, 1362), (343, 1398), (348, 1407), (409, 1512), (410, 1515), (425, 1575), (430, 1593), (431, 1596), (439, 1623), (453, 1653), (527, 1815), (660, 2031), (699, 2106), (711, 2121), (941, 2472),

Gene: Emerson\_8 Start: 1593, Stop: 3017, Start Num: 161

Candidate Starts for Emerson\_8:

(85, 1521), (Start: 143 @1581 has 2 MA's), (Start: 161 @1593 has 150 MA's), (Start: 219 @1704 has 15 MA's), (222, 1710), (257, 1788), (265, 1797), (277, 1845), (284, 1863), (313, 1932), (348, 1974), (354, 1980), (376, 2007), (378, 2010), (420, 2127), (422, 2136), (451, 2217), (542, 2331), (566, 2379), (572, 2391), (585, 2421), (597, 2445), (605, 2457), (670, 2535), (672, 2541), (771, 2688), (789, 2721), (823, 2775), (960, 2952), (1009, 3006),

Gene: EmiRose\_2 Start: 963, Stop: 2567, Start Num: 82

Candidate Starts for EmiRose\_2:

(Start: 82 @963 has 1 MA's), (173, 1083), (188, 1125), (199, 1146), (236, 1218), (244, 1236), (263, 1287), (315, 1431), (432, 1668), (439, 1692), (444, 1707), (509, 1770), (537, 1821), (572, 1893), (706, 2109), (771, 2202), (783, 2226), (792, 2241), (821, 2289), (843, 2325), (861, 2364),

Gene: Emperor\_2 Start: 438, Stop: 1862, Start Num: 156

Candidate Starts for Emperor\_2:

(Start: 113 @417 has 34 MA's), (Start: 156 @438 has 23 MA's), (Start: 209 @534 has 1 MA's), (227, 561), (263, 606), (265, 612), (267, 618), (272, 645), (283, 678), (316, 744), (374, 834), (409, 915), (534, 1146), (695, 1410), (773, 1503), (791, 1536), (800, 1548), (998, 1842),

Gene: Enby\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Enby\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Enceladus\_4 Start: 1053, Stop: 2636, Start Num: 68

Candidate Starts for Enceladus\_4:

(Start: 68 @1053 has 59 MA's), (Start: 71 @1059 has 81 MA's), (191, 1230), (249, 1317), (262, 1335), (265, 1341), (273, 1377), (336, 1515), (338, 1518), (389, 1593), (408, 1650), (409, 1653), (478, 1821), (511, 1875), (515, 1884), (525, 1899), (535, 1920), (552, 1959), (568, 1980), (572, 1986), (586, 2013), (623, 2055), (654, 2079), (666, 2097), (670, 2106), (672, 2112), (685, 2145), (708, 2178), (731, 2217), (734, 2223), (736, 2226), (773, 2271), (810, 2337), (842, 2388), (865, 2412), (877, 2427), (878, 2430), (976, 2532), (1005, 2559), (1034, 2610), (1036, 2613),

Gene: EniyanLRS\_23 Start: 7822, Stop: 9435, Start Num: 80

Candidate Starts for EniyanLRS\_23:

(Start: 80 @7822 has 9 MA's), (191, 7972), (Start: 201 @7990 has 6 MA's), (220, 8023), (233, 8035), (266, 8086), (267, 8089), (279, 8137), (281, 8143), (297, 8182), (299, 8185), (313, 8218), (353, 8287), (395, 8353), (398, 8371), (407, 8395), (409, 8401), (441, 8506), (467, 8548), (476, 8566), (490, 8575), (602, 8779), (606, 8785), (635, 8818), (731, 8983), (736, 8992), (741, 8998), (742, 9001), (787, 9076), (808, 9109), (817, 9124), (877, 9205), (1005, 9358), (1018, 9379), (1019, 9382),

Gene: Enkosi\_4 Start: 847, Stop: 2271, Start Num: 161

Candidate Starts for Enkosi\_4:

(Start: 143 @835 has 2 MA's), (Start: 161 @847 has 150 MA's), (194, 913), (Start: 219 @958 has 15 MA's), (240, 1003), (257, 1042), (265, 1051), (277, 1099), (284, 1117), (293, 1135), (313, 1186), (354, 1234), (376, 1261), (420, 1381), (422, 1390), (434, 1426), (435, 1429), (451, 1471), (462, 1489), (542, 1585), (564, 1627), (566, 1633), (572, 1645), (585, 1675), (588, 1681), (597, 1699), (617, 1726), (672, 1795), (717, 1867), (771, 1939), (789, 1972), (793, 1981), (810, 2008), (823, 2026), (960, 2203), (1009, 2260), (1014, 2266),

Gene: Enochoraptor\_2 Start: 385, Stop: 1896, Start Num: 144

Candidate Starts for Enochoraptor\_2:

(Start: 144 @385 has 46 MA's), (174, 424), (182, 442), (195, 469), (204, 487), (220, 514), (Start: 221 @517 has 3 MA's), (260, 565), (265, 574), (267, 580), (273, 610), (278, 625), (294, 658), (300, 676), (310, 700), (313, 706), (332, 745), (338, 754), (341, 757), (359, 796), (361, 799), (389, 859), (395, 868), (408, 913), (409, 916), (414, 937), (420, 952), (422, 961), (424, 973), (437, 1012), (454, 1048), (456, 1051), (458, 1054), (471, 1075), (532, 1162), (546, 1186), (561, 1213), (572, 1234), (619, 1300),

(744, 1510), (758, 1537), (775, 1558), (781, 1564), (787, 1576), (809, 1609), (820, 1627), (823, 1633), (842, 1663), (850, 1678), (872, 1711), (874, 1714), (882, 1726), (950, 1813), (978, 1849), (1005, 1882), (1008, 1888),

Gene: Enoki\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for Enoki\_2:

(141, 370), (Start: 144 @373 has 46 MA's), (Start: 158 @385 has 20 MA's), (174, 412), (182, 430), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (273, 598), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (437, 1000), (446, 1021), (456, 1039), (458, 1042), (465, 1048), (471, 1063), (508, 1129), (510, 1132), (546, 1174), (561, 1201), (572, 1222), (619, 1288), (648, 1321), (666, 1351), (683, 1393), (734, 1480), (742, 1492), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (810, 1600), (820, 1615), (823, 1621), (836, 1642), (848, 1663), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (942, 1792), (950, 1801), (952, 1807), (960, 1816), (1005, 1870), (1008, 1876),

Gene: EpicDab\_2 Start: 546, Stop: 1865, Start Num: 209

Candidate Starts for EpicDab\_2:

(Start: 113 @429 has 34 MA's), (Start: 156 @450 has 23 MA's), (Start: 209 @546 has 1 MA's), (263, 618), (267, 630), (278, 675), (316, 759), (325, 771), (378, 837), (423, 963), (440, 1026), (505, 1092), (521, 1125), (571, 1218), (610, 1287), (678, 1383), (704, 1428), (819, 1584), (850, 1641), (854, 1650), (884, 1695), (979, 1827), (1000, 1851),

Gene: Eponine\_9 Start: 2470, Stop: 3915, Start Num: 161

Candidate Starts for Eponine\_9:

(Start: 161 @2470 has 150 MA's), (Start: 219 @2575 has 15 MA's), (257, 2659), (265, 2668), (277, 2716), (293, 2758), (313, 2809), (321, 2827), (354, 2857), (376, 2884), (407, 2962), (420, 3004), (422, 3013), (423, 3016), (451, 3094), (456, 3103), (496, 3142), (542, 3208), (566, 3256), (585, 3298), (597, 3322), (672, 3415), (688, 3457), (717, 3502), (770, 3571), (793, 3616), (803, 3631), (808, 3637), (823, 3661), (960, 3838), (1009, 3904), (1014, 3910),

Gene: Erin\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Erin\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: EstebanJulior\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for EstebanJulior\_2:

(Start: 71 @426 has 81 MA's), (Start: 221 @636 has 3 MA's), (265, 696), (273, 732), (281, 756), (289, 780), (346, 882), (379, 942), (408, 1011), (410, 1017), (425, 1077), (443, 1137), (466, 1173), (503, 1236), (520, 1266), (574, 1362), (627, 1449), (684, 1524), (704, 1557), (728, 1593), (782, 1668), (793, 1689), (795, 1692), (846, 1755), (868, 1779), (941, 1857), (1032, 1977),

Gene: Estes\_19 Start: 5466, Stop: 7007, Start Num: 93

Candidate Starts for Estes\_19:

(Start: 93 @5466 has 19 MA's), (Start: 96 @5469 has 1 MA's), (218, 5652), (235, 5670), (258, 5703), (264, 5712), (281, 5775), (313, 5850), (407, 6003), (418, 6042), (453, 6135), (467, 6156), (549, 6303), (585, 6363), (708, 6510), (724, 6537), (773, 6615), (808, 6675), (824, 6702), (1021, 6957),

Gene: Eula\_3 Start: 676, Stop: 2304, Start Num: 125

Candidate Starts for Eula\_3:



(Start: 125 @676 has 61 MA's), (228, 832), (281, 940), (319, 1024), (331, 1048), (346, 1066), (392, 1123), (409, 1174), (410, 1177), (425, 1237), (430, 1255), (439, 1285), (453, 1315), (699, 1771), (711, 1786), (941, 2137), (1050, 2293),

Gene: Eunoia\_2 Start: 429, Stop: 1994, Start Num: 71

Candidate Starts for Eunoia\_2:

(Start: 71 @429 has 81 MA's), (Start: 200 @600 has 2 MA's), (263, 693), (281, 759), (289, 783), (316, 837), (392, 966), (425, 1080), (443, 1140), (461, 1170), (520, 1269), (530, 1284), (574, 1365), (627, 1452), (684, 1527), (685, 1530), (704, 1560), (768, 1644), (793, 1692), (821, 1716), (903, 1806), (941, 1860), (1005, 1941), (1032, 1980),

Gene: Euratis\_2 Start: 596, Stop: 2176, Start Num: 114

Candidate Starts for Euratis\_2:

(Start: 114 @596 has 3 MA's), (225, 767), (265, 833), (277, 881), (281, 893), (313, 962), (315, 965), (326, 986), (327, 989), (346, 1016), (363, 1037), (394, 1070), (410, 1121), (477, 1304), (505, 1343), (516, 1364), (569, 1475), (576, 1496), (671, 1637), (673, 1643), (674, 1646), (693, 1694), (726, 1742), (802, 1847), (804, 1850), (812, 1868), (825, 1895), (850, 1943), (924, 2024), (946, 2051), (996, 2123),

Gene: Evanesce\_5 Start: 1894, Stop: 3489, Start Num: 74

Candidate Starts for Evanesce\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: EvenBluerMoon\_3 Start: 1241, Stop: 2836, Start Num: 110

Candidate Starts for EvenBluerMoon\_3:

(Start: 110 @1241 has 15 MA's), (273, 1499), (281, 1523), (283, 1529), (425, 1820), (434, 1850), (455, 1901), (461, 1910), (516, 2012), (521, 2024), (581, 2147), (678, 2276), (820, 2504), (845, 2546), (1034, 2825),

Gene: Eyes\_2 Start: 522, Stop: 2105, Start Num: 120

Candidate Starts for Eyes\_2:

(Start: 120 @522 has 15 MA's), (193, 624), (294, 840), (313, 888), (348, 948), (362, 960), (408, 1050), (422, 1098), (440, 1155), (524, 1299), (548, 1350), (641, 1506), (670, 1554), (679, 1578), (734, 1665), (810, 1785), (821, 1803), (874, 1872), (885, 1887), (904, 1911),

Gene: Eyre\_2 Start: 528, Stop: 2045, Start Num: 157

Candidate Starts for Eyre\_2:

(142, 516), (Start: 157 @528 has 1 MA's), (190, 600), (195, 609), (255, 696), (270, 735), (273, 750), (367, 939), (424, 1080), (450, 1143), (491, 1200), (528, 1272), (553, 1329), (572, 1359), (604, 1416), (670, 1500), (685, 1539), (708, 1572), (713, 1581), (719, 1590), (750, 1644), (755, 1653), (777, 1680), (827, 1761), (849, 1797), (911, 1881), (976, 1962), (982, 1968),

Gene: Fairfaxidum\_2 Start: 378, Stop: 1928, Start Num: 129

Candidate Starts for Fairfaxidum\_2:

(Start: 89 @333 has 52 MA's), (107, 354), (116, 363), (Start: 129 @378 has 6 MA's), (180, 441), (198, 477), (212, 504), (225, 519), (241, 552), (252, 573), (264, 594), (273, 633), (281, 657), (294, 693), (313, 741), (338, 783), (346, 795), (408, 900), (449, 1020), (524, 1113), (542, 1146), (548, 1164), (641, 1320), (657, 1341), (667, 1359), (703, 1431), (736, 1479), (747, 1497), (761, 1518), (771, 1527), (773,

1530), (789, 1560), (821, 1614), (885, 1701), (914, 1743), (952, 1794), (1038, 1911), (1042, 1917),

Gene: Faith1\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Faith1\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Faith5x5\_2 Start: 473, Stop: 1936, Start Num: 178

Candidate Starts for Faith5x5\_2:

(Start: 147 @422 has 1 MA's), (151, 428), (Start: 159 @437 has 2 MA's), (Start: 178 @473 has 1 MA's), (Start: 186 @497 has 1 MA's), (199, 524), (Start: 205 @536 has 1 MA's), (210, 548), (234, 590), (244, 611), (263, 650), (264, 653), (281, 713), (287, 734), (293, 740), (294, 743), (313, 791), (317, 800), (319, 803), (391, 911), (401, 947), (409, 968), (415, 995), (422, 1013), (423, 1016), (434, 1058), (437, 1067), (498, 1154), (500, 1160), (534, 1205), (561, 1256), (566, 1265), (567, 1268), (583, 1307), (585, 1310), (605, 1340), (660, 1391), (670, 1412), (672, 1418), (692, 1475), (701, 1490), (705, 1493), (732, 1526), (777, 1592), (780, 1595), (820, 1658), (838, 1688), (859, 1727), (863, 1730), (880, 1754), (894, 1766), (897, 1769), (947, 1835), (952, 1844), (954, 1847), (960, 1853), (975, 1877), (1007, 1922), (1009, 1925),

Gene: Familton\_31 Start: 13080, Stop: 14594, Start Num: 72

Candidate Starts for Familton\_31:

(Start: 72 @13080 has 33 MA's), (Start: 74 @13083 has 14 MA's), (Start: 205 @13263 has 1 MA's), (249, 13356), (276, 13431), (287, 13464), (300, 13491), (313, 13521), (407, 13674), (409, 13680), (420, 13716), (422, 13725), (451, 13806), (456, 13815), (458, 13818), (498, 13857), (538, 13914), (553, 13950), (554, 13953), (668, 14109), (672, 14118), (711, 14187), (717, 14196), (722, 14202), (742, 14235), (771, 14271), (823, 14358), (836, 14379), (891, 14442), (893, 14445), (896, 14448), (907, 14466), (920, 14487), (960, 14529), (988, 14565), (1005, 14577),

Gene: Fefferhead\_7 Start: 1383, Stop: 2807, Start Num: 161

Candidate Starts for Fefferhead\_7:

(75, 1299), (Start: 143 @1371 has 2 MA's), (Start: 161 @1383 has 150 MA's), (Start: 205 @1470 has 1 MA's), (Start: 219 @1494 has 15 MA's), (257, 1578), (265, 1587), (277, 1635), (284, 1653), (293, 1671), (313, 1722), (376, 1797), (378, 1800), (420, 1917), (422, 1926), (423, 1929), (433, 1959), (451, 2007), (542, 2121), (566, 2169), (572, 2181), (585, 2211), (597, 2235), (608, 2250), (617, 2262), (672, 2331), (690, 2373), (717, 2403), (771, 2475), (789, 2508), (793, 2517), (823, 2562), (1009, 2796), (1014, 2802),

Gene: Fenry\_2 Start: 361, Stop: 1929, Start Num: 113

Candidate Starts for Fenry\_2:

(Start: 36 @256 has 19 MA's), (90, 337), (Start: 113 @361 has 34 MA's), (183, 445), (198, 478), (225, 520), (233, 538), (241, 553), (252, 574), (264, 595), (273, 634), (294, 694), (306, 730), (313, 742), (341, 787), (346, 796), (371, 823), (408, 901), (440, 1006), (449, 1021), (457, 1036), (524, 1114), (548, 1165), (641, 1321), (667, 1360), (683, 1399), (703, 1432), (711, 1444), (742, 1489), (743, 1492), (747, 1498), (761, 1519), (771, 1528), (773, 1531), (789, 1561), (803, 1585), (814, 1600), (877, 1690), (885, 1702), (914, 1744), (924, 1759), (942, 1780), (952, 1795), (964, 1810), (1024, 1891), (1029, 1903), (1038, 1912),

Gene: Feyre\_6 Start: 1325, Stop: 2752, Start Num: 166

Candidate Starts for Feyre\_6:

(Start: 166 @1325 has 22 MA's), (194, 1382), (Start: 205 @1403 has 1 MA's), (Start: 219 @1427 has 15 MA's), (257, 1511), (265, 1520), (267, 1526), (277, 1568), (284, 1586), (293, 1604), (313, 1655), (320, 1670), (376, 1730), (407, 1808), (420, 1850), (422, 1859), (423, 1862), (451, 1940), (542, 2054), (566, 2102), (585, 2144), (597, 2168), (605, 2180), (626, 2207), (667, 2252), (672, 2264), (762, 2411), (787, 2450), (823, 2507), (838, 2531), (856, 2555), (878, 2579), (954, 2678), (960, 2684), (1009, 2741),

Gene: Finalfrontier\_4 Start: 1182, Stop: 2810, Start Num: 125

Candidate Starts for Finalfrontier\_4:

(Start: 125 @1182 has 61 MA's), (228, 1338), (281, 1446), (319, 1530), (331, 1554), (346, 1572), (392, 1629), (409, 1680), (410, 1683), (411, 1692), (425, 1743), (430, 1761), (439, 1791), (453, 1821), (699, 2277), (711, 2292), (941, 2643), (1050, 2799),

Gene: Findley\_4 Start: 652, Stop: 2076, Start Num: 161

Candidate Starts for Findley\_4:

(75, 574), (85, 586), (91, 595), (Start: 161 @652 has 150 MA's), (194, 712), (Start: 205 @733 has 1 MA's), (216, 754), (257, 838), (265, 847), (277, 895), (293, 931), (313, 982), (348, 1024), (354, 1030), (376, 1057), (420, 1177), (422, 1186), (423, 1189), (451, 1267), (456, 1276), (542, 1381), (566, 1429), (572, 1441), (585, 1471), (597, 1495), (608, 1510), (672, 1588), (690, 1630), (717, 1660), (734, 1687), (770, 1729), (779, 1744), (808, 1795), (823, 1819), (856, 1867), (954, 1990), (1009, 2065),

Gene: Finemlucis\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Finemlucis\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Finkle\_2 Start: 383, Stop: 2002, Start Num: 66

Candidate Starts for Finkle\_2:

(Start: 66 @383 has 1 MA's), (69, 389), (225, 605), (241, 638), (277, 731), (391, 920), (408, 974), (420, 1013), (425, 1037), (494, 1172), (524, 1187), (572, 1280), (641, 1394), (667, 1433), (715, 1523), (752, 1580), (854, 1733), (914, 1814), (1035, 1982),

Gene: Finnry\_5 Start: 1187, Stop: 2752, Start Num: 68

Candidate Starts for Finnry\_5:

(Start: 68 @1187 has 59 MA's), (Start: 71 @1193 has 81 MA's), (191, 1364), (262, 1469), (267, 1481), (327, 1637), (334, 1646), (336, 1649), (338, 1652), (389, 1727), (407, 1781), (408, 1784), (409, 1787), (515, 2018), (552, 2093), (568, 2114), (572, 2120), (623, 2189), (654, 2213), (666, 2231), (672, 2246), (736, 2360), (770, 2399), (773, 2405), (810, 2471), (877, 2561), (885, 2573), (933, 2612), (1008, 2699), (1034, 2744), (1036, 2747),

Gene: Fionnbharth\_9 Start: 2465, Stop: 3910, Start Num: 161

Candidate Starts for Fionnbharth\_9:

(Start: 161 @2465 has 150 MA's), (Start: 219 @2570 has 15 MA's), (257, 2654), (265, 2663), (277, 2711), (283, 2726), (293, 2753), (313, 2804), (321, 2822), (354, 2852), (376, 2879), (407, 2957), (420, 2999), (422, 3008), (423, 3011), (451, 3089), (456, 3098), (496, 3137), (542, 3203), (566, 3251), (585, 3293), (672, 3410), (688, 3452), (717, 3497), (770, 3566), (793, 3611), (808, 3632), (823, 3656), (960, 3833), (1009, 3899), (1014, 3905),

Gene: Firecracker\_31 Start: 13153, Stop: 14664, Start Num: 74

Candidate Starts for Firecracker\_31:

(Start: 72 @13150 has 33 MA's), (Start: 74 @13153 has 14 MA's), (Start: 205 @13333 has 1 MA's), (249, 13426), (276, 13501), (287, 13534), (300, 13561), (313, 13591), (407, 13744), (409, 13750), (420, 13786), (422, 13795), (451, 13876), (456, 13885), (458, 13888), (498, 13927), (538, 13984), (553, 14020), (554, 14023), (668, 14179), (672, 14188), (711, 14257), (717, 14266), (722, 14272), (742, 14305), (771, 14341), (823, 14428), (836, 14449), (891, 14512), (893, 14515), (896, 14518), (907, 14536), (920, 14557), (960, 14599), (985, 14632), (988, 14635), (1005, 14647),

Gene: FirstPlacePfu\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for FirstPlacePfu\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Fishburne\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Fishburne\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: FlagStaff\_2 Start: 359, Stop: 1903, Start Num: 72

Candidate Starts for FlagStaff\_2:

(Start: 72 @359 has 33 MA's), (264, 632), (277, 683), (293, 719), (317, 779), (327, 800), (409, 932), (420, 968), (424, 989), (436, 1019), (451, 1058), (456, 1067), (566, 1220), (608, 1298), (656, 1364), (672, 1391), (736, 1490), (808, 1604), (823, 1628), (836, 1649), (878, 1700), (891, 1715), (960, 1808), (1009, 1892), (1014, 1898),

Gene: FlameThrower\_3 Start: 871, Stop: 2436, Start Num: 125

Candidate Starts for FlameThrower\_3:

(Start: 125 @871 has 61 MA's), (228, 1027), (281, 1135), (316, 1213), (320, 1222), (335, 1249), (392, 1318), (409, 1369), (425, 1432), (453, 1510), (580, 1783), (678, 1921), (766, 2050), (768, 2053), (985, 2353), (1010, 2383), (1043, 2428),

Gene: Flathead\_3 Start: 670, Stop: 2157, Start Num: 139

Candidate Starts for Flathead\_3:

(Start: 132 @658 has 1 MA's), (Start: 139 @670 has 74 MA's), (Start: 219 @796 has 15 MA's), (222, 802), (257, 880), (259, 883), (263, 889), (265, 895), (274, 934), (283, 958), (293, 979), (294, 982), (308, 1021), (319, 1042), (344, 1069), (355, 1087), (366, 1090), (391, 1141), (409, 1198), (414, 1219), (422, 1243), (424, 1255), (433, 1276), (437, 1288), (449, 1321), (452, 1327), (498, 1396), (500, 1402), (516, 1435), (537, 1471), (567, 1531), (572, 1540), (583, 1567), (640, 1645), (694, 1741), (736, 1786), (787, 1858), (810, 1897), (834, 1933), (837, 1939), (856, 1963), (882, 1993), (891, 1999), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101),

Gene: Fluke\_5 Start: 3123, Stop: 4688, Start Num: 71

Candidate Starts for Fluke\_5:

(Start: 71 @3123 has 81 MA's), (Start: 221 @3333 has 3 MA's), (Start: 223 @3336 has 13 MA's), (273, 3429), (281, 3453), (289, 3477), (402, 3693), (408, 3708), (410, 3714), (425, 3774), (503, 3933), (520, 3963), (530, 3978), (574, 4059), (620, 4137), (627, 4146), (669, 4182), (684, 4221), (704, 4254), (711, 4263), (728, 4290), (771, 4344), (793, 4386), (835, 4431), (846, 4452), (868, 4476), (941, 4554), (1032, 4674),

Gene: Forge\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Forge\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: FoulBall\_28 Start: 13074, Stop: 14588, Start Num: 72

Candidate Starts for FoulBall\_28:

(Start: 72 @13074 has 33 MA's), (Start: 74 @13077 has 14 MA's), (Start: 205 @13257 has 1 MA's), (249, 13350), (276, 13425), (287, 13458), (300, 13485), (313, 13515), (407, 13668), (409, 13674), (420, 13710), (422, 13719), (451, 13800), (456, 13809), (458, 13812), (498, 13851), (538, 13908), (553, 13944), (554, 13947), (668, 14103), (672, 14112), (711, 14181), (717, 14190), (722, 14196), (742, 14229), (771, 14265), (823, 14352), (836, 14373), (891, 14436), (893, 14439), (896, 14442), (907, 14460), (920, 14481), (960, 14523), (988, 14559), (1005, 14571),

Gene: Francois\_6 Start: 1977, Stop: 3407, Start Num: 223

Candidate Starts for Francois\_6:

(Start: 119 @1809 has 2 MA's), (122, 1812), (Start: 125 @1815 has 61 MA's), (Start: 129 @1821 has 6 MA's), (Start: 223 @1977 has 13 MA's), (231, 1995), (265, 2058), (281, 2118), (289, 2136), (304, 2175), (308, 2184), (367, 2268), (372, 2277), (409, 2352), (413, 2367), (423, 2400), (447, 2466), (619, 2784), (621, 2787), (634, 2799), (666, 2847), (683, 2889), (715, 2940), (736, 2970), (771, 3018), (786, 3045), (821, 3105), (842, 3138), (856, 3153), (914, 3231), (964, 3294), (967, 3297),

Gene: Frankie\_3 Start: 670, Stop: 2157, Start Num: 139

Candidate Starts for Frankie\_3:

(Start: 132 @658 has 1 MA's), (Start: 139 @670 has 74 MA's), (Start: 219 @796 has 15 MA's), (222, 802), (242, 844), (244, 850), (259, 883), (263, 889), (265, 895), (274, 934), (283, 958), (292, 976), (293, 979), (308, 1021), (319, 1042), (344, 1069), (349, 1078), (355, 1087), (366, 1090), (391, 1141), (409, 1198), (414, 1219), (422, 1243), (424, 1255), (433, 1276), (437, 1288), (449, 1321), (452, 1327), (498, 1396), (500, 1402), (516, 1435), (537, 1471), (567, 1531), (572, 1540), (583, 1567), (640, 1645), (694, 1741), (736, 1786), (787, 1858), (810, 1897), (834, 1933), (837, 1939), (856, 1963), (882, 1993), (891, 1999), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101), (975, 2113),

Gene: Franklin22\_2 Start: 667, Stop: 2232, Start Num: 125

Candidate Starts for Franklin22\_2:

(Start: 125 @667 has 61 MA's), (Start: 147 @694 has 1 MA's), (228, 823), (281, 931), (283, 937), (319, 1015), (346, 1057), (392, 1114), (409, 1165), (425, 1228), (678, 1717), (774, 1861), (821, 1921), (941, 2089), (1000, 2161), (1028, 2203), (1043, 2224),

Gene: Frickyeah\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for Frickyeah\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (244, 853), (259, 886), (274, 937), (277, 946), (293, 982), (308, 1024), (319, 1045), (326, 1057), (344, 1072), (355, 1090), (366, 1093), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (422, 1246), (424, 1258), (433, 1279), (437, 1291), (445, 1318), (452, 1330), (503, 1411), (534, 1471), (542, 1483), (550, 1507), (572, 1543), (583, 1570), (601, 1603), (652, 1657), (721, 1759), (736, 1786), (834, 1933), (841, 1945), (856, 1963), (919, 2041), (922, 2044), (925, 2047), (969, 2101), (975, 2113),

Gene: Frokostdame\_2 Start: 361, Stop: 1959, Start Num: 113

Candidate Starts for Frokostdame\_2:

(Start: 89 @334 has 52 MA's), (107, 355), (Start: 113 @361 has 34 MA's), (198, 475), (202, 484), (225, 517), (233, 535), (241, 550), (252, 571), (264, 592), (278, 646), (281, 655), (294, 691), (306, 727), (313, 739), (338, 781), (341, 784), (440, 1003), (449, 1018), (457, 1033), (459, 1036), (524, 1111), (548, 1162), (641, 1318), (657, 1339), (659, 1342), (703, 1429), (711, 1441), (734, 1474), (736, 1477), (761, 1516), (770, 1522), (771, 1525), (810, 1594), (814, 1597), (854, 1657), (856, 1660), (865, 1669), (914, 1738), (924, 1753), (1049, 1942),

Gene: Frosty24\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Frosty24\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Fryberger\_34 Start: 9845, Stop: 11251, Start Num: 176

Candidate Starts for Fryberger\_34:

(133, 9788), (Start: 176 @9845 has 6 MA's), (247, 9971), (272, 10031), (275, 10040), (310, 10124), (339, 10178), (408, 10304), (410, 10310), (414, 10328), (434, 10394), (448, 10427), (463, 10448), (488, 10481), (506, 10526), (572, 10619), (631, 10697), (664, 10742), (672, 10760), (710, 10823), (715, 10829), (793, 10955), (822, 11000), (833, 11018), (970, 11192),

Gene: Fulbright\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Fulbright\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: G4\_3 Start: 956, Stop: 2410, Start Num: 154

Candidate Starts for G4\_3:

(Start: 154 @956 has 4 MA's), (Start: 157 @959 has 1 MA's), (Start: 205 @1058 has 1 MA's), (222, 1085), (234, 1112), (238, 1121), (254, 1163), (265, 1178), (275, 1220), (293, 1262), (317, 1322), (327, 1340), (405, 1460), (422, 1517), (426, 1535), (437, 1562), (566, 1760), (567, 1763), (570, 1769), (585, 1802), (670, 1907), (803, 2126), (830, 2165), (1005, 2396),

Gene: GEazy\_2 Start: 522, Stop: 2105, Start Num: 120

Candidate Starts for GEazy\_2:

(90, 489), (98, 498), (Start: 120 @522 has 15 MA's), (278, 807), (294, 840), (313, 888), (348, 948), (362, 960), (408, 1050), (440, 1155), (524, 1299), (548, 1350), (596, 1446), (641, 1506), (670, 1554), (679, 1578), (734, 1665), (792, 1755), (810, 1785), (821, 1803), (874, 1872), (885, 1887), (904, 1911),

Gene: GMA5\_2 Start: 466, Stop: 1860, Start Num: 156

Candidate Starts for GMA5\_2:

(Start: 156 @466 has 23 MA's), (Start: 209 @559 has 1 MA's), (277, 685), (283, 703), (312, 763), (316, 772), (317, 775), (383, 859), (407, 922), (409, 928), (423, 976), (438, 1030), (521, 1132), (578, 1243), (658, 1348), (680, 1387), (683, 1393), (810, 1567), (851, 1642), (923, 1741), (998, 1846),

Gene: GRU3\_2 Start: 495, Stop: 1916, Start Num: 156

Candidate Starts for GRU3\_2:

(Start: 156 @495 has 23 MA's), (Start: 209 @588 has 1 MA's), (227, 615), (264, 663), (267, 672), (273, 702), (277, 714), (289, 750), (302, 774), (312, 792), (316, 801), (409, 963), (423, 1011), (440, 1074), (658, 1389), (672, 1404), (680, 1428), (829, 1647), (851, 1692), (868, 1719), (910, 1770), (923, 1791),

Gene: Gabbspett\_3 Start: 1176, Stop: 2636, Start Num: 117

Candidate Starts for Gabbspett\_3:

(Start: 117 @1176 has 111 MA's), (122, 1182), (Start: 223 @1344 has 13 MA's), (228, 1353), (264, 1413), (283, 1482), (294, 1503), (317, 1554), (424, 1758), (504, 1893), (546, 1971), (551, 1986), (572, 2022), (589, 2064), (610, 2097), (622, 2115), (706, 2235), (708, 2238), (715, 2250), (774, 2325), (810, 2388), (817, 2397), (821, 2406), (823, 2409), (958, 2571), (965, 2580), (970, 2589), (995, 2628),

Gene: Gabriela\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Gabriela\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Gack\_2 Start: 703, Stop: 2268, Start Num: 125

Candidate Starts for Gack\_2:

(Start: 125 @703 has 61 MA's), (Start: 147 @730 has 1 MA's), (228, 859), (281, 967), (283, 973), (286, 982), (319, 1051), (346, 1093), (392, 1150), (409, 1201), (425, 1264), (474, 1384), (580, 1615), (678, 1753), (766, 1882), (941, 2125), (1028, 2239), (1043, 2260),

Gene: Galaxy\_3 Start: 758, Stop: 2338, Start Num: 137

Candidate Starts for Galaxy\_3:

(Start: 79 @692 has 7 MA's), (Start: 137 @758 has 8 MA's), (167, 794), (Start: 201 @854 has 6 MA's), (206, 863), (276, 995), (281, 1010), (289, 1034), (300, 1055), (392, 1193), (409, 1244), (411, 1256), (425, 1307), (429, 1319), (455, 1388), (481, 1448), (493, 1478), (498, 1487), (527, 1550), (658, 1766), (669, 1778), (684, 1817), (699, 1844), (711, 1859), (731, 1889), (765, 1928), (770, 1937), (774, 1946), (838, 2036), (851, 2063), (918, 2177), (974, 2246),

Gene: Gambino\_2 Start: 361, Stop: 1959, Start Num: 113

Candidate Starts for Gambino\_2:

(Start: 89 @334 has 52 MA's), (Start: 113 @361 has 34 MA's), (198, 475), (202, 484), (225, 517), (233, 535), (241, 550), (252, 571), (264, 592), (278, 646), (281, 655), (294, 691), (306, 727), (313, 739), (338, 781), (341, 784), (440, 1003), (449, 1018), (457, 1033), (459, 1036), (524, 1111), (548, 1162), (641, 1318), (657, 1339), (659, 1342), (703, 1429), (711, 1441), (734, 1474), (736, 1477), (761, 1516), (770, 1522), (771, 1525), (810, 1594), (814, 1597), (854, 1657), (856, 1660), (865, 1669), (914, 1738), (924, 1753), (1049, 1942),

Gene: Gancho\_4 Start: 1561, Stop: 3195, Start Num: 36

Candidate Starts for Gancho\_4:

(Start: 36 @1561 has 19 MA's), (Start: 74 @1600 has 14 MA's), (135, 1648), (241, 1819), (262, 1858), (336, 2038), (343, 2047), (348, 2056), (389, 2119), (393, 2125), (417, 2209), (418, 2212), (420, 2215), (457, 2311), (459, 2314), (466, 2323), (524, 2389), (541, 2419), (550, 2446), (570, 2479), (576, 2500), (577, 2503), (641, 2599), (657, 2620), (703, 2710), (733, 2752), (743, 2770), (747, 2776), (789, 2839), (792, 2845), (793, 2848), (821, 2893), (826, 2899), (842, 2926), (856, 2941), (899, 2992), (904, 3001), (912, 3016), (914, 3019), (942, 3058), (952, 3073), (964, 3088), (967, 3091), (1030, 3169), (1035, 3175),

Gene: Ganymede\_8 Start: 1613, Stop: 3034, Start Num: 161

Candidate Starts for Ganymede\_8:

(85, 1541), (Start: 143 @1601 has 2 MA's), (Start: 161 @1613 has 150 MA's), (Start: 219 @1724 has 15 MA's), (222, 1730), (257, 1808), (265, 1817), (277, 1865), (284, 1883), (313, 1952), (348, 1994), (354, 2000), (376, 2027), (378, 2030), (420, 2147), (422, 2156), (451, 2237), (542, 2351), (566, 2399), (572, 2411), (585, 2441), (597, 2465), (605, 2477), (670, 2555), (672, 2561), (771, 2705), (789, 2738), (823, 2792), (960, 2969), (1009, 3023),

Gene: Gardann\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Gardann\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: GardenSalsa\_18 Start: 5300, Stop: 6841, Start Num: 93

Candidate Starts for GardenSalsa\_18:

(Start: 93 @5300 has 19 MA's), (Start: 96 @5303 has 1 MA's), (218, 5486), (235, 5504), (258, 5537), (264, 5546), (281, 5609), (313, 5684), (407, 5837), (418, 5876), (453, 5969), (467, 5990), (549, 6137), (585, 6197), (724, 6371), (773, 6449), (808, 6509), (824, 6536), (1021, 6791),

Gene: Gardevoir\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Gardevoir\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: GemG\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for GemG\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: GenevaB15\_18 Start: 5321, Stop: 6862, Start Num: 93

Candidate Starts for GenevaB15\_18:

(Start: 93 @5321 has 19 MA's), (Start: 96 @5324 has 1 MA's), (218, 5507), (235, 5525), (258, 5558), (264, 5567), (313, 5705), (407, 5858), (418, 5897), (453, 5990), (467, 6011), (549, 6158), (585, 6218), (708, 6365), (724, 6392), (773, 6470), (808, 6530), (824, 6557), (1021, 6812),

Gene: Gengar\_6 Start: 1351, Stop: 2778, Start Num: 166

Candidate Starts for Gengar\_6:

(75, 1258), (Start: 166 @1351 has 22 MA's), (194, 1408), (Start: 205 @1429 has 1 MA's), (Start: 219 @1453 has 15 MA's), (257, 1537), (265, 1546), (267, 1552), (277, 1594), (284, 1612), (293, 1630), (313, 1681), (376, 1756), (407, 1834), (420, 1876), (422, 1885), (423, 1888), (451, 1966), (542, 2080), (566, 2128), (585, 2170), (597, 2194), (605, 2206), (626, 2233), (667, 2278), (672, 2290), (762, 2437), (787, 2476), (823, 2533), (838, 2557), (856, 2581), (878, 2605), (954, 2704), (960, 2710), (1009, 2767),

Gene: Geraldini\_8 Start: 1616, Stop: 3037, Start Num: 161



Candidate Starts for Geraldini\_8:

(85, 1544), (Start: 143 @1604 has 2 MA's), (Start: 161 @1616 has 150 MA's), (Start: 219 @1727 has 15 MA's), (222, 1733), (257, 1811), (265, 1820), (277, 1868), (284, 1886), (313, 1955), (348, 1997), (354, 2003), (376, 2030), (378, 2033), (420, 2150), (422, 2159), (542, 2354), (566, 2402), (572, 2414), (585, 2444), (597, 2468), (605, 2480), (670, 2558), (672, 2564), (771, 2708), (789, 2741), (823, 2795), (960, 2972), (1009, 3026),

Gene: Getalong\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for Getalong\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (244, 853), (259, 886), (274, 937), (277, 946), (293, 982), (308, 1024), (319, 1045), (326, 1057), (344, 1072), (355, 1090), (366, 1093), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (422, 1246), (423, 1249), (424, 1258), (433, 1279), (437, 1291), (445, 1318), (452, 1330), (498, 1399), (503, 1411), (542, 1483), (550, 1507), (572, 1543), (583, 1570), (626, 1636), (652, 1657), (721, 1759), (736, 1786), (841, 1945), (856, 1963), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101), (975, 2113),

Gene: Gex\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Gex\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Ghobes\_1 Start: 60, Stop: 1760, Start Num: 19

Candidate Starts for Ghobes\_1:

(15, 21), (Start: 19 @60 has 3 MA's), (191, 345), (Start: 221 @399 has 3 MA's), (264, 459), (299, 564), (309, 588), (343, 642), (407, 750), (427, 825), (431, 840), (442, 876), (459, 906), (516, 966), (584, 1107), (683, 1248), (684, 1251), (685, 1254), (687, 1257), (699, 1278), (711, 1293), (793, 1425), (820, 1479), (835, 1503), (995, 1695),

Gene: Gideon\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Gideon\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Giles\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Giles\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Gillker\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Gillker\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Girafales\_3 Start: 672, Stop: 2159, Start Num: 139

Candidate Starts for Girafales\_3:

(Start: 132 @660 has 1 MA's), (Start: 139 @672 has 74 MA's), (211, 789), (Start: 219 @798 has 15 MA's), (224, 807), (257, 882), (259, 885), (263, 891), (274, 936), (275, 939), (283, 960), (292, 978), (344, 1071), (355, 1089), (366, 1092), (376, 1116), (409, 1200), (422, 1245), (424, 1257), (433, 1278), (437, 1290), (445, 1317), (452, 1329), (500, 1404), (514, 1434), (516, 1437), (542, 1482), (567, 1533), (572, 1542), (583, 1569), (601, 1602), (640, 1647), (670, 1680), (825, 1920), (834, 1935), (837, 1941), (856, 1965), (919, 2043), (922, 2046), (925, 2049), (960, 2091), (969, 2103), (975, 2115),

Gene: Gisselle\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Gisselle\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (263, 690), (265, 696), (276, 741), (281, 756), (283, 762), (289, 780), (408, 1011), (410, 1017), (425, 1077), (503, 1236), (520, 1266), (530, 1281), (581, 1380), (620, 1440), (627, 1449), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (846, 1755), (941, 1857), (1032, 1977),

Gene: Gizermo\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Gizermo\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Glaske\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for Glaske\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (252, 718), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (630, 1465), (640, 1477), (670, 1522), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: Glaske16\_15 Start: 4718, Stop: 6262, Start Num: 93

Candidate Starts for Glaske16\_15:

(Start: 93 @4718 has 19 MA's), (133, 4766), (264, 4967), (313, 5105), (418, 5297), (525, 5507), (549, 5558), (591, 5630), (670, 5693), (679, 5717), (685, 5732), (724, 5792), (731, 5804), (770, 5864), (787, 5897), (808, 5930), (824, 5957), (857, 6005), (1008, 6191), (1021, 6212),

Gene: Glenn\_5 Start: 3133, Stop: 4698, Start Num: 71

Candidate Starts for Glenn\_5:

(Start: 71 @3133 has 81 MA's), (Start: 221 @3343 has 3 MA's), (Start: 223 @3346 has 13 MA's), (263, 3397), (281, 3463), (289, 3487), (402, 3703), (407, 3715), (408, 3718), (410, 3724), (425, 3784), (443, 3844), (450, 3856), (503, 3943), (520, 3973), (530, 3988), (574, 4069), (620, 4147), (627, 4156), (669, 4192), (684, 4231), (704, 4264), (711, 4273), (728, 4300), (771, 4354), (793, 4396), (835, 4441), (846, 4462), (868, 4486), (941, 4564), (1032, 4684),

Gene: Godfather\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Godfather\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Goib\_8 Start: 3467, Stop: 5074, Start Num: 105

Candidate Starts for Goib\_8:

(Start: 49 @3389 has 3 MA's), (Start: 105 @3467 has 6 MA's), (265, 3695), (289, 3779), (300, 3800), (309, 3821), (392, 3959), (410, 4013), (433, 4100), (434, 4103), (443, 4133), (527, 4238), (574, 4340), (650, 4463), (689, 4550), (699, 4565), (711, 4580), (759, 4643), (800, 4712), (825, 4754), (840, 4778), (865, 4829), (868, 4832), (894, 4865), (941, 4931), (979, 4982), (1039, 5060), (1044, 5066),

Gene: GoldenAsh\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for GoldenAsh\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: GoldenBlanche\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for GoldenBlanche\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Gomashi\_2 Start: 456, Stop: 1892, Start Num: 162

Candidate Starts for Gomashi\_2:

(Start: 72 @360 has 33 MA's), (Start: 162 @456 has 39 MA's), (Start: 168 @459 has 3 MA's), (Start: 186 @495 has 1 MA's), (Start: 205 @534 has 1 MA's), (277, 696), (313, 783), (317, 792), (327, 810), (346, 822), (409, 942), (420, 978), (424, 999), (433, 1020), (451, 1068), (456, 1077), (566, 1230), (595, 1290), (608, 1308), (656, 1359), (672, 1386), (678, 1401), (679, 1404), (736, 1485), (768, 1530), (810, 1605), (823, 1623), (836, 1644), (874, 1689), (888, 1707), (891, 1710), (960, 1803), (1012, 1884),

Gene: Gonephishing\_10 Start: 4236, Stop: 5768, Start Num: 158

Candidate Starts for Gonephishing\_10:

(88, 4152), (Start: 121 @4194 has 4 MA's), (128, 4203), (Start: 158 @4236 has 20 MA's), (218, 4350), (247, 4413), (266, 4446), (267, 4449), (276, 4488), (278, 4494), (308, 4569), (327, 4605), (388, 4680), (390, 4683), (401, 4719), (412, 4752), (540, 5001), (572, 5064), (584, 5091), (684, 5250), (708, 5286), (728, 5316), (734, 5325), (780, 5379), (792, 5403), (976, 5637), (988, 5649),

Gene: Goobery\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Goobery\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: GrandSlam\_6 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for GrandSlam\_6:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (304, 2176), (308, 2185), (367, 2269), (409, 2353),

(413, 2368), (423, 2401), (447, 2467), (517, 2599), (621, 2788), (666, 2848), (683, 2890), (715, 2941), (770, 3016), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: Gravaillia\_5 Start: 1594, Stop: 3228, Start Num: 36

Candidate Starts for Gravaillia\_5:

(Start: 36 @1594 has 19 MA's), (Start: 74 @1633 has 14 MA's), (135, 1681), (241, 1852), (262, 1891), (336, 2071), (343, 2080), (348, 2089), (389, 2152), (393, 2158), (417, 2242), (418, 2245), (420, 2248), (457, 2344), (459, 2347), (466, 2356), (524, 2422), (541, 2452), (550, 2479), (570, 2512), (576, 2533), (577, 2536), (641, 2632), (657, 2653), (703, 2743), (733, 2785), (743, 2803), (747, 2809), (789, 2872), (792, 2878), (793, 2881), (821, 2926), (826, 2932), (842, 2959), (856, 2974), (899, 3025), (904, 3034), (912, 3049), (914, 3052), (942, 3091), (952, 3106), (964, 3121), (967, 3124), (1030, 3202), (1035, 3208),

Gene: GreaseLightnin\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for GreaseLightnin\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: GreenHearts\_5 Start: 3132, Stop: 4697, Start Num: 71

Candidate Starts for GreenHearts\_5:

(Start: 71 @3132 has 81 MA's), (Start: 201 @3306 has 6 MA's), (Start: 221 @3342 has 3 MA's), (263, 3396), (266, 3405), (273, 3438), (278, 3453), (281, 3462), (346, 3588), (402, 3702), (407, 3714), (408, 3717), (410, 3723), (425, 3783), (443, 3843), (503, 3942), (520, 3972), (530, 3987), (561, 4035), (627, 4155), (684, 4230), (704, 4263), (728, 4299), (782, 4374), (793, 4395), (820, 4416), (868, 4485), (941, 4563), (973, 4602), (995, 4632), (1005, 4644), (1032, 4683), (1039, 4692),

Gene: Greenhouse\_5 Start: 3101, Stop: 4666, Start Num: 71

Candidate Starts for Greenhouse\_5:

(Start: 71 @3101 has 81 MA's), (Start: 201 @3275 has 6 MA's), (Start: 221 @3311 has 3 MA's), (263, 3365), (266, 3374), (273, 3407), (281, 3431), (402, 3671), (408, 3686), (410, 3692), (425, 3752), (443, 3812), (477, 3878), (503, 3911), (520, 3941), (530, 3956), (561, 4004), (627, 4124), (684, 4199), (704, 4232), (782, 4343), (793, 4364), (820, 4385), (868, 4454), (941, 4532), (973, 4571), (995, 4601), (1005, 4613), (1032, 4652), (1039, 4661),

Gene: Grizzly\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Grizzly\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (326, 806), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (682, 1409), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Gspu1\_5 Start: 1941, Stop: 3626, Start Num: 49

Candidate Starts for Gspu1\_5:

(Start: 49 @1941 has 3 MA's), (65, 1968), (Start: 125 @2022 has 61 MA's), (Start: 201 @2133 has 6 MA's), (263, 2223), (265, 2229), (267, 2235), (275, 2271), (278, 2280), (300, 2334), (325, 2385), (392, 2493), (408, 2541), (410, 2547), (432, 2631), (433, 2634), (434, 2637), (443, 2667), (507, 2739), (527, 2772), (559, 2838), (574, 2874), (683, 3069), (759, 3171), (868, 3360), (879, 3378), (894, 3393), (921, 3435), (941, 3459), (995, 3528), (1044, 3618),

Gene: Guacamole\_2 Start: 361, Stop: 1929, Start Num: 113

Candidate Starts for Guacamole\_2:

(Start: 36 @256 has 19 MA's), (Start: 113 @361 has 34 MA's), (183, 445), (198, 478), (225, 520), (233, 538), (241, 553), (252, 574), (264, 595), (273, 634), (294, 694), (306, 730), (313, 742), (338, 784), (346, 796), (371, 823), (408, 901), (440, 1006), (449, 1021), (457, 1036), (524, 1114), (548, 1165), (641, 1321), (657, 1342), (667, 1360), (670, 1366), (703, 1432), (711, 1444), (742, 1489), (743, 1492), (747, 1498), (761, 1519), (771, 1528), (773, 1531), (814, 1600), (885, 1702), (914, 1744), (924, 1759), (952, 1795), (1024, 1891), (1029, 1903), (1038, 1912),

Gene: Guanica15\_8 Start: 1587, Stop: 3011, Start Num: 161

Candidate Starts for Guanica15\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 205 @1674 has 1 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (240, 1743), (257, 1782), (265, 1791), (267, 1797), (277, 1839), (284, 1857), (293, 1875), (313, 1926), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (496, 2259), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (601, 2445), (617, 2466), (672, 2535), (717, 2607), (770, 2676), (771, 2679), (789, 2712), (823, 2766), (838, 2790), (893, 2853), (960, 2943), (1009, 3000), (1014, 3006),

Gene: Guey18\_39 Start: 11038, Stop: 12444, Start Num: 176

Candidate Starts for Guey18\_39:

(133, 10981), (Start: 176 @11038 has 6 MA's), (247, 11164), (272, 11224), (275, 11233), (287, 11260), (310, 11317), (339, 11371), (408, 11497), (410, 11503), (414, 11521), (434, 11587), (463, 11641), (488, 11674), (506, 11719), (572, 11812), (631, 11890), (664, 11935), (672, 11953), (710, 12016), (715, 12022), (793, 12148), (822, 12193), (833, 12211), (970, 12385),

Gene: Guillsminger\_6 Start: 1326, Stop: 2753, Start Num: 166

Candidate Starts for Guillsminger\_6:

(75, 1233), (Start: 166 @1326 has 22 MA's), (194, 1383), (Start: 205 @1404 has 1 MA's), (Start: 219 @1428 has 15 MA's), (257, 1512), (265, 1521), (267, 1527), (277, 1569), (284, 1587), (293, 1605), (313, 1656), (376, 1731), (407, 1809), (420, 1851), (422, 1860), (423, 1863), (451, 1941), (542, 2055), (566, 2103), (585, 2145), (597, 2169), (605, 2181), (626, 2208), (667, 2253), (672, 2265), (762, 2412), (787, 2451), (823, 2508), (838, 2532), (856, 2556), (878, 2580), (954, 2679), (960, 2685), (1009, 2742),

Gene: Guntur\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Guntur\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Gusanita\_4 Start: 1860, Stop: 3557, Start Num: 110

Candidate Starts for Gusanita\_4:

(Start: 66 @1800 has 1 MA's), (Start: 110 @1860 has 15 MA's), (190, 1980), (Start: 201 @2001 has 6 MA's), (208, 2016), (228, 2049), (264, 2094), (265, 2097), (275, 2139), (281, 2157), (282, 2160), (348, 2286), (392, 2340), (425, 2454), (455, 2535), (546, 2766), (574, 2832), (580, 2847), (670, 2994), (678, 3018), (682, 3027), (695, 3057), (711, 3075), (738, 3117), (789, 3189), (821, 3231), (918, 3348), (921, 3351), (927, 3357), (974, 3420), (1008, 3465), (1027, 3498), (1050, 3546),

Gene: Gustav\_2 Start: 554, Stop: 2107, Start Num: 111

Candidate Starts for Gustav\_2:

(Start: 111 @554 has 7 MA's), (136, 581), (190, 659), (208, 695), (272, 809), (281, 836), (340, 956), (350, 971), (392, 1022), (408, 1070), (424, 1133), (442, 1193), (464, 1229), (531, 1310), (541, 1325), (552, 1358), (564, 1370), (587, 1427), (661, 1514), (670, 1526), (685, 1568), (710, 1604), (711, 1607), (724, 1625), (786, 1736), (820, 1805), (821, 1808), (826, 1814), (851, 1862), (905, 1919), (918, 1943), (1035, 2099),

Gene: GuuelaD\_4 Start: 1069, Stop: 2643, Start Num: 68

Candidate Starts for GuuelaD\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (84, 1093), (185, 1231), (262, 1351), (334, 1528), (338, 1534), (407, 1672), (409, 1678), (414, 1699), (450, 1798), (478, 1846), (511, 1900), (525, 1924), (547, 1969), (549, 1975), (568, 2005), (572, 2011), (586, 2038), (591, 2047), (654, 2104), (670, 2131), (672, 2137), (685, 2170), (715, 2215), (736, 2251), (773, 2296), (810, 2362), (865, 2437), (878, 2455), (885, 2464), (1021, 2611), (1034, 2635), (1036, 2638),

Gene: HH92\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for HH92\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: HUHilltop\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for HUHilltop\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Hadrien\_5 Start: 1894, Stop: 3489, Start Num: 74

Candidate Starts for Hadrien\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Hafay\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Hafay\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Hail\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Hail\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Halena\_4 Start: 1052, Stop: 2635, Start Num: 68

Candidate Starts for Halena\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: Haley23\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Haley23\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Halo\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Halo\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Hammy\_7 Start: 1384, Stop: 2808, Start Num: 161

Candidate Starts for Hammy\_7:

(Start: 143 @1372 has 2 MA's), (Start: 161 @1384 has 150 MA's), (Start: 205 @1471 has 1 MA's), (Start: 219 @1495 has 15 MA's), (257, 1579), (265, 1588), (277, 1636), (284, 1654), (293, 1672), (313, 1723), (354, 1771), (420, 1918), (422, 1927), (423, 1930), (433, 1960), (451, 2008), (542, 2122), (572, 2182), (585, 2212), (617, 2263), (637, 2284), (672, 2332), (690, 2374), (717, 2404), (771, 2476), (823, 2563), (960, 2740), (1009, 2797), (1014, 2803),

Gene: Hamood\_6 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for Hamood\_6:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (304, 2176), (308, 2185), (367, 2269), (409, 2353), (413, 2368), (423, 2401), (447, 2467), (517, 2599), (621, 2788), (666, 2848), (683, 2890), (715, 2941), (770, 3016), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: Hannaconda\_7 Start: 2388, Stop: 3920, Start Num: 158

Candidate Starts for Hannaconda\_7:

(17, 2142), (27, 2193), (88, 2304), (Start: 121 @2346 has 4 MA's), (128, 2355), (Start: 158 @2388 has 20 MA's), (218, 2502), (247, 2565), (266, 2598), (267, 2601), (276, 2640), (278, 2646), (308, 2721),

(327, 2757), (388, 2832), (390, 2835), (401, 2871), (412, 2904), (540, 3153), (572, 3216), (584, 3243), (684, 3402), (708, 3438), (728, 3468), (734, 3477), (780, 3531), (792, 3555), (976, 3789), (988, 3801),

Gene: HannahD\_2 Start: 522, Stop: 2105, Start Num: 120

Candidate Starts for HannahD\_2:

(90, 489), (98, 498), (Start: 120 @522 has 15 MA's), (278, 807), (294, 840), (313, 888), (348, 948), (362, 960), (408, 1050), (440, 1155), (524, 1299), (548, 1350), (596, 1446), (641, 1506), (670, 1554), (679, 1578), (734, 1665), (792, 1755), (810, 1785), (821, 1803), (874, 1872), (885, 1887), (904, 1911),

Gene: HannahPhantana\_4 Start: 1013, Stop: 2494, Start Num: 201

Candidate Starts for HannahPhantana\_4:

(Start: 79 @848 has 7 MA's), (Start: 201 @1013 has 6 MA's), (Start: 223 @1052 has 13 MA's), (263, 1103), (267, 1115), (275, 1151), (281, 1169), (392, 1352), (425, 1466), (429, 1478), (443, 1526), (455, 1547), (466, 1562), (485, 1619), (669, 1934), (699, 2000), (731, 2045), (765, 2084), (771, 2096), (820, 2162), (838, 2192), (860, 2237), (880, 2279), (974, 2402), (977, 2408), (995, 2429), (1005, 2441), (1032, 2480), (1034, 2483),

Gene: HarperAnne\_3 Start: 1062, Stop: 2522, Start Num: 117

Candidate Starts for HarperAnne\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (504, 1779), (546, 1857), (551, 1872), (564, 1890), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (724, 2148), (731, 2160), (774, 2211), (808, 2268), (810, 2274), (817, 2283), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: HeadNerd\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for HeadNerd\_2:

(Start: 71 @426 has 81 MA's), (Start: 221 @636 has 3 MA's), (265, 696), (273, 732), (276, 741), (281, 756), (283, 762), (289, 780), (379, 942), (392, 963), (425, 1077), (443, 1137), (477, 1203), (503, 1236), (520, 1266), (530, 1281), (574, 1362), (620, 1440), (627, 1449), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (846, 1755), (941, 1857),

Gene: Heather\_2 Start: 597, Stop: 2144, Start Num: 120

Candidate Starts for Heather\_2:

(Start: 120 @597 has 15 MA's), (261, 816), (265, 825), (277, 873), (298, 918), (313, 954), (326, 978), (346, 1008), (352, 1017), (394, 1062), (400, 1092), (410, 1113), (430, 1191), (466, 1266), (477, 1296), (616, 1551), (618, 1554), (658, 1596), (671, 1623), (691, 1674), (693, 1680), (700, 1689), (709, 1701), (727, 1731), (802, 1833), (812, 1854), (825, 1881), (850, 1929), (924, 2010), (943, 2034), (946, 2037), (1025, 2133),

Gene: Hedwig\_2 Start: 586, Stop: 2196, Start Num: 120

Candidate Starts for Hedwig\_2:

(Start: 120 @586 has 15 MA's), (239, 769), (255, 802), (294, 904), (313, 952), (362, 1024), (425, 1177), (440, 1219), (457, 1249), (494, 1312), (518, 1354), (524, 1363), (566, 1444), (567, 1447), (574, 1465), (587, 1495), (596, 1510), (619, 1543), (641, 1570), (679, 1648), (734, 1735), (749, 1759), (809, 1852), (810, 1855), (821, 1873), (885, 1957),

Gene: HedwigODU\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for HedwigODU\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679),



(789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: Heftyboy\_6 Start: 1347, Stop: 2774, Start Num: 166

Candidate Starts for Heftyboy\_6:

(75, 1254), (Start: 166 @1347 has 22 MA's), (194, 1404), (Start: 205 @1425 has 1 MA's), (Start: 219 @1449 has 15 MA's), (257, 1533), (265, 1542), (267, 1548), (277, 1590), (284, 1608), (293, 1626), (313, 1677), (376, 1752), (407, 1830), (420, 1872), (422, 1881), (423, 1884), (451, 1962), (542, 2076), (566, 2124), (585, 2166), (597, 2190), (605, 2202), (626, 2229), (667, 2274), (672, 2286), (762, 2433), (787, 2472), (823, 2529), (838, 2553), (856, 2577), (878, 2601), (954, 2700), (960, 2706), (1009, 2763),

Gene: Hegedechwinu\_3 Start: 670, Stop: 2157, Start Num: 139

Candidate Starts for Hegedechwinu\_3:

(Start: 132 @658 has 1 MA's), (Start: 139 @670 has 74 MA's), (Start: 219 @796 has 15 MA's), (222, 802), (257, 880), (259, 883), (263, 889), (265, 895), (274, 934), (283, 958), (293, 979), (294, 982), (308, 1021), (319, 1042), (344, 1069), (355, 1087), (366, 1090), (391, 1141), (409, 1198), (414, 1219), (422, 1243), (424, 1255), (433, 1276), (437, 1288), (449, 1321), (452, 1327), (498, 1396), (500, 1402), (516, 1435), (537, 1471), (567, 1531), (572, 1540), (583, 1567), (640, 1645), (694, 1741), (736, 1786), (787, 1858), (810, 1897), (834, 1933), (837, 1939), (856, 1963), (882, 1993), (891, 1999), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101),

Gene: Heinz\_2 Start: 511, Stop: 2103, Start Num: 110

Candidate Starts for Heinz\_2:

(Start: 110 @511 has 15 MA's), (206, 646), (208, 652), (230, 694), (265, 733), (267, 739), (273, 769), (289, 817), (319, 877), (346, 919), (348, 922), (365, 946), (367, 949), (392, 976), (411, 1039), (431, 1111), (440, 1141), (442, 1147), (443, 1150), (444, 1153), (567, 1396), (574, 1417), (580, 1432), (581, 1435), (588, 1447), (630, 1507), (672, 1552), (678, 1570), (695, 1609), (771, 1702), (782, 1723), (908, 1927), (977, 2020), (993, 2038), (1034, 2092),

Gene: Herb\_2 Start: 428, Stop: 1993, Start Num: 71

Candidate Starts for Herb\_2:

(Start: 71 @428 has 81 MA's), (Start: 200 @599 has 2 MA's), (263, 692), (266, 701), (273, 734), (278, 749), (281, 758), (289, 782), (316, 836), (381, 947), (408, 1013), (410, 1019), (425, 1079), (443, 1139), (461, 1169), (520, 1268), (620, 1442), (627, 1451), (669, 1487), (672, 1493), (685, 1529), (710, 1565), (731, 1598), (762, 1637), (768, 1643), (886, 1784), (941, 1859), (1005, 1940), (1032, 1979),

Gene: Hernandez44\_3 Start: 1176, Stop: 2636, Start Num: 117

Candidate Starts for Hernandez44\_3:

(Start: 117 @1176 has 111 MA's), (122, 1182), (Start: 223 @1344 has 13 MA's), (228, 1353), (264, 1413), (283, 1482), (294, 1503), (317, 1554), (424, 1758), (504, 1893), (546, 1971), (551, 1986), (572, 2022), (589, 2064), (610, 2097), (622, 2115), (706, 2235), (708, 2238), (715, 2250), (774, 2325), (810, 2388), (817, 2397), (821, 2406), (823, 2409), (958, 2571), (965, 2580), (970, 2589), (995, 2628),

Gene: Hibiscus\_2 Start: 511, Stop: 2103, Start Num: 110

Candidate Starts for Hibiscus\_2:

(Start: 110 @511 has 15 MA's), (206, 646), (230, 694), (265, 733), (273, 769), (289, 817), (319, 877), (346, 919), (348, 922), (365, 946), (367, 949), (392, 976), (411, 1039), (431, 1111), (440, 1141), (442, 1147), (443, 1150), (567, 1399), (574, 1420), (580, 1435), (581, 1438), (588, 1450), (630, 1510), (672, 1555), (678, 1573), (682, 1582), (695, 1612), (771, 1705), (782, 1726), (787, 1735), (820, 1795), (858, 1855), (908, 1927), (929, 1957), (973, 2011), (977, 2020), (993, 2038), (1034, 2092),

Gene: Hilltopfarm\_9 Start: 4704, Stop: 6329, Start Num: 70

Candidate Starts for Hilltopfarm\_9:

(26, 4623), (29, 4638), (Start: 51 @4680 has 3 MA's), (Start: 70 @4704 has 4 MA's), (73, 4710), (Start: 197 @4878 has 2 MA's), (202, 4890), (208, 4902), (281, 5046), (309, 5142), (314, 5151), (365, 5229), (370, 5235), (402, 5292), (408, 5307), (432, 5397), (442, 5430), (443, 5433), (507, 5505), (541, 5562), (558, 5610), (568, 5631), (573, 5643), (576, 5655), (588, 5679), (601, 5703), (605, 5709), (660, 5766), (672, 5784), (728, 5886), (763, 5928), (797, 5991), (803, 6000), (808, 6006), (895, 6120), (903, 6132), (914, 6150), (946, 6192), (977, 6234), (987, 6249),

Gene: Hitter\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Hitter\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (405, 891), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Holliday\_3 Start: 671, Stop: 2188, Start Num: 139

Candidate Starts for Holliday\_3:

(Start: 134 @662 has 3 MA's), (Start: 139 @671 has 74 MA's), (211, 788), (Start: 219 @797 has 15 MA's), (224, 806), (244, 851), (250, 869), (259, 884), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (321, 1049), (344, 1070), (355, 1088), (366, 1091), (368, 1094), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (424, 1256), (426, 1262), (433, 1277), (437, 1289), (452, 1328), (503, 1409), (526, 1451), (567, 1532), (572, 1541), (583, 1568), (626, 1634), (652, 1655), (721, 1757), (736, 1784), (834, 1931), (841, 1943), (856, 1961), (919, 2039), (922, 2042), (925, 2045), (960, 2087), (969, 2099), (975, 2111),

Gene: Homura\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Homura\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Hope\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Hope\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Horacetta\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Horacetta\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Hortense\_2 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for Hortense\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (273, 618), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (401, 855), (420, 912), (422, 921), (425, 936), (457,

1008), (466, 1020), (494, 1071), (548, 1137), (572, 1179), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (767, 1500), (787, 1536), (789, 1539), (810, 1575), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (964, 1785), (1002, 1827),

Gene: Horus\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for Horus\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (Start: 205 @775 has 1 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (224, 808), (242, 847), (244, 853), (259, 886), (273, 934), (274, 937), (277, 946), (292, 979), (293, 982), (308, 1024), (326, 1057), (344, 1072), (355, 1090), (366, 1093), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (422, 1246), (423, 1249), (424, 1258), (433, 1279), (437, 1291), (445, 1318), (449, 1324), (452, 1330), (498, 1399), (503, 1411), (542, 1483), (550, 1507), (572, 1543), (583, 1570), (652, 1657), (670, 1681), (721, 1759), (736, 1786), (742, 1795), (834, 1933), (841, 1945), (856, 1963), (919, 2041), (925, 2047), (960, 2089), (969, 2101), (975, 2113), (1018, 2182),

Gene: Hotshotbaby7\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Hotshotbaby7\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Howe\_2 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for Howe\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (273, 618), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (401, 855), (420, 912), (422, 921), (425, 936), (457, 1008), (466, 1020), (494, 1071), (548, 1137), (572, 1179), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (767, 1500), (787, 1536), (789, 1539), (810, 1575), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (964, 1785), (1002, 1827),

Gene: Huckleberry\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Huckleberry\_2:

(Start: 71 @426 has 81 MA's), (Start: 221 @636 has 3 MA's), (265, 696), (273, 732), (276, 741), (281, 756), (283, 762), (289, 780), (379, 942), (392, 963), (425, 1077), (443, 1137), (477, 1203), (503, 1236), (520, 1266), (530, 1281), (574, 1362), (620, 1440), (627, 1449), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (846, 1755), (941, 1857),

Gene: Huff\_9 Start: 3697, Stop: 5304, Start Num: 105

Candidate Starts for Huff\_9:

(Start: 49 @3619 has 3 MA's), (Start: 105 @3697 has 6 MA's), (265, 3925), (275, 3967), (300, 4030), (309, 4051), (392, 4189), (410, 4243), (432, 4327), (433, 4330), (434, 4333), (443, 4363), (574, 4570), (650, 4693), (689, 4780), (699, 4795), (711, 4810), (759, 4873), (800, 4942), (825, 4984), (865, 5059), (868, 5062), (894, 5095), (941, 5161), (979, 5212), (1039, 5290), (1044, 5296),

Gene: Hulk\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Hulk\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (504, 1803), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (817, 2307), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Hunnie\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Hunnie\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: HunterDalle\_2 Start: 429, Stop: 1994, Start Num: 71

Candidate Starts for HunterDalle\_2:

(Start: 71 @429 has 81 MA's), (Start: 200 @600 has 2 MA's), (263, 693), (278, 750), (281, 759), (289, 783), (316, 837), (392, 966), (425, 1080), (443, 1140), (461, 1170), (520, 1269), (530, 1284), (627, 1452), (684, 1527), (685, 1530), (704, 1560), (768, 1644), (793, 1692), (821, 1716), (903, 1806), (941, 1860), (1005, 1941), (1032, 1980),

Gene: Huntingdon\_5 Start: 3080, Stop: 4645, Start Num: 71

Candidate Starts for Huntingdon\_5:

(Start: 71 @3080 has 81 MA's), (Start: 201 @3254 has 6 MA's), (Start: 221 @3290 has 3 MA's), (263, 3344), (273, 3386), (281, 3410), (346, 3536), (402, 3650), (408, 3665), (410, 3671), (425, 3731), (443, 3791), (477, 3857), (503, 3890), (520, 3920), (530, 3935), (551, 3968), (561, 3983), (574, 4016), (627, 4103), (782, 4322), (793, 4343), (820, 4364), (868, 4433), (941, 4511), (973, 4550), (995, 4580), (1005, 4592), (1032, 4631), (1039, 4640),

Gene: Hurricane\_7 Start: 1494, Stop: 2918, Start Num: 161

Candidate Starts for Hurricane\_7:

(112, 1455), (Start: 143 @1482 has 2 MA's), (Start: 161 @1494 has 150 MA's), (Start: 205 @1581 has 1 MA's), (Start: 219 @1605 has 15 MA's), (257, 1689), (265, 1698), (277, 1746), (284, 1764), (293, 1782), (313, 1833), (348, 1875), (354, 1881), (376, 1908), (407, 1986), (420, 2028), (422, 2037), (451, 2118), (462, 2136), (542, 2232), (566, 2280), (572, 2292), (585, 2322), (597, 2346), (605, 2358), (672, 2442), (690, 2484), (770, 2583), (771, 2586), (793, 2628), (803, 2643), (808, 2649), (821, 2670), (823, 2673), (960, 2850), (1014, 2913),

Gene: Hyperbowlee\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Hyperbowlee\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: IPhane7\_14 Start: 4719, Stop: 6263, Start Num: 93

Candidate Starts for IPhane7\_14:

(Start: 93 @4719 has 19 MA's), (133, 4767), (264, 4968), (313, 5106), (418, 5298), (525, 5508), (549, 5559), (591, 5631), (670, 5694), (679, 5718), (685, 5733), (724, 5793), (731, 5805), (770, 5865), (787, 5898), (808, 5931), (824, 5958), (857, 6006), (1008, 6192), (1021, 6213),

Gene: Icarian\_4 Start: 949, Stop: 2574, Start Num: 125

Candidate Starts for Icarian\_4:

(Start: 125 @949 has 61 MA's), (228, 1105), (267, 1159), (281, 1213), (286, 1228), (319, 1297), (348, 1342), (392, 1396), (409, 1447), (410, 1450), (425, 1510), (430, 1528), (431, 1531), (439, 1558), (453, 1588), (527, 1750), (660, 1966), (699, 2041), (710, 2053), (912, 2368), (941, 2407),

Gene: Idaho\_3 Start: 471, Stop: 2039, Start Num: 47

Candidate Starts for Idaho\_3:

(Start: 47 @471 has 3 MA's), (126, 576), (Start: 201 @684 has 6 MA's), (202, 687), (276, 825), (308, 900), (310, 903), (313, 909), (316, 915), (325, 927), (330, 936), (364, 969), (407, 1071), (428, 1146), (502, 1260), (516, 1290), (518, 1293), (532, 1317), (546, 1347), (550, 1359), (560, 1377), (571, 1398), (610, 1470), (638, 1503), (672, 1545), (677, 1560), (682, 1572), (711, 1617), (721, 1629), (728, 1644), (753, 1668), (788, 1719), (798, 1737), (825, 1779), (829, 1785), (833, 1794), (913, 1917), (939, 1953), (965, 1983),

Gene: IdentityCrisis\_2 Start: 663, Stop: 2147, Start Num: 158

Candidate Starts for IdentityCrisis\_2:

(91, 600), (Start: 158 @663 has 20 MA's), (Start: 205 @747 has 1 MA's), (277, 909), (293, 945), (313, 996), (317, 1005), (420, 1191), (424, 1212), (433, 1233), (437, 1245), (451, 1281), (456, 1290), (487, 1353), (566, 1491), (572, 1503), (670, 1644), (672, 1650), (717, 1719), (728, 1737), (745, 1767), (771, 1791), (787, 1821), (808, 1854), (823, 1878), (856, 1932), (878, 1956),

Gene: Idergollasper\_30 Start: 13074, Stop: 14588, Start Num: 72

Candidate Starts for Idergollasper\_30:

(Start: 72 @13074 has 33 MA's), (Start: 74 @13077 has 14 MA's), (Start: 205 @13257 has 1 MA's), (249, 13350), (276, 13425), (287, 13458), (300, 13485), (313, 13515), (407, 13668), (409, 13674), (420, 13710), (422, 13719), (451, 13800), (456, 13809), (458, 13812), (498, 13851), (538, 13908), (553, 13944), (554, 13947), (668, 14103), (672, 14112), (711, 14181), (717, 14190), (722, 14196), (742, 14229), (771, 14265), (823, 14352), (836, 14373), (891, 14436), (893, 14439), (896, 14442), (907, 14460), (920, 14481), (960, 14523), (988, 14559), (1005, 14571),

Gene: Illumine\_8 Start: 1604, Stop: 3025, Start Num: 161

Candidate Starts for Illumine\_8:

(85, 1532), (Start: 143 @1592 has 2 MA's), (Start: 161 @1604 has 150 MA's), (Start: 219 @1715 has 15 MA's), (222, 1721), (257, 1799), (265, 1808), (277, 1856), (284, 1874), (313, 1943), (348, 1985), (354, 1991), (376, 2018), (378, 2021), (407, 2096), (420, 2138), (422, 2147), (451, 2228), (542, 2342), (566, 2390), (572, 2402), (585, 2432), (597, 2456), (605, 2468), (617, 2483), (672, 2552), (687, 2591), (771, 2696), (789, 2729), (823, 2783), (960, 2960), (1009, 3014),

Gene: Immaculata\_5 Start: 3127, Stop: 4692, Start Num: 71

Candidate Starts for Immaculata\_5:

(Start: 71 @3127 has 81 MA's), (Start: 221 @3337 has 3 MA's), (263, 3391), (281, 3457), (289, 3481), (402, 3697), (408, 3712), (410, 3718), (425, 3778), (443, 3838), (503, 3937), (520, 3967), (530, 3982), (574, 4063), (620, 4141), (627, 4150), (669, 4186), (684, 4225), (704, 4258), (711, 4267), (728, 4294), (771, 4348), (793, 4390), (820, 4411), (835, 4435), (846, 4456), (868, 4480), (941, 4558), (1032, 4678),

Gene: IndyLu\_3 Start: 768, Stop: 2396, Start Num: 125

Candidate Starts for IndyLu\_3:

(Start: 125 @768 has 61 MA's), (228, 924), (281, 1032), (300, 1077), (319, 1116), (346, 1158), (392, 1215), (409, 1266), (410, 1269), (425, 1329), (430, 1347), (439, 1377), (453, 1407), (711, 1878), (782, 1980), (941, 2229), (977, 2277), (1000, 2301), (1032, 2346),

Gene: Inky\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Inky\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Inspire2\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Inspire2\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: InvictusManeo\_6 Start: 1331, Stop: 2758, Start Num: 166

Candidate Starts for InvictusManeo\_6:

(Start: 166 @1331 has 22 MA's), (194, 1388), (Start: 205 @1409 has 1 MA's), (Start: 219 @1433 has 15 MA's), (257, 1517), (265, 1526), (267, 1532), (277, 1574), (284, 1592), (293, 1610), (313, 1661), (346, 1700), (376, 1736), (407, 1814), (420, 1856), (422, 1865), (423, 1868), (451, 1946), (542, 2060), (566, 2108), (572, 2120), (585, 2150), (605, 2186), (626, 2213), (672, 2270), (717, 2354), (733, 2378), (787, 2456), (823, 2513), (838, 2537), (856, 2561), (960, 2690), (1009, 2747),

Gene: Itos\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Itos\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: JAWS\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for JAWS\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: JCole\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for JCole\_2:

(Start: 89 @318 has 52 MA's), (206, 474), (225, 504), (241, 537), (265, 582), (274, 621), (277, 630), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: JF1\_9 Start: 2465, Stop: 3910, Start Num: 161

Candidate Starts for JF1\_9:

(Start: 161 @2465 has 150 MA's), (Start: 219 @2570 has 15 MA's), (257, 2654), (265, 2663), (277, 2711), (283, 2726), (293, 2753), (313, 2804), (321, 2822), (354, 2852), (376, 2879), (407, 2957), (420, 2999), (422, 3008), (423, 3011), (451, 3089), (456, 3098), (496, 3137), (542, 3203), (566, 3251), (585, 3293), (672, 3410), (688, 3452), (717, 3497), (770, 3566), (793, 3611), (808, 3632), (823, 3656), (960, 3833), (1009, 3899), (1014, 3905),

Gene: JRok\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for JRok\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (970, 2484), (995, 2523),

Gene: Jabbawokkie\_4 Start: 1187, Stop: 2707, Start Num: 139

Candidate Starts for Jabbawokkie\_4:

(Start: 132 @1175 has 1 MA's), (Start: 139 @1187 has 74 MA's), (Start: 219 @1313 has 15 MA's), (224, 1322), (244, 1367), (257, 1397), (259, 1400), (263, 1406), (274, 1451), (283, 1475), (293, 1496), (308, 1538), (319, 1559), (344, 1586), (355, 1604), (366, 1607), (376, 1631), (391, 1658), (409, 1715), (420, 1751), (422, 1760), (424, 1772), (426, 1778), (433, 1793), (437, 1805), (449, 1838), (452, 1844), (472, 1880), (474, 1889), (500, 1919), (514, 1949), (516, 1952), (567, 2048), (572, 2057), (583, 2084), (646, 2168), (662, 2183), (731, 2294), (736, 2303), (742, 2312), (787, 2375), (834, 2450), (841, 2462), (856, 2480), (891, 2516), (919, 2558), (925, 2564), (960, 2606), (969, 2618), (975, 2630), (1017, 2696),

Gene: Jahseh\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Jahseh\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: JaimeB\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for JaimeB\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: JalFarm20\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for JalFarm20\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Jalammah\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Jalammah\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (877, 1689), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Jamie19\_2 Start: 509, Stop: 2044, Start Num: 152

Candidate Starts for Jamie19\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367,

926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Jamun\_3 Start: 1027, Stop: 2607, Start Num: 137

Candidate Starts for Jamun\_3:

(Start: 79 @961 has 7 MA's), (Start: 137 @1027 has 8 MA's), (Start: 201 @1123 has 6 MA's), (206, 1132), (267, 1225), (276, 1264), (281, 1279), (289, 1303), (425, 1576), (429, 1588), (430, 1594), (443, 1636), (455, 1657), (481, 1717), (493, 1747), (498, 1756), (527, 1819), (658, 2035), (669, 2047), (684, 2086), (699, 2113), (711, 2128), (731, 2158), (765, 2197), (770, 2206), (774, 2215), (793, 2251), (838, 2305), (974, 2515), (1006, 2557), (1034, 2596),

Gene: Jane\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Jane\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: JanetJ\_3 Start: 1011, Stop: 2603, Start Num: 110

Candidate Starts for JanetJ\_3:

(Start: 110 @1011 has 15 MA's), (Start: 147 @1053 has 1 MA's), (273, 1269), (281, 1293), (283, 1299), (408, 1524), (425, 1590), (443, 1650), (455, 1671), (461, 1680), (516, 1782), (521, 1794), (581, 1917), (639, 2001), (768, 2202), (845, 2316), (1034, 2592),

Gene: JangDynasty\_30 Start: 13169, Stop: 14683, Start Num: 72

Candidate Starts for JangDynasty\_30:

(Start: 72 @13169 has 33 MA's), (Start: 74 @13172 has 14 MA's), (Start: 205 @13352 has 1 MA's), (249, 13445), (276, 13520), (287, 13553), (300, 13580), (313, 13610), (407, 13763), (409, 13769), (420, 13805), (422, 13814), (451, 13895), (456, 13904), (458, 13907), (498, 13946), (538, 14003), (553, 14039), (554, 14042), (668, 14198), (672, 14207), (711, 14276), (717, 14285), (722, 14291), (742, 14324), (771, 14360), (823, 14447), (836, 14468), (891, 14531), (893, 14534), (896, 14537), (907, 14555), (920, 14576), (960, 14618), (988, 14654), (1005, 14666),

Gene: Jannah\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Jannah\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Jarvi\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Jarvi\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: JasperJr\_2 Start: 361, Stop: 1929, Start Num: 113

Candidate Starts for JasperJr\_2:



(Start: 36 @256 has 19 MA's), (Start: 113 @361 has 34 MA's), (183, 445), (198, 478), (225, 520), (233, 538), (241, 553), (252, 574), (264, 595), (273, 634), (294, 694), (306, 730), (313, 742), (338, 784), (346, 796), (371, 823), (408, 901), (440, 1006), (449, 1021), (457, 1036), (524, 1114), (548, 1165), (641, 1321), (657, 1342), (667, 1360), (670, 1366), (703, 1432), (711, 1444), (742, 1489), (743, 1492), (747, 1498), (761, 1519), (771, 1528), (773, 1531), (814, 1600), (885, 1702), (914, 1744), (924, 1759), (952, 1795), (1024, 1891), (1029, 1903), (1038, 1912),

Gene: Jayhawk\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for Jayhawk\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: Jeanie\_2 Start: 520, Stop: 1905, Start Num: 156

Candidate Starts for Jeanie\_2:

(Start: 156 @520 has 23 MA's), (Start: 197 @586 has 2 MA's), (Start: 209 @613 has 1 MA's), (276, 736), (277, 739), (283, 757), (312, 820), (316, 829), (317, 832), (374, 901), (393, 934), (399, 958), (409, 985), (423, 1033), (463, 1132), (509, 1165), (516, 1177), (521, 1189), (608, 1345), (617, 1360), (658, 1408), (683, 1453), (687, 1462), (701, 1486), (728, 1525), (953, 1825), (998, 1891),

Gene: Jebeks\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Jebeks\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (630, 1478), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Jeckyll\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Jeckyll\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Jerky\_3 Start: 1155, Stop: 2615, Start Num: 117

Candidate Starts for Jerky\_3:

(Start: 117 @1155 has 111 MA's), (122, 1161), (Start: 223 @1323 has 13 MA's), (228, 1332), (264, 1392), (283, 1461), (294, 1482), (317, 1533), (424, 1737), (504, 1872), (546, 1950), (551, 1965), (572, 2001), (589, 2043), (610, 2076), (622, 2094), (706, 2214), (708, 2217), (715, 2229), (774, 2304), (810, 2367), (821, 2385), (823, 2388), (958, 2550), (965, 2559), (970, 2568),

Gene: Jessica\_5 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Jessica\_5:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Jflix2\_8 Start: 5554, Stop: 7107, Start Num: 144

Candidate Starts for Jflix2\_8:

(Start: 138 @5548 has 2 MA's), (Start: 144 @5554 has 46 MA's), (266, 5788), (343, 5965), (365, 6001), (367, 6004), (412, 6115), (418, 6133), (423, 6148), (432, 6175), (572, 6427), (584, 6448), (621, 6499), (738, 6691), (867, 6874), (911, 6937), (920, 6952), (945, 6976), (1013, 7054),

Gene: JoBros\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for JoBros\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Joann\_5 Start: 3072, Stop: 4637, Start Num: 71

Candidate Starts for Joann\_5:

(Start: 71 @3072 has 81 MA's), (Start: 201 @3246 has 6 MA's), (Start: 221 @3282 has 3 MA's), (263, 3336), (266, 3345), (273, 3378), (281, 3402), (289, 3426), (346, 3528), (402, 3642), (408, 3657), (410, 3663), (425, 3723), (443, 3783), (503, 3882), (520, 3912), (530, 3927), (561, 3975), (627, 4095), (684, 4170), (704, 4203), (728, 4239), (782, 4314), (793, 4335), (820, 4356), (868, 4425), (941, 4503), (973, 4542), (995, 4572), (1005, 4584), (1032, 4623), (1039, 4632),

Gene: Job42\_3 Start: 670, Stop: 2157, Start Num: 139

Candidate Starts for Job42\_3:

(Start: 132 @658 has 1 MA's), (Start: 139 @670 has 74 MA's), (Start: 219 @796 has 15 MA's), (222, 802), (242, 844), (244, 850), (259, 883), (263, 889), (265, 895), (274, 934), (283, 958), (292, 976), (293, 979), (308, 1021), (344, 1069), (349, 1078), (355, 1087), (366, 1090), (391, 1141), (414, 1219), (422, 1243), (424, 1255), (433, 1276), (437, 1288), (449, 1321), (452, 1327), (498, 1396), (500, 1402), (516, 1435), (537, 1471), (567, 1531), (572, 1540), (583, 1567), (640, 1645), (694, 1741), (736, 1786), (787, 1858), (800, 1879), (810, 1897), (834, 1933), (837, 1939), (856, 1963), (882, 1993), (891, 1999), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101), (975, 2113),

Gene: Jobypre\_5 Start: 1196, Stop: 2755, Start Num: 71

Candidate Starts for Jobypre\_5:

(Start: 36 @1139 has 19 MA's), (40, 1148), (Start: 68 @1190 has 59 MA's), (Start: 71 @1196 has 81 MA's), (191, 1367), (207, 1397), (262, 1472), (265, 1478), (267, 1484), (327, 1640), (334, 1649), (336, 1652), (338, 1655), (389, 1730), (407, 1784), (408, 1787), (409, 1790), (515, 2021), (552, 2096), (568, 2117), (572, 2123), (623, 2192), (654, 2216), (666, 2234), (672, 2249), (736, 2363), (770, 2402), (773, 2408), (810, 2474), (850, 2528), (877, 2564), (885, 2576), (933, 2615), (1008, 2702), (1034, 2747), (1036, 2750),

Gene: JoeDirt\_4 Start: 1059, Stop: 2636, Start Num: 71

Candidate Starts for JoeDirt\_4:

(Start: 68 @1053 has 59 MA's), (Start: 71 @1059 has 81 MA's), (191, 1230), (249, 1317), (262, 1335), (265, 1341), (273, 1377), (336, 1515), (338, 1518), (389, 1593), (407, 1647), (408, 1650), (409, 1653), (478, 1821), (511, 1875), (515, 1884), (525, 1899), (535, 1920), (552, 1959), (568, 1980), (572, 1986), (586, 2013), (623, 2055), (654, 2079), (666, 2097), (670, 2106), (672, 2112), (685, 2145), (708, 2178), (731, 2217), (734, 2223), (736, 2226), (773, 2271), (810, 2337), (842, 2388), (856, 2403), (865, 2412), (877, 2427), (878, 2430), (976, 2532), (1005, 2559), (1034, 2610), (1036, 2613),

Gene: Johnathan\_3 Start: 689, Stop: 2317, Start Num: 125

Candidate Starts for Johnathan\_3:

(Start: 125 @689 has 61 MA's), (228, 845), (281, 953), (300, 998), (307, 1016), (319, 1037), (331, 1061), (392, 1136), (409, 1187), (410, 1190), (425, 1250), (430, 1268), (439, 1298), (453, 1328), (699,

1784), (711, 1799), (869, 2054), (941, 2150), (977, 2198), (1050, 2306),

Gene: Jojo24\_2 Start: 521, Stop: 2098, Start Num: 110

Candidate Starts for Jojo24\_2:

(Start: 110 @521 has 15 MA's), (230, 704), (265, 743), (267, 749), (273, 779), (319, 887), (365, 956), (392, 986), (431, 1121), (440, 1151), (442, 1157), (443, 1160), (574, 1427), (580, 1442), (581, 1445), (588, 1457), (630, 1517), (672, 1562), (678, 1580), (682, 1589), (695, 1619), (771, 1712), (782, 1733), (787, 1742), (820, 1802), (835, 1826), (908, 1922), (977, 2015), (993, 2033), (1034, 2087),

Gene: Jolene\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Jolene\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Jolie2\_2 Start: 376, Stop: 1950, Start Num: 72

Candidate Starts for Jolie2\_2:

(Start: 72 @376 has 33 MA's), (194, 544), (293, 763), (313, 814), (317, 823), (337, 853), (365, 865), (391, 916), (409, 973), (420, 1009), (424, 1030), (434, 1054), (451, 1099), (456, 1108), (566, 1261), (608, 1339), (642, 1384), (672, 1435), (736, 1534), (742, 1543), (787, 1615), (793, 1627), (803, 1642), (808, 1648), (810, 1654), (821, 1669), (823, 1672), (836, 1693), (874, 1750), (878, 1756), (888, 1768), (891, 1771), (954, 1858), (1009, 1939), (1014, 1945),

Gene: Jonghyun\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Jonghyun\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: JooneeDee\_3 Start: 1104, Stop: 2564, Start Num: 117

Candidate Starts for JooneeDee\_3:

(Start: 117 @1104 has 111 MA's), (122, 1110), (Start: 223 @1272 has 13 MA's), (228, 1281), (264, 1341), (283, 1410), (294, 1431), (317, 1482), (424, 1686), (504, 1821), (546, 1899), (551, 1914), (564, 1932), (572, 1950), (589, 1992), (610, 2025), (622, 2043), (706, 2163), (708, 2166), (715, 2178), (724, 2190), (731, 2202), (774, 2253), (808, 2310), (810, 2316), (817, 2325), (821, 2334), (823, 2337), (958, 2499), (965, 2508), (970, 2517), (995, 2556),

Gene: JorRay\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for JorRay\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Josuke\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Josuke\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589,

1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Journey\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Journey\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Jovita\_3 Start: 802, Stop: 2430, Start Num: 125

Candidate Starts for Jovita\_3:

(Start: 125 @802 has 61 MA's), (228, 958), (281, 1066), (319, 1150), (331, 1174), (346, 1192), (392, 1249), (409, 1300), (410, 1303), (425, 1363), (430, 1381), (439, 1411), (453, 1441), (699, 1897), (711, 1912), (941, 2263), (1050, 2419),

Gene: Joy99\_8 Start: 1563, Stop: 2987, Start Num: 161

Candidate Starts for Joy99\_8:

(85, 1491), (Start: 143 @1551 has 2 MA's), (Start: 161 @1563 has 150 MA's), (Start: 219 @1674 has 15 MA's), (222, 1680), (257, 1758), (265, 1767), (277, 1815), (284, 1833), (313, 1902), (348, 1944), (354, 1950), (376, 1977), (378, 1980), (420, 2097), (422, 2106), (451, 2187), (542, 2301), (566, 2349), (572, 2361), (585, 2391), (597, 2415), (605, 2427), (617, 2442), (670, 2505), (672, 2511), (771, 2658), (789, 2691), (823, 2745), (960, 2922), (1009, 2976),

Gene: JuJu\_2 Start: 352, Stop: 1959, Start Num: 104

Candidate Starts for JuJu\_2:

(Start: 104 @352 has 1 MA's), (107, 355), (Start: 113 @361 has 34 MA's), (198, 475), (225, 517), (233, 535), (241, 550), (252, 571), (273, 631), (281, 655), (294, 691), (306, 727), (313, 739), (338, 781), (341, 784), (425, 961), (440, 1003), (449, 1018), (457, 1033), (459, 1036), (524, 1111), (548, 1162), (641, 1318), (657, 1339), (659, 1342), (703, 1429), (711, 1441), (736, 1477), (761, 1516), (770, 1522), (773, 1528), (789, 1558), (810, 1594), (814, 1597), (854, 1657), (856, 1660), (865, 1669), (914, 1738), (1023, 1888), (1049, 1942),

Gene: Jubie\_5 Start: 1190, Stop: 2755, Start Num: 68

Candidate Starts for Jubie\_5:

(Start: 36 @1139 has 19 MA's), (40, 1148), (Start: 68 @1190 has 59 MA's), (Start: 71 @1196 has 81 MA's), (191, 1367), (207, 1397), (262, 1472), (265, 1478), (267, 1484), (327, 1640), (334, 1649), (336, 1652), (338, 1655), (389, 1730), (407, 1784), (408, 1787), (409, 1790), (515, 2021), (552, 2096), (568, 2117), (572, 2123), (623, 2192), (654, 2216), (666, 2234), (672, 2249), (736, 2363), (770, 2402), (773, 2408), (810, 2474), (850, 2528), (877, 2564), (885, 2576), (933, 2615), (1008, 2702), (1034, 2747), (1036, 2750),

Gene: Juice456\_3 Start: 797, Stop: 2158, Start Num: 219

Candidate Starts for Juice456\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (257, 881), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (293, 980), (294, 983), (308, 1022), (319, 1043), (344, 1070), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102),

Gene: Juliette\_9 Start: 2575, Stop: 3915, Start Num: 219

Candidate Starts for Juliette\_9:

(Start: 161 @2470 has 150 MA's), (Start: 219 @2575 has 15 MA's), (257, 2659), (265, 2668), (277, 2716), (293, 2758), (313, 2809), (321, 2827), (354, 2857), (376, 2884), (407, 2962), (420, 3004), (422, 3013), (423, 3016), (451, 3094), (456, 3103), (496, 3142), (542, 3208), (566, 3256), (585, 3298), (597, 3322), (672, 3415), (688, 3457), (717, 3502), (770, 3571), (793, 3616), (803, 3631), (808, 3637), (823, 3661), (960, 3838), (1009, 3904), (1014, 3910),

Gene: Jumboset\_5 Start: 3286, Stop: 4641, Start Num: 221

Candidate Starts for Jumboset\_5:

(Start: 71 @3076 has 81 MA's), (Start: 221 @3286 has 3 MA's), (263, 3340), (281, 3406), (289, 3430), (402, 3646), (408, 3661), (410, 3667), (425, 3727), (443, 3787), (503, 3886), (520, 3916), (530, 3931), (574, 4012), (620, 4090), (627, 4099), (669, 4135), (684, 4174), (704, 4207), (711, 4216), (728, 4243), (771, 4297), (793, 4339), (835, 4384), (846, 4405), (868, 4429), (941, 4507), (1032, 4627),

Gene: Jung\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for Jung\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (252, 718), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (640, 1477), (670, 1522), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: Juniormint\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Juniormint\_2:

(Start: 42 @413 has 46 MA's), (Start: 124 @524 has 3 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (720, 1622), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Juno112\_2 Start: 370, Stop: 1992, Start Num: 95

Candidate Starts for Juno112\_2:

(Start: 79 @349 has 7 MA's), (Start: 95 @370 has 42 MA's), (263, 601), (264, 604), (267, 613), (275, 649), (281, 667), (316, 745), (392, 850), (425, 964), (432, 988), (443, 1024), (455, 1045), (466, 1060), (485, 1120), (496, 1141), (527, 1204), (658, 1420), (669, 1432), (679, 1459), (699, 1498), (704, 1504), (731, 1543), (755, 1570), (765, 1582), (782, 1615), (789, 1627), (817, 1654), (820, 1660), (974, 1900), (977, 1906), (995, 1927), (1010, 1948), (1032, 1978), (1034, 1981), (1036, 1984),

Gene: JustASigh\_2 Start: 553, Stop: 2340, Start Num: 34

Candidate Starts for JustASigh\_2:

(Start: 34 @553 has 1 MA's), (225, 850), (241, 883), (273, 964), (306, 1048), (313, 1060), (373, 1147), (409, 1237), (441, 1342), (527, 1495), (534, 1513), (570, 1582), (636, 1699), (666, 1741), (670, 1750), (703, 1816), (724, 1846), (784, 1936), (789, 1945), (792, 1951), (793, 1954), (808, 1975), (885, 2083), (899, 2098), (914, 2125), (951, 2170), (964, 2188), (992, 2224), (1003, 2230), (1020, 2260),

Gene: KHumphrey\_2 Start: 370, Stop: 1992, Start Num: 95

Candidate Starts for KHumphrey\_2:

(Start: 79 @349 has 7 MA's), (Start: 95 @370 has 42 MA's), (263, 601), (264, 604), (267, 613), (275, 649), (281, 667), (316, 745), (392, 850), (425, 964), (432, 988), (443, 1024), (455, 1045), (466, 1060), (485, 1120), (527, 1204), (658, 1420), (669, 1432), (679, 1459), (699, 1498), (704, 1504), (731, 1543), (755, 1570), (765, 1582), (782, 1615), (789, 1627), (817, 1654), (820, 1660), (918, 1831), (974, 1900), (977, 1906), (995, 1927), (1010, 1948), (1032, 1978), (1034, 1981), (1036, 1984),

Gene: Kahlid\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Kahlid\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Kaijohn\_3 Start: 1080, Stop: 2540, Start Num: 117

Candidate Starts for Kaijohn\_3:

(Start: 117 @1080 has 111 MA's), (122, 1086), (Start: 223 @1248 has 13 MA's), (228, 1257), (264, 1317), (283, 1386), (294, 1407), (317, 1458), (424, 1662), (504, 1797), (546, 1875), (551, 1890), (572, 1926), (589, 1968), (610, 2001), (622, 2019), (643, 2043), (706, 2139), (708, 2142), (715, 2154), (774, 2229), (810, 2292), (821, 2310), (823, 2313), (958, 2475), (965, 2484), (970, 2493), (995, 2532),

Gene: Kalizoi\_5 Start: 3286, Stop: 4641, Start Num: 221

Candidate Starts for Kalizoi\_5:

(Start: 71 @3076 has 81 MA's), (Start: 221 @3286 has 3 MA's), (263, 3340), (278, 3397), (281, 3406), (402, 3646), (408, 3661), (410, 3667), (425, 3727), (443, 3787), (503, 3886), (520, 3916), (530, 3931), (574, 4012), (620, 4090), (627, 4099), (669, 4135), (684, 4174), (704, 4207), (711, 4216), (728, 4243), (771, 4297), (793, 4339), (835, 4384), (846, 4405), (868, 4429), (941, 4507), (1032, 4627),

Gene: Kamaru\_3 Start: 671, Stop: 2188, Start Num: 139

Candidate Starts for Kamaru\_3:

(Start: 134 @662 has 3 MA's), (Start: 139 @671 has 74 MA's), (211, 788), (Start: 219 @797 has 15 MA's), (224, 806), (244, 851), (250, 869), (259, 884), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (321, 1049), (344, 1070), (355, 1088), (366, 1091), (368, 1094), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (424, 1256), (426, 1262), (433, 1277), (437, 1289), (452, 1328), (503, 1409), (526, 1451), (567, 1532), (572, 1541), (583, 1568), (626, 1634), (652, 1655), (721, 1757), (736, 1784), (834, 1931), (841, 1943), (856, 1961), (919, 2039), (922, 2042), (925, 2045), (960, 2087), (969, 2099), (975, 2111),

Gene: KappaFarmDelta\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for KappaFarmDelta\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (198, 477), (225, 519), (233, 537), (241, 552), (264, 594), (273, 633), (281, 657), (294, 693), (306, 729), (313, 741), (338, 783), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (459, 1038), (524, 1113), (548, 1164), (641, 1320), (657, 1341), (667, 1359), (670, 1365), (703, 1431), (711, 1443), (736, 1479), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (814, 1599), (854, 1659), (885, 1701), (914, 1743), (924, 1758), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911),

Gene: Kareem\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Kareem\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Kari\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Kari\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Kasen3\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Kasen3\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: KashFlow\_4 Start: 1954, Stop: 3486, Start Num: 158

Candidate Starts for KashFlow\_4:

(88, 1870), (Start: 121 @1912 has 4 MA's), (128, 1921), (Start: 158 @1954 has 20 MA's), (218, 2068), (247, 2131), (266, 2164), (267, 2167), (278, 2212), (308, 2287), (313, 2296), (388, 2398), (390, 2401), (412, 2470), (540, 2719), (572, 2782), (584, 2809), (684, 2968), (708, 3004), (724, 3025), (728, 3034), (734, 3043), (780, 3097), (792, 3121), (976, 3355), (988, 3367),

Gene: Katzastrophic\_3 Start: 938, Stop: 2503, Start Num: 125

Candidate Starts for Katzastrophic\_3:

(Start: 125 @938 has 61 MA's), (228, 1094), (281, 1202), (316, 1280), (320, 1289), (335, 1316), (392, 1385), (409, 1436), (425, 1499), (453, 1577), (580, 1850), (678, 1988), (766, 2117), (768, 2120), (985, 2420), (1043, 2495),

Gene: KayPaulus\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for KayPaulus\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (431, 1677), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (995, 2523),

Gene: Keelan\_32 Start: 9783, Stop: 11189, Start Num: 176

Candidate Starts for Keelan\_32:

(133, 9726), (153, 9747), (Start: 176 @9783 has 6 MA's), (181, 9795), (272, 9969), (275, 9978), (287, 10005), (310, 10062), (339, 10116), (408, 10242), (410, 10248), (414, 10266), (422, 10290), (506, 10464), (550, 10521), (572, 10557), (631, 10635), (672, 10698), (710, 10761), (739, 10800), (793, 10893), (822, 10938), (833, 10956), (842, 10971),

Gene: Keiki\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for Keiki\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (243, 528), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (561, 1206), (572, 1227), (619, 1293), (636, 1314), (666, 1356), (683, 1398), (724, 1467), (734, 1485), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (809, 1602), (823, 1626), (872, 1704), (874, 1707), (882, 1719), (942, 1797), (950, 1806), (970, 1827), (1005, 1875), (1008, 1881),

Gene: Kels\_2 Start: 349, Stop: 1851, Start Num: 86

Candidate Starts for Kels\_2:

(Start: 86 @349 has 2 MA's), (106, 373), (Start: 209 @508 has 1 MA's), (218, 520), (Start: 221 @526 has 3 MA's), (227, 535), (267, 598), (273, 628), (276, 637), (282, 655), (341, 754), (348, 766), (376, 799), (409, 880), (423, 928), (447, 1009), (546, 1144), (578, 1210), (583, 1222), (603, 1255), (622, 1279), (711, 1411), (728, 1438), (800, 1531), (848, 1615), (852, 1624), (915, 1708), (926, 1723), (970, 1783), (988, 1813),

Gene: Kenna\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for Kenna\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (Start: 205 @775 has 1 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (224, 808), (242, 847), (244, 853), (259, 886), (273, 934), (274, 937), (277, 946), (292, 979), (293, 982), (308, 1024), (326, 1057), (344, 1072), (355, 1090), (366, 1093), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (422, 1246), (423, 1249), (424, 1258), (433, 1279), (437, 1291), (445, 1318), (449, 1324), (452, 1330), (498, 1399), (503, 1411), (542, 1483), (550, 1507), (572, 1543), (583, 1570), (652, 1657), (670, 1681), (721, 1759), (736, 1786), (742, 1795), (834, 1933), (841, 1945), (856, 1963), (919, 2041), (925, 2047), (960, 2089), (969, 2101), (975, 2113), (1018, 2182),

Gene: Kenzers\_3 Start: 677, Stop: 2305, Start Num: 125

Candidate Starts for Kenzers\_3:

(Start: 125 @677 has 61 MA's), (228, 833), (281, 941), (319, 1025), (331, 1049), (346, 1067), (392, 1124), (409, 1175), (410, 1178), (425, 1238), (430, 1256), (439, 1286), (453, 1316), (699, 1772), (711, 1787), (941, 2138), (977, 2186), (1050, 2294),

Gene: Kepler\_3 Start: 848, Stop: 2329, Start Num: 201

Candidate Starts for Kepler\_3:

(Start: 79 @683 has 7 MA's), (Start: 201 @848 has 6 MA's), (Start: 223 @887 has 13 MA's), (263, 938), (267, 950), (275, 986), (281, 1004), (392, 1187), (402, 1220), (425, 1301), (429, 1313), (443, 1361), (455, 1382), (466, 1397), (485, 1454), (669, 1769), (699, 1835), (710, 1847), (731, 1880), (765, 1919), (771, 1931), (782, 1952), (820, 1997), (838, 2027), (860, 2072), (880, 2114), (903, 2141), (905, 2144), (974, 2237), (977, 2243), (995, 2264), (1005, 2276), (1032, 2315), (1034, 2318),

Gene: Keshu\_7 Start: 1473, Stop: 2897, Start Num: 161

Candidate Starts for Keshu\_7:

(112, 1434), (Start: 143 @1461 has 2 MA's), (Start: 161 @1473 has 150 MA's), (Start: 205 @1560 has 1 MA's), (Start: 219 @1584 has 15 MA's), (257, 1668), (265, 1677), (277, 1725), (284, 1743), (293, 1761), (313, 1812), (348, 1854), (354, 1860), (376, 1887), (407, 1965), (420, 2007), (422, 2016), (451, 2097), (462, 2115), (542, 2211), (566, 2259), (572, 2271), (585, 2301), (597, 2325), (605, 2337), (672, 2421), (690, 2463), (770, 2562), (771, 2565), (793, 2607), (803, 2622), (808, 2628), (821, 2649), (823, 2652), (960, 2829), (1014, 2892),

Gene: Kevanna\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Kevanna\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (431, 1677), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (995, 2523),

Gene: Kevin1\_2 Start: 495, Stop: 2030, Start Num: 152

Candidate Starts for Kevin1\_2:

(Start: 152 @495 has 22 MA's), (Start: 156 @498 has 23 MA's), (Start: 166 @513 has 22 MA's), (190, 570), (Start: 200 @588 has 2 MA's), (206, 600), (256, 672), (272, 720), (275, 729), (300, 792), (336, 864), (367, 912), (408, 1011), (414, 1035), (423, 1062), (450, 1134), (459, 1149), (469, 1167), (528,



1275), (540, 1299), (572, 1362), (631, 1446), (670, 1503), (675, 1518), (708, 1575), (719, 1593), (735, 1620), (780, 1689), (814, 1746), (827, 1755), (849, 1776), (873, 1809), (883, 1824), (902, 1845), (911, 1860), (976, 1941), (982, 1947),

Gene: Khuang\_2 Start: 390, Stop: 1988, Start Num: 99

Candidate Starts for Khuang\_2:

(52, 318), (99, 390), (190, 507), (267, 630), (300, 759), (392, 918), (410, 972), (424, 1029), (443, 1092), (574, 1341), (588, 1371), (595, 1383), (669, 1470), (678, 1494), (682, 1503), (684, 1509), (704, 1542), (724, 1569), (725, 1572), (771, 1632), (826, 1704), (886, 1767), (903, 1788), (908, 1797), (937, 1836), (1023, 1950), (1027, 1956),

Gene: KiSi\_7 Start: 1481, Stop: 2905, Start Num: 161

Candidate Starts for KiSi\_7:

(Start: 161 @1481 has 150 MA's), (Start: 205 @1568 has 1 MA's), (Start: 219 @1592 has 15 MA's), (222, 1598), (257, 1676), (265, 1685), (277, 1733), (284, 1751), (293, 1769), (313, 1820), (346, 1859), (376, 1895), (407, 1973), (420, 2015), (422, 2024), (451, 2105), (542, 2219), (564, 2261), (566, 2267), (572, 2279), (585, 2309), (597, 2333), (605, 2345), (617, 2360), (672, 2429), (690, 2471), (770, 2570), (787, 2603), (789, 2606), (810, 2642), (823, 2660), (965, 2843), (1009, 2894),

Gene: Kieran\_3 Start: 938, Stop: 2563, Start Num: 119

Candidate Starts for Kieran\_3:

(1, 410), (Start: 119 @938 has 2 MA's), (Start: 125 @944 has 61 MA's), (228, 1100), (275, 1190), (281, 1208), (286, 1223), (319, 1292), (331, 1316), (346, 1334), (392, 1391), (409, 1442), (410, 1445), (425, 1505), (431, 1526), (439, 1553), (453, 1583), (622, 1922), (710, 2045), (912, 2360), (941, 2399), (1032, 2516),

Gene: Kiko\_2 Start: 407, Stop: 2017, Start Num: 120

Candidate Starts for Kiko\_2:

(Start: 120 @407 has 15 MA's), (239, 593), (294, 728), (313, 776), (362, 848), (425, 1001), (440, 1043), (457, 1073), (494, 1136), (524, 1187), (561, 1259), (566, 1268), (567, 1271), (574, 1289), (587, 1319), (641, 1394), (683, 1481), (703, 1514), (734, 1559), (761, 1601), (805, 1670), (810, 1679), (821, 1697), (877, 1769), (904, 1805), (934, 1847), (950, 1868), (952, 1874),

Gene: KilKor\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for KilKor\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (252, 718), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (630, 1465), (640, 1477), (670, 1522), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: KillerTomato\_3 Start: 1125, Stop: 2585, Start Num: 117

Candidate Starts for KillerTomato\_3:

(Start: 117 @1125 has 111 MA's), (122, 1131), (Start: 223 @1293 has 13 MA's), (228, 1302), (264, 1362), (283, 1431), (294, 1452), (317, 1503), (424, 1707), (504, 1842), (546, 1920), (551, 1935), (572, 1971), (589, 2013), (610, 2046), (622, 2064), (706, 2184), (708, 2187), (715, 2199), (774, 2274), (810, 2337), (821, 2355), (823, 2358), (958, 2520), (970, 2538), (995, 2577),

Gene: Kimberlium\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Kimberlium\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (257, 881), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (293, 980), (294, 983), (308, 1022), (319, 1043), (344, 1070), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403),

(516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102),

Gene: Kinbote\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Kinbote\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: KingBob\_2 Start: 428, Stop: 1993, Start Num: 71

Candidate Starts for KingBob\_2:

(Start: 71 @428 has 81 MA's), (Start: 200 @599 has 2 MA's), (263, 692), (266, 701), (273, 734), (278, 749), (281, 758), (289, 782), (316, 836), (381, 947), (408, 1013), (410, 1019), (425, 1079), (443, 1139), (461, 1169), (520, 1268), (620, 1442), (627, 1451), (669, 1487), (672, 1493), (685, 1529), (710, 1565), (731, 1598), (762, 1637), (768, 1643), (886, 1784), (941, 1859), (1005, 1940), (1032, 1979),

Gene: Kingsley\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Kingsley\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Kingsolomon\_5 Start: 1190, Stop: 2755, Start Num: 68

Candidate Starts for Kingsolomon\_5:

(Start: 36 @1139 has 19 MA's), (40, 1148), (Start: 68 @1190 has 59 MA's), (Start: 71 @1196 has 81 MA's), (191, 1367), (207, 1397), (262, 1472), (265, 1478), (267, 1484), (327, 1640), (334, 1649), (336, 1652), (338, 1655), (389, 1730), (407, 1784), (408, 1787), (409, 1790), (515, 2021), (552, 2096), (568, 2117), (572, 2123), (623, 2192), (654, 2216), (666, 2234), (672, 2249), (736, 2363), (770, 2402), (773, 2408), (810, 2474), (850, 2528), (877, 2564), (885, 2576), (933, 2615), (1008, 2702), (1034, 2747), (1036, 2750),

Gene: Kittykat\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Kittykat\_2:

(Start: 71 @426 has 81 MA's), (263, 690), (265, 696), (276, 741), (281, 756), (283, 762), (289, 780), (408, 1011), (410, 1017), (425, 1077), (450, 1149), (503, 1236), (520, 1266), (530, 1281), (581, 1380), (620, 1440), (627, 1449), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (846, 1755), (868, 1779), (941, 1857), (1032, 1977), (1039, 1986),

Gene: Klein\_10 Start: 3688, Stop: 5220, Start Num: 158

Candidate Starts for Klein\_10:

(88, 3604), (Start: 121 @3646 has 4 MA's), (128, 3655), (Start: 158 @3688 has 20 MA's), (218, 3802), (247, 3865), (266, 3898), (267, 3901), (276, 3940), (278, 3946), (308, 4021), (313, 4030), (388, 4132), (401, 4171), (412, 4204), (540, 4453), (572, 4516), (584, 4543), (684, 4702), (708, 4738), (724, 4759), (728, 4768), (734, 4777), (780, 4831), (792, 4855), (855, 4936), (976, 5089), (988, 5101),

Gene: Kojax4\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Kojax4\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Korra\_5 Start: 3082, Stop: 4647, Start Num: 71

Candidate Starts for Korra\_5:

(Start: 71 @3082 has 81 MA's), (Start: 221 @3292 has 3 MA's), (263, 3346), (278, 3403), (281, 3412), (402, 3652), (408, 3667), (410, 3673), (425, 3733), (443, 3793), (503, 3892), (520, 3922), (530, 3937), (574, 4018), (620, 4096), (627, 4105), (669, 4141), (684, 4180), (704, 4213), (711, 4222), (728, 4249), (771, 4303), (793, 4345), (835, 4390), (846, 4411), (868, 4435), (941, 4513), (1032, 4633),

Gene: Kratio\_5 Start: 1088, Stop: 2515, Start Num: 166

Candidate Starts for Kratio\_5:

(Start: 166 @1088 has 22 MA's), (194, 1145), (Start: 205 @1166 has 1 MA's), (Start: 219 @1190 has 15 MA's), (257, 1274), (265, 1283), (267, 1289), (277, 1331), (284, 1349), (293, 1367), (313, 1418), (346, 1457), (376, 1493), (407, 1571), (420, 1613), (422, 1622), (423, 1625), (451, 1703), (542, 1817), (566, 1865), (572, 1877), (585, 1907), (605, 1943), (626, 1970), (672, 2027), (717, 2111), (733, 2135), (787, 2213), (823, 2270), (838, 2294), (856, 2318), (960, 2447), (1009, 2504),

Gene: Krili\_30 Start: 13244, Stop: 14758, Start Num: 72

Candidate Starts for Krili\_30:

(Start: 72 @13244 has 33 MA's), (Start: 74 @13247 has 14 MA's), (Start: 205 @13427 has 1 MA's), (249, 13520), (276, 13595), (287, 13628), (300, 13655), (313, 13685), (407, 13838), (409, 13844), (420, 13880), (422, 13889), (451, 13970), (456, 13979), (458, 13982), (498, 14021), (538, 14078), (553, 14114), (554, 14117), (668, 14273), (672, 14282), (711, 14351), (717, 14360), (722, 14366), (742, 14399), (771, 14435), (823, 14522), (836, 14543), (891, 14606), (893, 14609), (896, 14612), (907, 14630), (920, 14651), (960, 14693), (988, 14729), (1005, 14741),

Gene: Krueger\_7 Start: 1519, Stop: 2946, Start Num: 161

Candidate Starts for Krueger\_7:

(Start: 161 @1519 has 150 MA's), (Start: 205 @1609 has 1 MA's), (Start: 219 @1633 has 15 MA's), (222, 1639), (257, 1717), (265, 1726), (277, 1774), (284, 1792), (313, 1861), (346, 1900), (354, 1909), (376, 1936), (378, 1939), (407, 2014), (420, 2056), (422, 2065), (451, 2146), (496, 2194), (542, 2260), (564, 2302), (566, 2308), (572, 2320), (575, 2326), (585, 2350), (597, 2374), (601, 2380), (617, 2401), (672, 2470), (690, 2512), (762, 2605), (770, 2611), (771, 2614), (789, 2647), (808, 2677), (823, 2701), (856, 2749), (960, 2878), (1009, 2935), (1014, 2941),

Gene: Krypton555\_5 Start: 1185, Stop: 2750, Start Num: 68

Candidate Starts for Krypton555\_5:

(Start: 68 @1185 has 59 MA's), (Start: 71 @1191 has 81 MA's), (191, 1362), (262, 1467), (267, 1479), (327, 1635), (334, 1644), (336, 1647), (338, 1650), (389, 1725), (407, 1779), (408, 1782), (409, 1785), (515, 2016), (568, 2112), (572, 2118), (623, 2187), (654, 2211), (666, 2229), (672, 2244), (685, 2277), (736, 2358), (770, 2397), (773, 2403), (810, 2469), (850, 2523), (877, 2559), (885, 2571), (933, 2610), (1008, 2697), (1034, 2742), (1036, 2745),

Gene: Ksquared\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Ksquared\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524,

1286), (541, 1316), (548, 1337), (630, 1478), (640, 1490), (670, 1535), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Kubed\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for Kubed\_2:

(Start: 144 @378 has 46 MA's), (Start: 158 @390 has 20 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (508, 1134), (546, 1179), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (683, 1398), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (787, 1569), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005, 1875), (1008, 1881),

Gene: Kudetre\_12 Start: 4947, Stop: 6422, Start Num: 144

Candidate Starts for Kudetre\_12:

(Start: 144 @4947 has 46 MA's), (235, 5094), (262, 5133), (267, 5145), (310, 5268), (364, 5355), (391, 5412), (410, 5469), (422, 5511), (424, 5523), (434, 5547), (441, 5571), (467, 5613), (572, 5793), (600, 5835), (667, 5916), (685, 5961), (700, 5985), (728, 6030), (773, 6090), (814, 6153), (817, 6159), (871, 6231), (885, 6249), (902, 6267), (994, 6366), (1010, 6384), (1027, 6414),

Gene: Kuleana\_3 Start: 777, Stop: 2342, Start Num: 147

Candidate Starts for Kuleana\_3:

(Start: 74 @690 has 14 MA's), (Start: 79 @696 has 7 MA's), (Start: 147 @777 has 1 MA's), (202, 864), (208, 876), (Start: 223 @900 has 13 MA's), (264, 954), (267, 963), (275, 999), (281, 1017), (392, 1200), (409, 1251), (411, 1263), (425, 1314), (429, 1326), (430, 1332), (443, 1374), (455, 1395), (466, 1410), (485, 1467), (669, 1782), (699, 1848), (731, 1893), (765, 1932), (770, 1941), (771, 1944), (782, 1965), (817, 2004), (820, 2010), (821, 2013), (894, 2142), (973, 2247), (974, 2250), (995, 2277), (1000, 2280), (1006, 2292), (1014, 2301), (1032, 2328), (1034, 2331), (1036, 2334),

Gene: Kumao\_13 Start: 4256, Stop: 5845, Start Num: 77

Candidate Starts for Kumao\_13:

(Start: 77 @4256 has 1 MA's), (179, 4373), (233, 4472), (235, 4475), (284, 4610), (313, 4676), (334, 4715), (343, 4727), (395, 4787), (408, 4832), (418, 4868), (420, 4871), (422, 4880), (525, 5078), (545, 5111), (583, 5183), (600, 5204), (670, 5297), (672, 5303), (724, 5396), (728, 5405), (770, 5462), (773, 5468), (786, 5492), (824, 5555), (842, 5585), (885, 5636), (966, 5723), (1005, 5768), (1008, 5774), (1019, 5792),

Gene: Kumotta\_3 Start: 1020, Stop: 2465, Start Num: 163

Candidate Starts for Kumotta\_3:

(Start: 163 @1020 has 2 MA's), (224, 1125), (263, 1203), (265, 1209), (420, 1545), (422, 1554), (424, 1566), (436, 1596), (437, 1599), (451, 1635), (536, 1755), (548, 1782), (566, 1812), (660, 1941), (670, 1962), (672, 1968), (674, 1974), (676, 1980), (683, 1998), (771, 2118), (785, 2145), (826, 2208), (844, 2238), (893, 2292), (907, 2313), (1009, 2454),

Gene: KylieMac\_5 Start: 787, Stop: 2277, Start Num: 95

Candidate Starts for KylieMac\_5:

(Start: 95 @787 has 42 MA's), (Start: 150 @832 has 1 MA's), (Start: 209 @934 has 1 MA's), (227, 961), (263, 1012), (267, 1024), (273, 1054), (277, 1066), (282, 1081), (313, 1147), (348, 1192), (399, 1279), (408, 1303), (409, 1306), (410, 1309), (423, 1354), (429, 1378), (431, 1387), (463, 1453), (516, 1516), (521, 1528), (546, 1570), (555, 1588), (583, 1648), (622, 1705), (635, 1717), (649, 1741), (670, 1759), (711, 1837), (755, 1891), (791, 1945), (800, 1957), (806, 1966), (848, 2041), (852, 2050), (868,

2077), (915, 2134), (955, 2188), (1004, 2260),

Gene: KyriosFaba\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for KyriosFaba\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Lahqtemish\_3 Start: 769, Stop: 2394, Start Num: 125

Candidate Starts for Lahqtemish\_3:

(Start: 125 @769 has 61 MA's), (228, 925), (281, 1033), (319, 1117), (348, 1162), (409, 1267), (425, 1330), (431, 1351), (453, 1408), (617, 1744), (711, 1876), (782, 1978), (941, 2227), (977, 2275), (1032, 2344),

Gene: Laila\_5 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Laila\_5:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (227, 974), (263, 1025), (267, 1037), (273, 1067), (277, 1079), (282, 1094), (313, 1160), (348, 1205), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (429, 1391), (431, 1400), (463, 1466), (516, 1529), (521, 1541), (546, 1583), (555, 1601), (583, 1661), (622, 1718), (635, 1730), (649, 1754), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (806, 1979), (848, 2054), (852, 2063), (868, 2090), (915, 2147), (955, 2201), (1004, 2273),

Gene: Lakshmi\_5 Start: 3282, Stop: 4673, Start Num: 201

Candidate Starts for Lakshmi\_5:

(Start: 71 @3108 has 81 MA's), (Start: 201 @3282 has 6 MA's), (208, 3297), (Start: 221 @3318 has 3 MA's), (263, 3372), (266, 3381), (273, 3414), (281, 3438), (402, 3678), (408, 3693), (410, 3699), (425, 3759), (443, 3819), (503, 3918), (520, 3948), (530, 3963), (561, 4011), (574, 4044), (627, 4131), (684, 4206), (728, 4275), (782, 4350), (793, 4371), (820, 4392), (868, 4461), (905, 4488), (941, 4539), (973, 4578), (995, 4608), (1005, 4620), (1032, 4659), (1039, 4668),

Gene: Lamberg\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Lamberg\_2:

(Start: 89 @318 has 52 MA's), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Langerak\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Langerak\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (720, 1622), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Larva\_6 Start: 1090, Stop: 2517, Start Num: 166

Candidate Starts for Larva\_6:

(Start: 166 @1090 has 22 MA's), (194, 1147), (Start: 205 @1168 has 1 MA's), (Start: 219 @1192 has 15 MA's), (257, 1276), (265, 1285), (267, 1291), (284, 1351), (293, 1369), (313, 1420), (346, 1459), (407, 1573), (420, 1615), (422, 1624), (423, 1627), (451, 1705), (542, 1819), (566, 1867), (572, 1879), (585, 1909), (605, 1945), (626, 1972), (672, 2029), (717, 2113), (733, 2137), (787, 2215), (823, 2272),

(838, 2296), (856, 2320), (960, 2449), (1009, 2506),

Gene: Lasagna\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Lasagna\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (266, 699), (273, 732), (278, 747), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: LastHope\_8 Start: 1617, Stop: 3041, Start Num: 161

Candidate Starts for LastHope\_8:

(75, 1533), (Start: 161 @1617 has 150 MA's), (Start: 205 @1704 has 1 MA's), (Start: 219 @1728 has 15 MA's), (222, 1734), (240, 1773), (257, 1812), (265, 1821), (267, 1827), (277, 1869), (284, 1887), (293, 1905), (313, 1956), (346, 1995), (354, 2004), (376, 2031), (378, 2034), (420, 2151), (422, 2160), (496, 2289), (542, 2355), (566, 2403), (572, 2415), (585, 2445), (597, 2469), (672, 2565), (770, 2706), (771, 2709), (789, 2742), (808, 2772), (823, 2796), (893, 2883), (960, 2973), (1009, 3030), (1014, 3036),

Gene: LaterM\_8 Start: 1568, Stop: 2989, Start Num: 161

Candidate Starts for LaterM\_8:

(85, 1496), (Start: 143 @1556 has 2 MA's), (Start: 161 @1568 has 150 MA's), (Start: 219 @1679 has 15 MA's), (222, 1685), (257, 1763), (265, 1772), (277, 1820), (284, 1838), (293, 1856), (313, 1907), (348, 1949), (354, 1955), (376, 1982), (378, 1985), (407, 2060), (420, 2102), (422, 2111), (451, 2192), (542, 2306), (566, 2354), (572, 2366), (585, 2396), (597, 2420), (605, 2432), (617, 2447), (672, 2516), (771, 2660), (789, 2693), (823, 2747), (960, 2924), (1009, 2978),

Gene: Lauchelly\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for Lauchelly\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (454, 1041), (456, 1044), (465, 1053), (508, 1134), (532, 1155), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (796, 1584), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (836, 1647), (872, 1704), (874, 1707), (882, 1719), (942, 1797), (952, 1812), (970, 1827), (973, 1833), (1005, 1875), (1008, 1881),

Gene: LaviMo\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for LaviMo\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: LeBron\_4 Start: 1059, Stop: 2636, Start Num: 71

Candidate Starts for LeBron\_4:

(Start: 68 @1053 has 59 MA's), (Start: 71 @1059 has 81 MA's), (191, 1230), (249, 1317), (262, 1335), (265, 1341), (273, 1377), (336, 1515), (338, 1518), (389, 1593), (408, 1650), (409, 1653), (478, 1821), (511, 1875), (515, 1884), (525, 1899), (535, 1920), (552, 1959), (568, 1980), (572, 1986), (586, 2013), (623, 2055), (654, 2079), (666, 2097), (670, 2106), (672, 2112), (685, 2145), (708, 2178), (731, 2217), (734, 2223), (736, 2226), (773, 2271), (810, 2337), (842, 2388), (856, 2403), (865, 2412), (877, 2427), (878, 2430), (976, 2532), (1005, 2559), (1034, 2610), (1036, 2613),

Gene: LeMond\_7 Start: 1481, Stop: 2905, Start Num: 161

Candidate Starts for LeMond\_7:

(Start: 161 @1481 has 150 MA's), (Start: 205 @1568 has 1 MA's), (Start: 219 @1592 has 15 MA's), (222, 1598), (257, 1676), (265, 1685), (267, 1691), (277, 1733), (284, 1751), (293, 1769), (313, 1820), (346, 1859), (376, 1895), (407, 1973), (420, 2015), (422, 2024), (451, 2105), (542, 2219), (564, 2261), (566, 2267), (572, 2279), (585, 2309), (597, 2333), (605, 2345), (617, 2360), (672, 2429), (690, 2471), (770, 2570), (787, 2603), (789, 2606), (810, 2642), (823, 2660), (1009, 2894),

Gene: Leafy\_3 Start: 1092, Stop: 2552, Start Num: 117

Candidate Starts for Leafy\_3:

(Start: 117 @1092 has 111 MA's), (122, 1098), (Start: 223 @1260 has 13 MA's), (228, 1269), (264, 1329), (283, 1398), (294, 1419), (317, 1470), (424, 1674), (504, 1809), (546, 1887), (551, 1902), (572, 1938), (589, 1980), (610, 2013), (622, 2031), (706, 2151), (708, 2154), (715, 2166), (774, 2241), (810, 2304), (821, 2322), (823, 2325), (958, 2487), (965, 2496), (970, 2505), (995, 2544),

Gene: Lederberg\_2 Start: 374, Stop: 1957, Start Num: 121

Candidate Starts for Lederberg\_2:

(Start: 118 @371 has 4 MA's), (Start: 121 @374 has 4 MA's), (126, 380), (232, 551), (263, 629), (266, 638), (340, 812), (404, 914), (407, 920), (410, 929), (411, 938), (428, 998), (442, 1046), (443, 1049), (505, 1112), (551, 1205), (581, 1271), (686, 1427), (696, 1445), (732, 1490), (755, 1532), (778, 1568), (786, 1583), (801, 1610), (803, 1613), (811, 1628), (826, 1661), (835, 1676), (865, 1724), (898, 1754), (909, 1772), (965, 1847), (1016, 1922), (1032, 1946),

Gene: LemonPepper\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for LemonPepper\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Lemuria\_2 Start: 376, Stop: 1959, Start Num: 72

Candidate Starts for Lemuria\_2:

(Start: 72 @376 has 33 MA's), (194, 553), (264, 685), (293, 772), (313, 823), (317, 832), (337, 862), (365, 874), (391, 925), (409, 982), (420, 1018), (424, 1039), (451, 1108), (456, 1117), (566, 1270), (642, 1393), (672, 1444), (742, 1552), (771, 1594), (787, 1624), (793, 1636), (803, 1651), (821, 1678), (823, 1681), (836, 1702), (874, 1759), (878, 1765), (888, 1777), (891, 1780), (1009, 1948), (1014, 1954),

Gene: Lennox\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Lennox\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (263, 690), (273, 732), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (820, 1710), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: Leona\_2 Start: 373, Stop: 1995, Start Num: 95

Candidate Starts for Leona\_2:

(Start: 79 @352 has 7 MA's), (Start: 95 @373 has 42 MA's), (263, 604), (267, 616), (275, 652), (281, 670), (283, 676), (316, 748), (411, 916), (425, 967), (432, 991), (443, 1027), (455, 1048), (466, 1063), (485, 1123), (527, 1207), (658, 1423), (669, 1435), (699, 1501), (704, 1507), (731, 1546), (765, 1585), (768, 1591), (782, 1618), (820, 1663), (974, 1903), (995, 1930), (1010, 1951), (1032, 1981), (1034, 1984),

Gene: Leozinho\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Leozinho\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Leroy\_3 Start: 674, Stop: 2191, Start Num: 139

Candidate Starts for Leroy\_3:

(Start: 134 @665 has 3 MA's), (Start: 139 @674 has 74 MA's), (211, 791), (Start: 219 @800 has 15 MA's), (224, 809), (244, 854), (259, 887), (274, 938), (277, 947), (293, 983), (308, 1025), (319, 1046), (326, 1058), (344, 1073), (355, 1091), (366, 1094), (368, 1097), (376, 1118), (391, 1145), (409, 1202), (422, 1247), (424, 1259), (433, 1280), (437, 1292), (445, 1319), (452, 1331), (503, 1412), (542, 1484), (550, 1508), (572, 1544), (583, 1571), (601, 1604), (652, 1658), (721, 1760), (736, 1787), (834, 1934), (841, 1946), (856, 1964), (919, 2042), (922, 2045), (925, 2048), (969, 2102), (975, 2114),

Gene: Leston\_6 Start: 1351, Stop: 2778, Start Num: 166

Candidate Starts for Leston\_6:

(75, 1258), (Start: 166 @1351 has 22 MA's), (194, 1408), (Start: 205 @1429 has 1 MA's), (Start: 219 @1453 has 15 MA's), (257, 1537), (265, 1546), (267, 1552), (277, 1594), (284, 1612), (293, 1630), (313, 1681), (376, 1756), (407, 1834), (420, 1876), (422, 1885), (423, 1888), (451, 1966), (542, 2080), (566, 2128), (585, 2170), (597, 2194), (605, 2206), (626, 2233), (667, 2278), (672, 2290), (762, 2437), (787, 2476), (823, 2533), (838, 2557), (856, 2581), (878, 2605), (954, 2704), (960, 2710), (1009, 2767),

Gene: Leviosa\_2 Start: 380, Stop: 1891, Start Num: 144

Candidate Starts for Leviosa\_2:

(Start: 144 @380 has 46 MA's), (174, 419), (182, 437), (204, 482), (220, 509), (Start: 221 @512 has 3 MA's), (260, 560), (265, 569), (267, 575), (276, 614), (278, 620), (294, 653), (300, 671), (310, 695), (313, 701), (332, 740), (338, 749), (341, 752), (359, 791), (361, 794), (389, 854), (395, 863), (408, 908), (409, 911), (414, 932), (420, 947), (422, 956), (424, 968), (446, 1028), (454, 1043), (456, 1046), (458, 1049), (471, 1070), (546, 1181), (561, 1208), (572, 1229), (619, 1295), (636, 1316), (659, 1346), (666, 1358), (683, 1400), (724, 1469), (728, 1478), (744, 1505), (758, 1532), (775, 1553), (778, 1556), (781, 1559), (787, 1571), (796, 1586), (807, 1601), (809, 1604), (823, 1628), (872, 1706), (874, 1709), (882, 1721), (942, 1799), (952, 1814), (973, 1835), (1005, 1877), (1008, 1883),

Gene: Lewan\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Lewan\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (278, 1408), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Liefie\_2 Start: 454, Stop: 1890, Start Num: 162

Candidate Starts for Liefie\_2:

(Start: 72 @358 has 33 MA's), (Start: 162 @454 has 39 MA's), (Start: 168 @457 has 3 MA's), (Start: 186 @493 has 1 MA's), (Start: 205 @532 has 1 MA's), (277, 694), (313, 781), (317, 790), (327, 808), (346, 820), (409, 940), (420, 976), (424, 997), (433, 1018), (451, 1066), (456, 1075), (566, 1228), (595,



1288), (608, 1306), (656, 1357), (672, 1384), (678, 1399), (679, 1402), (682, 1408), (736, 1483), (768, 1528), (810, 1603), (823, 1621), (836, 1642), (874, 1687), (888, 1705), (891, 1708), (960, 1801), (965, 1807), (1012, 1882),

Gene: LilBandit\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for LilBandit\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (446, 1026), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (715, 1452), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (823, 1626), (872, 1704), (874, 1707), (882, 1719), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005, 1875), (1008, 1881),

Gene: LilDestine\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for LilDestine\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: LilHazelnut\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for LilHazelnut\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: LilPharaoh\_4 Start: 847, Stop: 2271, Start Num: 161

Candidate Starts for LilPharaoh\_4:

(Start: 143 @835 has 2 MA's), (Start: 161 @847 has 150 MA's), (194, 913), (Start: 219 @958 has 15 MA's), (240, 1003), (257, 1042), (265, 1051), (277, 1099), (284, 1117), (293, 1135), (313, 1186), (354, 1234), (376, 1261), (420, 1381), (422, 1390), (434, 1426), (435, 1429), (451, 1471), (462, 1489), (542, 1585), (564, 1627), (566, 1633), (572, 1645), (585, 1675), (588, 1681), (597, 1699), (617, 1726), (672, 1795), (717, 1867), (771, 1939), (789, 1972), (793, 1981), (810, 2008), (823, 2026), (960, 2203), (1009, 2260), (1014, 2266),

Gene: LilSpotty\_2 Start: 328, Stop: 1785, Start Num: 81

Candidate Starts for LilSpotty\_2:

(Start: 36 @259 has 19 MA's), (45, 274), (54, 283), (Start: 81 @328 has 1 MA's), (Start: 184 @424 has 5 MA's), (Start: 186 @427 has 1 MA's), (Start: 219 @487 has 15 MA's), (238, 529), (242, 535), (269, 598), (281, 637), (283, 643), (287, 658), (299, 682), (315, 718), (317, 724), (405, 862), (407, 868), (409, 874), (414, 895), (422, 919), (426, 937), (436, 961), (437, 964), (503, 1063), (523, 1090), (561, 1153), (564, 1156), (626, 1264), (682, 1333), (683, 1336), (711, 1369), (730, 1390), (737, 1402), (740, 1405), (762, 1441), (768, 1444), (770, 1447), (789, 1480), (803, 1504), (879, 1609), (916, 1657), (935, 1678), (939, 1684), (954, 1702), (960, 1708), (963, 1711), (965, 1714), (984, 1738), (1003, 1762), (1009, 1774),

Gene: LilStuart\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for LilStuart\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (266, 699), (273, 732), (278, 747), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: Lilbooboo\_2 Start: 588, Stop: 2150, Start Num: 124

Candidate Starts for Lilbooboo\_2:

(Start: 124 @588 has 3 MA's), (265, 813), (277, 861), (313, 942), (315, 945), (326, 966), (327, 969), (363, 1017), (394, 1050), (400, 1080), (408, 1095), (419, 1134), (433, 1188), (499, 1311), (516, 1344), (576, 1476), (613, 1539), (618, 1545), (671, 1614), (673, 1620), (691, 1665), (693, 1671), (726, 1719), (802, 1824), (804, 1827), (812, 1845), (825, 1872), (850, 1920), (924, 2001), (943, 2025), (946, 2028), (996, 2100),

Gene: LilhomieP\_13 Start: 4719, Stop: 6263, Start Num: 93

Candidate Starts for LilhomieP\_13:

(Start: 93 @4719 has 19 MA's), (133, 4767), (264, 4968), (313, 5106), (418, 5298), (525, 5508), (549, 5559), (591, 5631), (670, 5694), (679, 5718), (685, 5733), (724, 5793), (731, 5805), (770, 5865), (787, 5898), (808, 5931), (824, 5958), (857, 6006), (1008, 6192), (1021, 6213),

Gene: LimaBean\_3 Start: 689, Stop: 2317, Start Num: 125

Candidate Starts for LimaBean\_3:

(Start: 125 @689 has 61 MA's), (228, 845), (281, 953), (319, 1037), (346, 1079), (392, 1136), (409, 1187), (410, 1190), (425, 1250), (430, 1268), (439, 1298), (453, 1328), (699, 1784), (711, 1799), (941, 2150), (977, 2198), (1050, 2306),

Gene: LindNT\_8 Start: 1562, Stop: 2983, Start Num: 161

Candidate Starts for LindNT\_8:

(85, 1490), (Start: 143 @1550 has 2 MA's), (Start: 161 @1562 has 150 MA's), (Start: 219 @1673 has 15 MA's), (222, 1679), (257, 1757), (265, 1766), (277, 1814), (284, 1832), (313, 1901), (348, 1943), (354, 1949), (376, 1976), (378, 1979), (420, 2096), (422, 2105), (451, 2186), (542, 2300), (566, 2348), (572, 2360), (585, 2390), (597, 2414), (605, 2426), (670, 2504), (672, 2510), (771, 2654), (789, 2687), (823, 2741), (960, 2918), (1009, 2972),

Gene: Link\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Link\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 201 @929 has 6 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: LionelHutz\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for LionelHutz\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: LitninMcQueen\_3 Start: 671, Stop: 2188, Start Num: 139

Candidate Starts for LitninMcQueen\_3:

(Start: 134 @662 has 3 MA's), (Start: 139 @671 has 74 MA's), (211, 788), (Start: 219 @797 has 15 MA's), (224, 806), (244, 851), (250, 869), (259, 884), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (321, 1049), (344, 1070), (355, 1088), (366, 1091), (368, 1094), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (424, 1256), (426, 1262), (433, 1277), (437, 1289), (452, 1328), (503, 1409), (526, 1451), (567, 1532), (572, 1541), (583, 1568), (626, 1634), (652, 1655), (721, 1757), (736, 1784), (834, 1931), (841, 1943), (856, 1961), (919, 2039), (922, 2042), (925, 2045), (960, 2087), (969, 2099), (975, 2111),

Gene: Litotes\_5 Start: 3057, Stop: 4625, Start Num: 71

Candidate Starts for Litotes\_5:

(Start: 71 @3057 has 81 MA's), (206, 3243), (Start: 223 @3273 has 13 MA's), (263, 3324), (267, 3336), (273, 3366), (281, 3390), (289, 3414), (346, 3516), (392, 3597), (408, 3645), (425, 3711), (439, 3759), (442, 3768), (503, 3870), (520, 3900), (544, 3939), (588, 4026), (669, 4119), (704, 4191), (728, 4227), (793, 4323), (846, 4389), (889, 4419), (894, 4425), (941, 4491), (1032, 4611),

Gene: LittleShirley\_3 Start: 798, Stop: 2159, Start Num: 219

Candidate Starts for LittleShirley\_3:

(Start: 132 @660 has 1 MA's), (Start: 139 @672 has 74 MA's), (Start: 219 @798 has 15 MA's), (222, 804), (242, 846), (244, 852), (259, 885), (263, 891), (265, 897), (274, 936), (283, 960), (292, 978), (293, 981), (308, 1023), (319, 1044), (344, 1071), (349, 1080), (355, 1089), (366, 1092), (391, 1143), (414, 1221), (422, 1245), (424, 1257), (433, 1278), (437, 1290), (449, 1323), (452, 1329), (498, 1398), (500, 1404), (516, 1437), (537, 1473), (567, 1533), (572, 1542), (583, 1569), (640, 1647), (694, 1743), (736, 1788), (787, 1860), (810, 1899), (834, 1935), (837, 1941), (856, 1965), (882, 1995), (891, 2001), (919, 2043), (922, 2046), (925, 2049), (960, 2091), (969, 2103), (975, 2115),

Gene: LittleTokyo\_3 Start: 691, Stop: 2322, Start Num: 79

Candidate Starts for LittleTokyo\_3:

(24, 580), (Start: 74 @685 has 14 MA's), (Start: 79 @691 has 7 MA's), (Start: 104 @724 has 1 MA's), (Start: 209 @865 has 1 MA's), (Start: 223 @886 has 13 MA's), (263, 937), (267, 949), (275, 985), (281, 1003), (283, 1009), (289, 1027), (392, 1186), (409, 1237), (425, 1300), (443, 1360), (455, 1381), (485, 1453), (546, 1579), (574, 1639), (622, 1720), (634, 1735), (658, 1756), (684, 1807), (711, 1849), (731, 1879), (765, 1918), (770, 1927), (820, 1996), (875, 2098), (880, 2107), (886, 2113), (903, 2134), (905, 2137), (918, 2161), (973, 2227), (974, 2230), (1005, 2269), (1034, 2311),

Gene: Livingwater\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Livingwater\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (431, 1677), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (995, 2523),

Gene: Llorens\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Llorens\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Loadrie\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Loadrie\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Loca\_3 Start: 1092, Stop: 2552, Start Num: 117

Candidate Starts for Loca\_3:

(Start: 117 @1092 has 111 MA's), (122, 1098), (Start: 223 @1260 has 13 MA's), (228, 1269), (264, 1329), (283, 1398), (294, 1419), (317, 1470), (424, 1674), (504, 1809), (546, 1887), (551, 1902), (572, 1938), (589, 1980), (610, 2013), (622, 2031), (706, 2151), (708, 2154), (774, 2241), (810, 2304), (821, 2322), (823, 2325), (958, 2487), (965, 2496), (995, 2544),

Gene: Lola20\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Lola20\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (970, 2484), (995, 2523),

Gene: Lolly9\_5 Start: 1196, Stop: 2761, Start Num: 68

Candidate Starts for Lolly9\_5:

(Start: 68 @1196 has 59 MA's), (Start: 71 @1202 has 81 MA's), (191, 1373), (262, 1478), (267, 1490), (327, 1646), (334, 1655), (336, 1658), (338, 1661), (389, 1736), (407, 1790), (408, 1793), (409, 1796), (495, 1985), (515, 2027), (552, 2102), (568, 2123), (572, 2129), (623, 2198), (666, 2240), (670, 2249), (672, 2255), (736, 2369), (770, 2408), (773, 2414), (810, 2480), (850, 2534), (877, 2570), (885, 2582), (933, 2621), (1008, 2708), (1034, 2753), (1036, 2756),

Gene: LordFarquaad\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for LordFarquaad\_2:

(Start: 89 @318 has 52 MA's), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Lorde\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Lorde\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Lore\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Lore\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (227, 974), (263, 1025), (267, 1037), (273, 1067), (277, 1079), (282, 1094), (313, 1160), (348, 1205), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (429, 1391), (431, 1400), (463, 1466), (516, 1529), (521, 1541), (546, 1583), (555, 1601), (583, 1661), (622, 1718), (635, 1730), (649, 1754), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (806, 1979), (848, 2054), (852, 2063), (868,

2090), (915, 2147), (955, 2201), (1004, 2273),

Gene: LouisV14\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for LouisV14\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: LouisXIV\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for LouisXIV\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Lton\_2 Start: 501, Stop: 1940, Start Num: 186

Candidate Starts for Lton\_2:

(73, 336), (Start: 125 @399 has 61 MA's), (Start: 147 @426 has 1 MA's), (149, 429), (151, 432), (Start: 159 @441 has 2 MA's), (Start: 186 @501 has 1 MA's), (199, 528), (Start: 205 @540 has 1 MA's), (210, 552), (244, 615), (257, 645), (263, 654), (264, 657), (269, 678), (293, 744), (294, 747), (313, 795), (317, 804), (319, 807), (391, 915), (401, 951), (409, 972), (415, 999), (422, 1017), (423, 1020), (434, 1062), (437, 1071), (468, 1134), (498, 1158), (500, 1164), (534, 1209), (561, 1260), (566, 1269), (567, 1272), (583, 1311), (585, 1314), (605, 1344), (670, 1416), (672, 1422), (701, 1494), (705, 1497), (732, 1530), (777, 1596), (780, 1599), (820, 1662), (838, 1692), (859, 1731), (863, 1734), (880, 1758), (894, 1770), (897, 1773), (947, 1839), (952, 1848), (954, 1851), (960, 1857), (965, 1863), (1009, 1929),

Gene: Lucky10\_2 Start: 313, Stop: 1758, Start Num: 127

Candidate Starts for Lucky10\_2:

(Start: 127 @313 has 3 MA's), (240, 484), (293, 616), (317, 676), (354, 715), (391, 769), (401, 805), (409, 826), (414, 847), (422, 871), (428, 895), (433, 904), (436, 913), (437, 916), (523, 1042), (564, 1108), (652, 1240), (656, 1246), (670, 1267), (672, 1273), (717, 1342), (748, 1384), (770, 1411), (803, 1471), (808, 1477), (823, 1501), (893, 1591), (954, 1675), (960, 1681), (965, 1687), (971, 1696),

Gene: Lucky2013\_10 Start: 3458, Stop: 4990, Start Num: 158

Candidate Starts for Lucky2013\_10:

(Start: 121 @3416 has 4 MA's), (128, 3425), (Start: 158 @3458 has 20 MA's), (218, 3572), (247, 3635), (266, 3668), (267, 3671), (276, 3710), (278, 3716), (308, 3791), (327, 3827), (388, 3902), (390, 3905), (401, 3941), (412, 3974), (540, 4223), (572, 4286), (584, 4313), (684, 4472), (708, 4508), (724, 4529), (728, 4538), (734, 4547), (780, 4601), (792, 4625), (976, 4859), (988, 4871),

Gene: Lucy\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Lucy\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (273, 732), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (461, 1167), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: Luke\_5 Start: 1894, Stop: 3489, Start Num: 74

Candidate Starts for Luke\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Lumos\_5 Start: 1190, Stop: 2755, Start Num: 68

Candidate Starts for Lumos\_5:

(Start: 36 @1139 has 19 MA's), (40, 1148), (Start: 68 @1190 has 59 MA's), (Start: 71 @1196 has 81 MA's), (191, 1367), (207, 1397), (262, 1472), (265, 1478), (267, 1484), (327, 1640), (334, 1649), (336, 1652), (338, 1655), (389, 1730), (407, 1784), (408, 1787), (409, 1790), (515, 2021), (552, 2096), (568, 2117), (572, 2123), (623, 2192), (654, 2216), (666, 2234), (672, 2249), (736, 2363), (770, 2402), (773, 2408), (810, 2474), (850, 2528), (877, 2564), (885, 2576), (933, 2615), (1008, 2702), (1034, 2747), (1036, 2750),

Gene: Luna22\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Luna22\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Lunahalos\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Lunahalos\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Lunar\_4 Start: 848, Stop: 2494, Start Num: 79

Candidate Starts for Lunar\_4:

(Start: 79 @848 has 7 MA's), (Start: 201 @1013 has 6 MA's), (Start: 223 @1052 has 13 MA's), (263, 1103), (267, 1115), (275, 1151), (281, 1169), (392, 1352), (425, 1466), (429, 1478), (443, 1526), (455, 1547), (466, 1562), (485, 1619), (669, 1934), (699, 2000), (710, 2012), (731, 2045), (765, 2084), (770, 2093), (771, 2096), (820, 2162), (838, 2192), (860, 2237), (880, 2279), (903, 2306), (905, 2309), (974, 2402), (977, 2408), (995, 2429), (1005, 2441), (1032, 2480), (1034, 2483),

Gene: Lunatic\_3 Start: 1062, Stop: 2522, Start Num: 117

Candidate Starts for Lunatic\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (504, 1779), (546, 1857), (551, 1872), (564, 1890), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (724, 2148), (731, 2160), (774, 2211), (808, 2268), (810, 2274), (817, 2283), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: Lutum\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for Lutum\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (Start: 205 @775 has 1 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (224, 808), (242, 847), (244, 853), (259, 886), (273, 934), (274, 937), (277, 946), (292, 979), (293, 982), (308, 1024), (326, 1057), (344, 1072), (355, 1090), (366, 1093), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (422, 1246), (423, 1249), (424, 1258), (433, 1279), (437, 1291), (445, 1318), (449, 1324), (452, 1330), (498, 1399), (503, 1411), (542, 1483), (550, 1507), (572, 1543), (583, 1570), (652, 1657), (670, 1681), (721, 1759), (736, 1786), (742, 1795), (834, 1933), (841, 1945), (856, 1963), (919, 2041), (925, 2047), (960, 2089), (969, 2101), (975, 2113), (1018, 2182),

Gene: Luxx\_3 Start: 1098, Stop: 2558, Start Num: 117

Candidate Starts for Luxx\_3:

(Start: 117 @1098 has 111 MA's), (122, 1104), (Start: 223 @1266 has 13 MA's), (228, 1275), (264, 1335), (283, 1404), (294, 1425), (317, 1476), (424, 1680), (546, 1893), (551, 1908), (572, 1944), (589, 1986), (610, 2019), (622, 2037), (706, 2157), (708, 2160), (715, 2172), (774, 2247), (810, 2310), (821, 2328), (823, 2331), (958, 2493), (965, 2502), (970, 2511), (995, 2550),

Gene: Lynlen\_3 Start: 677, Stop: 2305, Start Num: 125

Candidate Starts for Lynlen\_3:

(Start: 125 @677 has 61 MA's), (228, 833), (281, 941), (319, 1025), (331, 1049), (346, 1067), (392, 1124), (409, 1175), (410, 1178), (425, 1238), (430, 1256), (439, 1286), (453, 1316), (699, 1772), (711, 1787), (941, 2138), (977, 2186), (1050, 2294),

Gene: Lysidious\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Lysidious\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (877, 1689), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: MAckerman\_4 Start: 1058, Stop: 2635, Start Num: 71

Candidate Starts for MAckerman\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: MEAK\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for MEAK\_2:

(141, 370), (Start: 144 @373 has 46 MA's), (Start: 158 @385 has 20 MA's), (174, 412), (182, 430), (195, 457), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (273, 598), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (454, 1036), (456, 1039), (458, 1042), (471, 1063), (522, 1138), (532, 1150), (550, 1186), (561, 1201), (572, 1222), (666, 1351), (683, 1393), (724, 1462), (744, 1498), (758, 1525), (775, 1546), (781, 1552), (809, 1597), (820, 1615), (823, 1621), (850, 1666), (872, 1699), (874, 1702), (882, 1714), (942, 1792), (950, 1801), (978, 1837), (1005, 1870), (1008, 1876),

Gene: MOOREtheMARYer\_2 Start: 351, Stop: 1937, Start Num: 51

Candidate Starts for MOOREtheMARYer\_2:

(25, 288), (39, 336), (Start: 51 @351 has 3 MA's), (Start: 129 @438 has 6 MA's), (Start: 158 @462 has 20 MA's), (Start: 184 @498 has 5 MA's), (194, 519), (293, 738), (317, 798), (409, 963), (420, 999), (424, 1020), (434, 1044), (436, 1050), (451, 1089), (456, 1098), (566, 1251), (605, 1326), (672, 1425), (771, 1575), (795, 1620), (836, 1683), (878, 1734), (891, 1749), (960, 1842), (975, 1866), (986, 1884), (1012, 1929),

Gene: MacnCheese\_8 Start: 1694, Stop: 3127, Start Num: 161

Candidate Starts for MacnCheese\_8:

(112, 1655), (Start: 143 @1682 has 2 MA's), (Start: 161 @1694 has 150 MA's), (194, 1760), (Start: 205 @1781 has 1 MA's), (Start: 219 @1805 has 15 MA's), (257, 1889), (265, 1898), (277, 1946), (284, 1964), (293, 1982), (300, 2003), (313, 2033), (376, 2108), (407, 2186), (420, 2228), (422, 2237), (451, 2318), (462, 2336), (542, 2432), (566, 2480), (572, 2492), (585, 2522), (597, 2546), (605, 2558), (672, 2642), (770, 2792), (771, 2795), (803, 2852), (808, 2858), (821, 2879), (823, 2882), (960, 3059), (969, 3071), (1014, 3122),

Gene: MadKillah\_32 Start: 13466, Stop: 14977, Start Num: 74

Candidate Starts for MadKillah\_32:

(Start: 72 @13463 has 33 MA's), (Start: 74 @13466 has 14 MA's), (Start: 205 @13646 has 1 MA's), (249, 13739), (276, 13814), (287, 13847), (300, 13874), (313, 13904), (407, 14057), (409, 14063), (420, 14099), (422, 14108), (451, 14189), (456, 14198), (458, 14201), (498, 14240), (538, 14297), (553, 14333), (554, 14336), (668, 14492), (672, 14501), (711, 14570), (717, 14579), (722, 14585), (742, 14618), (771, 14654), (823, 14741), (836, 14762), (891, 14825), (893, 14828), (896, 14831), (907, 14849), (920, 14870), (960, 14912), (985, 14945), (988, 14948), (1005, 14960),

Gene: Madiba\_3 Start: 670, Stop: 2157, Start Num: 139

Candidate Starts for Madiba\_3:

(Start: 132 @658 has 1 MA's), (Start: 139 @670 has 74 MA's), (Start: 219 @796 has 15 MA's), (222, 802), (242, 844), (244, 850), (259, 883), (263, 889), (265, 895), (274, 934), (283, 958), (292, 976), (293, 979), (308, 1021), (319, 1042), (344, 1069), (349, 1078), (355, 1087), (366, 1090), (391, 1141), (409, 1198), (414, 1219), (422, 1243), (424, 1255), (433, 1276), (437, 1288), (449, 1321), (452, 1327), (498, 1396), (500, 1402), (516, 1435), (537, 1471), (567, 1531), (572, 1540), (583, 1567), (640, 1645), (694, 1741), (736, 1786), (787, 1858), (810, 1897), (834, 1933), (837, 1939), (856, 1963), (882, 1993), (891, 1999), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101), (975, 2113),

Gene: Madraxi\_10 Start: 7076, Stop: 8635, Start Num: 138

Candidate Starts for Madraxi\_10:

(Start: 138 @7076 has 2 MA's), (Start: 144 @7082 has 46 MA's), (266, 7316), (365, 7529), (367, 7532), (412, 7643), (418, 7661), (423, 7676), (432, 7703), (572, 7955), (584, 7976), (621, 8027), (738, 8219), (867, 8402), (911, 8465), (920, 8480), (940, 8498), (945, 8504), (1013, 8582),

Gene: Maggie\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Maggie\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: MagicMan\_2 Start: 520, Stop: 2169, Start Num: 80

Candidate Starts for MagicMan\_2:



(Start: 80 @520 has 9 MA's), (Start: 223 @718 has 13 MA's), (225, 721), (313, 931), (317, 940), (327, 961), (358, 1006), (425, 1189), (494, 1324), (548, 1390), (572, 1432), (641, 1546), (651, 1564), (655, 1567), (734, 1711), (741, 1720), (810, 1831), (821, 1849), (877, 1921), (904, 1957), (944, 2011), (986, 2071), (1017, 2122),

Gene: Magsby\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Magsby\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Mahdia\_2 Start: 553, Stop: 2121, Start Num: 111

Candidate Starts for Mahdia\_2:

(Start: 111 @553 has 7 MA's), (133, 580), (Start: 156 @607 has 23 MA's), (190, 661), (208, 697), (267, 784), (330, 946), (340, 958), (350, 973), (365, 994), (392, 1024), (408, 1072), (424, 1135), (442, 1195), (444, 1201), (469, 1243), (541, 1327), (552, 1360), (604, 1459), (622, 1480), (667, 1522), (670, 1528), (684, 1567), (706, 1612), (710, 1618), (711, 1621), (724, 1639), (786, 1750), (820, 1819), (821, 1822), (851, 1876), (858, 1879), (905, 1933), (918, 1957), (1035, 2113),

Gene: Maja\_2 Start: 590, Stop: 2185, Start Num: 110

Candidate Starts for Maja\_2:

(Start: 110 @590 has 15 MA's), (Start: 114 @593 has 3 MA's), (230, 773), (263, 806), (264, 809), (273, 848), (281, 872), (283, 878), (325, 968), (408, 1103), (425, 1169), (455, 1250), (461, 1259), (516, 1361), (521, 1373), (567, 1457), (581, 1496), (669, 1601), (704, 1673), (728, 1709), (742, 1730), (750, 1748), (764, 1772), (768, 1781), (782, 1808), (800, 1838), (845, 1895), (856, 1919), (918, 2021), (974, 2090), (977, 2096), (1008, 2135), (1034, 2174), (1039, 2180),

Gene: Majeke\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Majeke\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (720, 1622), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Majesty\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Majesty\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Makoto\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Makoto\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (273, 732), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (821, 1713), (846, 1755), (941, 1857),

Gene: Malachai\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Malachai\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (338, 783), (346, 795), (367, 816), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (657, 1341), (667, 1359), (670, 1365), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911),

Gene: Malibo\_2 Start: 434, Stop: 1993, Start Num: 134

Candidate Starts for Malibo\_2:

(28, 278), (38, 311), (55, 335), (Start: 134 @434 has 3 MA's), (185, 500), (217, 560), (225, 569), (245, 608), (265, 647), (313, 779), (315, 782), (327, 809), (338, 821), (455, 1070), (457, 1073), (494, 1136), (512, 1166), (521, 1184), (524, 1187), (627, 1376), (666, 1430), (670, 1439), (672, 1445), (703, 1502), (711, 1514), (736, 1550), (742, 1559), (770, 1595), (771, 1598), (786, 1625), (821, 1685), (835, 1706), (893, 1778), (914, 1811), (937, 1844), (959, 1874), (989, 1913), (1029, 1967),

Gene: Malisha\_3 Start: 669, Stop: 2186, Start Num: 139

Candidate Starts for Malisha\_3:

(Start: 134 @660 has 3 MA's), (Start: 139 @669 has 74 MA's), (211, 786), (Start: 219 @795 has 15 MA's), (224, 804), (250, 867), (259, 882), (265, 894), (274, 933), (292, 975), (293, 978), (308, 1020), (321, 1047), (344, 1068), (355, 1086), (366, 1089), (368, 1092), (376, 1113), (391, 1140), (409, 1197), (424, 1254), (426, 1260), (433, 1275), (437, 1287), (503, 1407), (526, 1449), (567, 1530), (572, 1539), (583, 1566), (605, 1605), (626, 1632), (652, 1653), (721, 1755), (736, 1782), (834, 1929), (841, 1941), (919, 2037), (922, 2040), (925, 2043), (960, 2085), (969, 2097), (975, 2109),

Gene: Malithi\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Malithi\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Malthus\_9 Start: 2465, Stop: 3910, Start Num: 161

Candidate Starts for Malthus\_9:

(Start: 161 @2465 has 150 MA's), (Start: 219 @2570 has 15 MA's), (257, 2654), (265, 2663), (277, 2711), (283, 2726), (293, 2753), (313, 2804), (321, 2822), (354, 2852), (376, 2879), (407, 2957), (420, 2999), (422, 3008), (423, 3011), (451, 3089), (456, 3098), (496, 3137), (542, 3203), (566, 3251), (585, 3293), (672, 3410), (688, 3452), (717, 3497), (770, 3566), (793, 3611), (808, 3632), (823, 3656), (960, 3833), (1009, 3899), (1014, 3905),

Gene: MamaPearl\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for MamaPearl\_2:

(Start: 71 @426 has 81 MA's), (Start: 221 @636 has 3 MA's), (265, 696), (273, 732), (281, 756), (289, 780), (346, 882), (379, 942), (408, 1011), (410, 1017), (425, 1077), (443, 1137), (466, 1173), (503, 1236), (520, 1266), (574, 1362), (627, 1449), (684, 1524), (704, 1557), (728, 1593), (782, 1668), (793, 1689), (795, 1692), (846, 1755), (868, 1779), (941, 1857), (1032, 1977),

Gene: ManAs\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for ManAs\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Maneater\_3 Start: 1062, Stop: 2522, Start Num: 117

Candidate Starts for Maneater\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (546, 1857), (551, 1872), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (774, 2211), (810, 2274), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: Mangethe\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Mangethe\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (720, 1622), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Marcoliusprime\_4 Start: 652, Stop: 2076, Start Num: 161

Candidate Starts for Marcoliusprime\_4:

(75, 574), (85, 586), (91, 595), (Start: 161 @652 has 150 MA's), (194, 712), (Start: 205 @733 has 1 MA's), (216, 754), (257, 838), (265, 847), (277, 895), (293, 931), (313, 982), (348, 1024), (376, 1057), (408, 1138), (420, 1177), (422, 1186), (423, 1189), (451, 1267), (456, 1276), (542, 1381), (566, 1429), (572, 1441), (585, 1471), (597, 1495), (667, 1576), (672, 1588), (690, 1630), (717, 1660), (734, 1687), (770, 1729), (779, 1744), (808, 1795), (823, 1819), (856, 1867), (954, 1990), (1009, 2065),

Gene: MargaretKali\_3 Start: 885, Stop: 2270, Start Num: 184

Candidate Starts for MargaretKali\_3:

(Start: 148 @825 has 1 MA's), (Start: 184 @885 has 5 MA's), (Start: 186 @888 has 1 MA's), (Start: 205 @927 has 1 MA's), (238, 990), (263, 1041), (287, 1125), (293, 1131), (294, 1134), (300, 1152), (354, 1230), (391, 1284), (409, 1341), (422, 1386), (433, 1419), (468, 1494), (561, 1620), (566, 1629), (585, 1674), (601, 1701), (662, 1761), (667, 1770), (672, 1782), (676, 1794), (687, 1824), (707, 1839), (745, 1902), (762, 1920), (808, 1992), (826, 2019), (865, 2073), (963, 2190), (1009, 2259),

Gene: Maria1952\_2 Start: 428, Stop: 1993, Start Num: 71

Candidate Starts for Maria1952\_2:

(Start: 71 @428 has 81 MA's), (Start: 200 @599 has 2 MA's), (263, 692), (266, 701), (273, 734), (278, 749), (281, 758), (289, 782), (316, 836), (381, 947), (408, 1013), (410, 1019), (425, 1079), (443, 1139), (461, 1169), (520, 1268), (620, 1442), (627, 1451), (669, 1487), (672, 1493), (685, 1529), (710, 1565), (731, 1598), (762, 1637), (768, 1643), (886, 1784), (941, 1859), (1005, 1940), (1032, 1979),

Gene: Mariposa\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Mariposa\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: MarkPhew\_7 Start: 1432, Stop: 2856, Start Num: 161

Candidate Starts for MarkPhew\_7:

(Start: 161 @1432 has 150 MA's), (Start: 205 @1519 has 1 MA's), (Start: 219 @1543 has 15 MA's), (240, 1588), (257, 1627), (265, 1636), (267, 1642), (277, 1684), (284, 1702), (293, 1720), (313, 1771), (346, 1810), (354, 1819), (376, 1846), (407, 1924), (420, 1966), (422, 1975), (451, 2056), (542, 2170), (564, 2212), (566, 2218), (572, 2230), (585, 2260), (605, 2296), (617, 2311), (672, 2380), (690, 2422),

(717, 2452), (770, 2521), (787, 2554), (789, 2557), (810, 2593), (823, 2611), (844, 2644), (1009, 2845),

Gene: Marker\_3 Start: 670, Stop: 2157, Start Num: 139

Candidate Starts for Marker\_3:

(Start: 132 @658 has 1 MA's), (Start: 139 @670 has 74 MA's), (Start: 219 @796 has 15 MA's), (222, 802), (242, 844), (244, 850), (259, 883), (263, 889), (265, 895), (274, 934), (283, 958), (292, 976), (293, 979), (308, 1021), (319, 1042), (344, 1069), (349, 1078), (355, 1087), (366, 1090), (391, 1141), (409, 1198), (414, 1219), (422, 1243), (424, 1255), (433, 1276), (437, 1288), (449, 1321), (452, 1327), (498, 1396), (500, 1402), (516, 1435), (537, 1471), (567, 1531), (572, 1540), (583, 1567), (640, 1645), (694, 1741), (736, 1786), (742, 1795), (787, 1858), (810, 1897), (834, 1933), (837, 1939), (856, 1963), (882, 1993), (891, 1999), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101), (975, 2113),

Gene: Marmie\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Marmie\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Marshawn\_9 Start: 2072, Stop: 3451, Start Num: 184

Candidate Starts for Marshawn\_9:

(Start: 143 @2015 has 2 MA's), (Start: 161 @2027 has 150 MA's), (Start: 184 @2072 has 5 MA's), (194, 2093), (Start: 205 @2114 has 1 MA's), (214, 2132), (Start: 219 @2138 has 15 MA's), (257, 2222), (265, 2231), (267, 2237), (277, 2279), (284, 2297), (293, 2315), (313, 2366), (376, 2441), (407, 2519), (420, 2561), (422, 2570), (451, 2651), (542, 2765), (566, 2813), (572, 2825), (585, 2855), (597, 2879), (617, 2906), (672, 2975), (690, 3017), (717, 3047), (770, 3116), (771, 3119), (789, 3152), (808, 3182), (810, 3188), (823, 3206), (836, 3227), (844, 3239), (960, 3383), (1009, 3440), (1014, 3446),

Gene: MaryV\_26 Start: 8094, Stop: 9707, Start Num: 80

Candidate Starts for MaryV\_26:

(Start: 80 @8094 has 9 MA's), (191, 8244), (Start: 201 @8262 has 6 MA's), (220, 8295), (233, 8307), (266, 8358), (267, 8361), (279, 8409), (281, 8415), (297, 8454), (299, 8457), (313, 8490), (353, 8559), (395, 8625), (398, 8643), (407, 8667), (409, 8673), (441, 8778), (467, 8820), (476, 8838), (490, 8847), (602, 9051), (606, 9057), (635, 9090), (731, 9255), (736, 9264), (741, 9270), (742, 9273), (787, 9348), (808, 9381), (817, 9396), (877, 9477), (1005, 9630), (1018, 9651), (1019, 9654),

Gene: Massimo\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Massimo\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: MasterPitts\_3 Start: 1092, Stop: 2546, Start Num: 122

Candidate Starts for MasterPitts\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Matteo\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Matteo\_2:

(Start: 89 @318 has 52 MA's), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Mbo4\_2 Start: 442, Stop: 1950, Start Num: 123

Candidate Starts for Mbo4\_2:

(123, 442), (206, 553), (225, 580), (313, 790), (315, 793), (327, 820), (387, 889), (420, 988), (422, 997), (425, 1012), (440, 1054), (494, 1147), (524, 1162), (548, 1213), (567, 1246), (619, 1345), (641, 1372), (670, 1414), (685, 1447), (736, 1519), (754, 1549), (767, 1561), (770, 1564), (771, 1567), (773, 1570), (810, 1636), (821, 1654), (832, 1669), (893, 1747), (904, 1762), (931, 1801), (942, 1816), (1011, 1900),

Gene: McGonagall\_2 Start: 520, Stop: 1905, Start Num: 156

Candidate Starts for McGonagall\_2:

(Start: 156 @520 has 23 MA's), (Start: 197 @586 has 2 MA's), (Start: 209 @613 has 1 MA's), (276, 736), (277, 739), (283, 757), (312, 820), (316, 829), (317, 832), (374, 901), (393, 934), (399, 958), (409, 985), (423, 1033), (463, 1132), (509, 1165), (516, 1177), (521, 1189), (608, 1345), (617, 1360), (658, 1408), (683, 1453), (687, 1462), (701, 1486), (728, 1525), (953, 1825), (998, 1891),

Gene: McShie\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for McShie\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (970, 2484), (995, 2523),

Gene: Mdavu\_4 Start: 847, Stop: 2271, Start Num: 161

Candidate Starts for Mdavu\_4:

(Start: 143 @835 has 2 MA's), (Start: 161 @847 has 150 MA's), (194, 913), (Start: 219 @958 has 15 MA's), (240, 1003), (257, 1042), (265, 1051), (277, 1099), (284, 1117), (293, 1135), (313, 1186), (354, 1234), (376, 1261), (420, 1381), (422, 1390), (434, 1426), (435, 1429), (451, 1471), (462, 1489), (542, 1585), (564, 1627), (566, 1633), (572, 1645), (585, 1675), (588, 1681), (597, 1699), (617, 1726), (672, 1795), (717, 1867), (771, 1939), (789, 1972), (793, 1981), (810, 2008), (823, 2026), (960, 2203), (1009, 2260), (1014, 2266),

Gene: MeaningOfLife\_8 Start: 1563, Stop: 2984, Start Num: 161

Candidate Starts for MeaningOfLife\_8:

(85, 1491), (Start: 143 @1551 has 2 MA's), (Start: 161 @1563 has 150 MA's), (Start: 219 @1674 has 15 MA's), (222, 1680), (257, 1758), (265, 1767), (277, 1815), (284, 1833), (313, 1902), (348, 1944), (354, 1950), (376, 1977), (378, 1980), (420, 2097), (422, 2106), (451, 2187), (542, 2301), (566, 2349), (572, 2361), (585, 2391), (597, 2415), (605, 2427), (670, 2505), (672, 2511), (771, 2655), (789, 2688), (823, 2742), (960, 2919), (1009, 2973),

Gene: MeganNoll\_5 Start: 3133, Stop: 4698, Start Num: 71

Candidate Starts for MeganNoll\_5:

(Start: 71 @3133 has 81 MA's), (Start: 221 @3343 has 3 MA's), (263, 3397), (281, 3463), (289, 3487), (402, 3703), (408, 3718), (410, 3724), (425, 3784), (443, 3844), (503, 3943), (520, 3973), (530, 3988), (574, 4069), (620, 4147), (627, 4156), (669, 4192), (684, 4231), (704, 4264), (711, 4273), (728, 4300),

(771, 4354), (793, 4396), (835, 4441), (846, 4462), (868, 4486), (941, 4564), (1032, 4684),

Gene: Megiddo\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for Megiddo\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (252, 718), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (630, 1465), (640, 1477), (670, 1522), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: Megsy\_8 Start: 1562, Stop: 2983, Start Num: 161

Candidate Starts for Megsy\_8:

(85, 1490), (Start: 143 @1550 has 2 MA's), (Start: 161 @1562 has 150 MA's), (Start: 219 @1673 has 15 MA's), (222, 1679), (257, 1757), (265, 1766), (277, 1814), (284, 1832), (313, 1901), (348, 1943), (354, 1949), (376, 1976), (378, 1979), (420, 2096), (422, 2105), (451, 2186), (542, 2300), (566, 2348), (572, 2360), (585, 2390), (597, 2414), (605, 2426), (670, 2504), (672, 2510), (771, 2654), (789, 2687), (823, 2741), (960, 2918), (1009, 2972),

Gene: MelBee03\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for MelBee03\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (431, 1677), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (995, 2523),

Gene: Melba\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Melba\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Mellie\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Mellie\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (405, 891), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Melons\_4 Start: 848, Stop: 2494, Start Num: 79

Candidate Starts for Melons\_4:

(Start: 79 @848 has 7 MA's), (Start: 201 @1013 has 6 MA's), (Start: 223 @1052 has 13 MA's), (263, 1103), (267, 1115), (275, 1151), (281, 1169), (392, 1352), (425, 1466), (429, 1478), (443, 1526), (455, 1547), (466, 1562), (485, 1619), (669, 1934), (699, 2000), (710, 2012), (731, 2045), (765, 2084), (770, 2093), (771, 2096), (820, 2162), (838, 2192), (860, 2237), (880, 2279), (903, 2306), (905, 2309), (974, 2402), (977, 2408), (995, 2429), (1005, 2441), (1032, 2480), (1034, 2483),

Gene: Melville\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Melville\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Mercurio\_3 Start: 1016, Stop: 2605, Start Num: 72

Candidate Starts for Mercurio\_3:

(55, 986), (Start: 72 @1016 has 33 MA's), (194, 1187), (264, 1319), (313, 1457), (317, 1466), (365, 1520), (391, 1571), (409, 1628), (420, 1664), (424, 1685), (451, 1754), (456, 1763), (566, 1916), (608, 1994), (629, 2021), (642, 2039), (672, 2090), (736, 2189), (742, 2198), (768, 2234), (771, 2240), (787, 2270), (793, 2282), (803, 2297), (808, 2303), (810, 2309), (821, 2324), (823, 2327), (836, 2348), (878, 2411), (891, 2426), (1009, 2594), (1014, 2600),

Gene: MiaZeal\_10 Start: 3527, Stop: 5059, Start Num: 158

Candidate Starts for MiaZeal\_10:

(88, 3443), (Start: 121 @3485 has 4 MA's), (128, 3494), (Start: 158 @3527 has 20 MA's), (218, 3641), (247, 3704), (266, 3737), (267, 3740), (278, 3785), (308, 3860), (313, 3869), (388, 3971), (390, 3974), (401, 4010), (412, 4043), (540, 4292), (572, 4355), (584, 4382), (684, 4541), (708, 4577), (728, 4607), (734, 4616), (780, 4670), (792, 4694), (976, 4928), (988, 4940),

Gene: Miaurora\_3 Start: 1179, Stop: 2639, Start Num: 117

Candidate Starts for Miaurora\_3:

(Start: 117 @1179 has 111 MA's), (122, 1185), (Start: 223 @1347 has 13 MA's), (228, 1356), (264, 1416), (283, 1485), (294, 1506), (317, 1557), (424, 1761), (504, 1896), (546, 1974), (551, 1989), (564, 2007), (572, 2025), (589, 2067), (610, 2100), (622, 2118), (706, 2238), (708, 2241), (715, 2253), (724, 2265), (731, 2277), (774, 2328), (808, 2385), (810, 2391), (817, 2400), (821, 2409), (823, 2412), (958, 2574), (965, 2583), (970, 2592), (995, 2631),

Gene: MichaelScott\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for MichaelScott\_3:

(Start: 89 @820 has 52 MA's), (183, 928), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (319, 1228), (389, 1318), (391, 1321), (420, 1414), (422, 1423), (425, 1438), (466, 1522), (494, 1573), (548, 1639), (572, 1681), (607, 1750), (611, 1756), (641, 1795), (655, 1816), (670, 1840), (672, 1846), (680, 1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (850, 2122), (888, 2173), (983, 2302), (1034, 2362),

Gene: MichelleMyBell\_2 Start: 512, Stop: 2044, Start Num: 156

Candidate Starts for MichelleMyBell\_2:

(4, 107), (5, 116), (9, 170), (Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (275, 743), (277, 749), (300, 806), (336, 878), (367, 926), (408, 1025), (423, 1076), (450, 1148), (459, 1163), (469, 1181), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (708, 1589), (719, 1607), (735, 1634), (780, 1703), (814, 1760), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (902, 1859), (911, 1874), (976, 1955), (982, 1961),

Gene: Miley16\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Miley16\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431),

(878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Milly\_4 Start: 652, Stop: 2076, Start Num: 161

Candidate Starts for Milly\_4:

(75, 574), (85, 586), (91, 595), (Start: 161 @652 has 150 MA's), (194, 712), (Start: 205 @733 has 1 MA's), (216, 754), (257, 838), (265, 847), (277, 895), (293, 931), (313, 982), (348, 1024), (354, 1030), (376, 1057), (408, 1138), (420, 1177), (422, 1186), (423, 1189), (451, 1267), (456, 1276), (542, 1381), (566, 1429), (572, 1441), (585, 1471), (597, 1495), (667, 1576), (672, 1588), (690, 1630), (717, 1660), (734, 1687), (770, 1729), (779, 1744), (808, 1795), (823, 1819), (856, 1867), (954, 1990), (1009, 2065),

Gene: Min1\_37 Start: 17540, Stop: 19132, Start Num: 131

Candidate Starts for Min1\_37:

(Start: 131 @17540 has 1 MA's), (141, 17555), (190, 17624), (228, 17693), (264, 17738), (265, 17741), (283, 17807), (304, 17888), (314, 17906), (347, 17960), (427, 18161), (443, 18215), (527, 18311), (552, 18368), (561, 18386), (580, 18434), (672, 18566), (687, 18605), (710, 18638), (728, 18668), (783, 18746), (808, 18785), (908, 18914), (973, 19001),

Gene: MiniLon\_5 Start: 1196, Stop: 2761, Start Num: 68

Candidate Starts for MiniLon\_5:

(Start: 68 @1196 has 59 MA's), (Start: 71 @1202 has 81 MA's), (191, 1373), (262, 1478), (267, 1490), (327, 1646), (334, 1655), (336, 1658), (338, 1661), (389, 1736), (407, 1790), (408, 1793), (409, 1796), (495, 1985), (515, 2027), (552, 2102), (568, 2123), (572, 2129), (623, 2198), (666, 2240), (670, 2249), (672, 2255), (736, 2369), (770, 2408), (773, 2414), (810, 2480), (850, 2534), (877, 2570), (885, 2582), (933, 2621), (1008, 2708), (1034, 2753), (1036, 2756),

Gene: MiniMac\_5 Start: 1196, Stop: 2761, Start Num: 68

Candidate Starts for MiniMac\_5:

(Start: 68 @1196 has 59 MA's), (Start: 71 @1202 has 81 MA's), (191, 1373), (262, 1478), (267, 1490), (327, 1646), (334, 1655), (336, 1658), (338, 1661), (389, 1736), (407, 1790), (408, 1793), (409, 1796), (515, 2027), (552, 2102), (568, 2123), (572, 2129), (623, 2198), (654, 2222), (666, 2240), (670, 2249), (672, 2255), (736, 2369), (770, 2408), (773, 2414), (810, 2480), (850, 2534), (877, 2570), (885, 2582), (933, 2621), (1008, 2708), (1034, 2753), (1036, 2756),

Gene: Minima\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Minima\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: MintFen\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for MintFen\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: MirimarMandM\_3 Start: 1104, Stop: 2564, Start Num: 117

Candidate Starts for MirimarMandM\_3:



(Start: 117 @1104 has 111 MA's), (122, 1110), (Start: 223 @1272 has 13 MA's), (228, 1281), (264, 1341), (283, 1410), (294, 1431), (310, 1467), (317, 1482), (424, 1686), (504, 1821), (546, 1899), (551, 1914), (564, 1932), (572, 1950), (589, 1992), (610, 2025), (622, 2043), (706, 2163), (708, 2166), (715, 2178), (724, 2190), (774, 2253), (808, 2310), (810, 2316), (817, 2325), (821, 2334), (823, 2337), (958, 2499), (965, 2508), (970, 2517), (995, 2556),

Gene: Miryou\_6 Start: 1325, Stop: 2752, Start Num: 166

Candidate Starts for Miryou\_6:

(Start: 166 @1325 has 22 MA's), (194, 1382), (Start: 205 @1403 has 1 MA's), (Start: 219 @1427 has 15 MA's), (257, 1511), (265, 1520), (267, 1526), (277, 1568), (284, 1586), (293, 1604), (313, 1655), (320, 1670), (376, 1730), (407, 1808), (420, 1850), (422, 1859), (423, 1862), (451, 1940), (542, 2054), (566, 2102), (585, 2144), (597, 2168), (605, 2180), (626, 2207), (667, 2252), (672, 2264), (762, 2411), (787, 2450), (823, 2507), (838, 2531), (856, 2555), (878, 2579), (954, 2678), (960, 2684), (1009, 2741),

Gene: Misaeng\_5 Start: 3319, Stop: 4710, Start Num: 201

Candidate Starts for Misaeng\_5:

(Start: 71 @3145 has 81 MA's), (Start: 201 @3319 has 6 MA's), (Start: 221 @3355 has 3 MA's), (263, 3409), (266, 3418), (273, 3451), (278, 3466), (281, 3475), (346, 3601), (402, 3715), (408, 3730), (410, 3736), (425, 3796), (443, 3856), (477, 3922), (503, 3955), (520, 3985), (530, 4000), (551, 4033), (561, 4048), (627, 4168), (643, 4183), (704, 4276), (728, 4312), (782, 4387), (793, 4408), (820, 4429), (868, 4498), (941, 4576), (973, 4615), (995, 4645), (1005, 4657), (1032, 4696), (1039, 4705),

Gene: Misha28\_3 Start: 674, Stop: 2161, Start Num: 139

Candidate Starts for Misha28\_3:

(Start: 132 @662 has 1 MA's), (Start: 139 @674 has 74 MA's), (Start: 219 @800 has 15 MA's), (222, 806), (242, 848), (244, 854), (259, 887), (263, 893), (265, 899), (274, 938), (283, 962), (292, 980), (293, 983), (308, 1025), (344, 1073), (349, 1082), (355, 1091), (366, 1094), (391, 1145), (414, 1223), (422, 1247), (424, 1259), (433, 1280), (437, 1292), (449, 1325), (452, 1331), (498, 1400), (500, 1406), (516, 1439), (537, 1475), (567, 1535), (572, 1544), (583, 1571), (640, 1649), (694, 1745), (736, 1790), (787, 1862), (810, 1901), (834, 1937), (837, 1943), (856, 1967), (882, 1997), (891, 2003), (919, 2045), (922, 2048), (925, 2051), (960, 2093), (969, 2105), (975, 2117),

Gene: MissDaisy\_9 Start: 2526, Stop: 3866, Start Num: 219

Candidate Starts for MissDaisy\_9:

(Start: 161 @2421 has 150 MA's), (Start: 219 @2526 has 15 MA's), (257, 2610), (265, 2619), (273, 2655), (277, 2667), (293, 2709), (313, 2760), (321, 2778), (354, 2808), (407, 2913), (420, 2955), (422, 2964), (423, 2967), (451, 3045), (456, 3054), (542, 3159), (564, 3201), (566, 3207), (585, 3249), (672, 3366), (688, 3408), (717, 3453), (770, 3522), (793, 3567), (808, 3588), (823, 3612), (891, 3696), (960, 3789), (1009, 3855), (1014, 3861),

Gene: MissRona\_2 Start: 361, Stop: 1959, Start Num: 113

Candidate Starts for MissRona\_2:

(Start: 89 @334 has 52 MA's), (Start: 113 @361 has 34 MA's), (198, 475), (202, 484), (225, 517), (233, 535), (241, 550), (252, 571), (264, 592), (278, 646), (281, 655), (294, 691), (306, 727), (313, 739), (338, 781), (341, 784), (440, 1003), (449, 1018), (457, 1033), (459, 1036), (524, 1111), (548, 1162), (641, 1318), (657, 1339), (659, 1342), (703, 1429), (711, 1441), (734, 1474), (736, 1477), (761, 1516), (770, 1522), (771, 1525), (810, 1594), (814, 1597), (854, 1657), (856, 1660), (865, 1669), (914, 1738), (924, 1753), (1049, 1942),

Gene: Mitti\_9 Start: 2478, Stop: 3923, Start Num: 161

Candidate Starts for Mitti\_9:

(Start: 161 @2478 has 150 MA's), (Start: 219 @2583 has 15 MA's), (257, 2667), (265, 2676), (273, 2712), (277, 2724), (283, 2739), (293, 2766), (313, 2817), (321, 2835), (354, 2865), (376, 2892), (407, 2970), (422, 3021), (423, 3024), (451, 3102), (456, 3111), (496, 3150), (542, 3216), (566, 3264), (585, 3306), (672, 3423), (688, 3465), (717, 3510), (770, 3579), (793, 3624), (808, 3645), (823, 3669), (960, 3846), (1009, 3912), (1014, 3918),

Gene: MkaliMitinis3\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for MkaliMitinis3\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: MoRicky\_2 Start: 176, Stop: 1804, Start Num: 98

Candidate Starts for MoRicky\_2:

(98, 176), (140, 224), (177, 278), (233, 380), (237, 389), (261, 422), (273, 467), (277, 479), (289, 515), (296, 527), (319, 575), (360, 620), (367, 632), (393, 686), (407, 731), (422, 782), (428, 806), (436, 833), (537, 971), (551, 1007), (578, 1067), (728, 1307), (806, 1409), (815, 1421), (846, 1475), (868, 1511), (869, 1514), (908, 1559), (930, 1589), (942, 1607), (1037, 1751), (1048, 1778),

Gene: Mocha12\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Mocha12\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Moki\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Moki\_2:

(Start: 71 @426 has 81 MA's), (Start: 221 @636 has 3 MA's), (265, 696), (273, 732), (276, 741), (281, 756), (283, 762), (289, 780), (379, 942), (392, 963), (425, 1077), (443, 1137), (477, 1203), (503, 1236), (520, 1266), (530, 1281), (574, 1362), (620, 1440), (627, 1449), (771, 1647), (793, 1689), (821, 1713), (846, 1755), (941, 1857),

Gene: Moloch\_4 Start: 874, Stop: 2364, Start Num: 95

Candidate Starts for Moloch\_4:

(Start: 95 @874 has 42 MA's), (Start: 150 @919 has 1 MA's), (Start: 209 @1021 has 1 MA's), (Start: 221 @1039 has 3 MA's), (227, 1048), (263, 1099), (264, 1102), (267, 1111), (273, 1141), (282, 1168), (341, 1267), (399, 1366), (408, 1390), (409, 1393), (410, 1396), (423, 1441), (555, 1675), (578, 1723), (583, 1735), (610, 1774), (622, 1792), (635, 1804), (636, 1807), (649, 1828), (657, 1834), (670, 1846), (711, 1924), (755, 1978), (791, 2032), (800, 2044), (829, 2089), (852, 2137), (915, 2221), (958, 2278), (1004, 2347),

Gene: MooKitty\_3 Start: 668, Stop: 2077, Start Num: 124

Candidate Starts for MooKitty\_3:

(Start: 124 @668 has 3 MA's), (170, 710), (Start: 201 @764 has 6 MA's), (Start: 209 @782 has 1 MA's), (265, 866), (267, 872), (273, 902), (277, 914), (283, 932), (370, 1052), (399, 1127), (408, 1151), (421, 1196), (423, 1202), (438, 1256), (440, 1265), (583, 1496), (595, 1517), (647, 1583), (712, 1688), (714, 1691), (755, 1736), (783, 1778), (799, 1802), (832, 1856), (833, 1859), (868, 1913), (890, 1934), (984, 2048), (997, 2063),

Gene: MooMoo\_2 Start: 337, Stop: 1785, Start Num: 161

Candidate Starts for MooMoo\_2:

(54, 205), (Start: 76 @241 has 1 MA's), (136, 307), (Start: 157 @331 has 1 MA's), (Start: 161 @337 has 150 MA's), (194, 412), (265, 556), (269, 574), (272, 589), (273, 592), (287, 634), (293, 640), (310, 685), (313, 691), (354, 739), (376, 766), (422, 895), (424, 907), (433, 928), (458, 988), (541, 1105), (564, 1150), (579, 1186), (588, 1204), (605, 1228), (622, 1249), (663, 1288), (667, 1294), (668, 1297), (711, 1372), (713, 1375), (722, 1387), (745, 1426), (770, 1450), (771, 1453), (787, 1483), (803, 1510), (844, 1573), (862, 1606), (878, 1627), (891, 1639), (960, 1720), (1005, 1768),

Gene: Moosehead\_2 Start: 437, Stop: 1936, Start Num: 159

Candidate Starts for Moosehead\_2:

(78, 338), (83, 344), (Start: 147 @422 has 1 MA's), (151, 428), (Start: 159 @437 has 2 MA's), (Start: 178 @473 has 1 MA's), (Start: 186 @497 has 1 MA's), (199, 524), (Start: 205 @536 has 1 MA's), (210, 548), (234, 590), (244, 611), (263, 650), (264, 653), (281, 713), (287, 734), (293, 740), (294, 743), (313, 791), (317, 800), (319, 803), (391, 911), (401, 947), (409, 968), (422, 1013), (423, 1016), (434, 1058), (437, 1067), (498, 1154), (500, 1160), (534, 1205), (561, 1256), (566, 1265), (567, 1268), (583, 1307), (585, 1310), (605, 1340), (670, 1412), (672, 1418), (701, 1490), (705, 1493), (732, 1526), (756, 1565), (777, 1592), (780, 1595), (820, 1658), (859, 1727), (863, 1730), (880, 1754), (894, 1766), (897, 1769), (947, 1835), (952, 1844), (954, 1847), (975, 1877), (1009, 1925),

Gene: Moostard\_5 Start: 1186, Stop: 2751, Start Num: 68

Candidate Starts for Moostard\_5:

(Start: 68 @1186 has 59 MA's), (Start: 71 @1192 has 81 MA's), (191, 1363), (262, 1468), (267, 1480), (327, 1636), (334, 1645), (336, 1648), (338, 1651), (389, 1726), (407, 1780), (408, 1783), (409, 1786), (515, 2017), (552, 2092), (568, 2113), (572, 2119), (623, 2188), (654, 2212), (666, 2230), (672, 2245), (736, 2359), (770, 2398), (773, 2404), (810, 2470), (877, 2560), (885, 2572), (933, 2611), (1008, 2698), (1034, 2743), (1036, 2746),

Gene: Mori\_30 Start: 13115, Stop: 14629, Start Num: 72

Candidate Starts for Mori\_30:

(Start: 72 @13115 has 33 MA's), (Start: 74 @13118 has 14 MA's), (Start: 205 @13298 has 1 MA's), (249, 13391), (276, 13466), (287, 13499), (300, 13526), (313, 13556), (407, 13709), (409, 13715), (420, 13751), (422, 13760), (451, 13841), (456, 13850), (458, 13853), (498, 13892), (538, 13949), (553, 13985), (554, 13988), (668, 14144), (672, 14153), (711, 14222), (717, 14231), (722, 14237), (742, 14270), (771, 14306), (823, 14393), (836, 14414), (891, 14477), (893, 14480), (896, 14483), (907, 14501), (920, 14522), (960, 14564), (988, 14600), (1005, 14612),

Gene: Morkie\_2 Start: 375, Stop: 1757, Start Num: 184

Candidate Starts for Morkie\_2:

(Start: 127 @312 has 3 MA's), (Start: 184 @375 has 5 MA's), (242, 486), (293, 615), (317, 675), (354, 714), (401, 804), (414, 846), (422, 870), (428, 894), (433, 903), (436, 912), (437, 915), (523, 1041), (585, 1158), (652, 1239), (670, 1266), (672, 1272), (717, 1341), (748, 1383), (770, 1410), (779, 1425), (793, 1455), (803, 1470), (808, 1476), (823, 1500), (878, 1575), (893, 1590), (954, 1674), (960, 1680), (965, 1686), (969, 1692), (971, 1695),

Gene: Morrissey\_2 Start: 537, Stop: 2093, Start Num: 111

Candidate Starts for Morrissey\_2:

(Start: 111 @537 has 7 MA's), (136, 564), (208, 678), (272, 792), (281, 819), (330, 927), (340, 939), (350, 954), (390, 1002), (392, 1005), (408, 1053), (424, 1116), (442, 1176), (443, 1179), (531, 1293), (541, 1308), (587, 1410), (590, 1416), (607, 1443), (622, 1461), (670, 1509), (672, 1515), (684, 1548), (710, 1587), (711, 1590), (786, 1722), (820, 1791), (821, 1794), (833, 1812), (851, 1848), (905, 1905), (918, 1929), (1035, 2085),

Gene: Mova\_3 Start: 672, Stop: 2159, Start Num: 139

Candidate Starts for Mova\_3:

(Start: 132 @660 has 1 MA's), (Start: 139 @672 has 74 MA's), (Start: 219 @798 has 15 MA's), (224, 807), (242, 846), (244, 852), (259, 885), (263, 891), (265, 897), (274, 936), (283, 960), (292, 978), (293, 981), (308, 1023), (319, 1044), (344, 1071), (349, 1080), (355, 1089), (366, 1092), (391, 1143), (414, 1221), (422, 1245), (424, 1257), (433, 1278), (437, 1290), (449, 1323), (452, 1329), (498, 1398), (500, 1404), (516, 1437), (537, 1473), (567, 1533), (572, 1542), (583, 1569), (640, 1647), (694, 1743), (736, 1788), (787, 1860), (800, 1881), (810, 1899), (834, 1935), (837, 1941), (856, 1965), (882, 1995), (891, 2001), (919, 2043), (922, 2046), (925, 2049), (960, 2091), (969, 2103), (975, 2115),

Gene: Mowgli\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Mowgli\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Moyashi\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for Moyashi\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (446, 1026), (456, 1044), (458, 1047), (465, 1053), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (809, 1602), (820, 1620), (823, 1626), (836, 1647), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (938, 1791), (942, 1797), (950, 1806), (974, 1836), (978, 1842), (1005, 1875), (1008, 1881),

Gene: Mozy\_3 Start: 672, Stop: 2159, Start Num: 139

Candidate Starts for Mozy\_3:

(Start: 132 @660 has 1 MA's), (Start: 139 @672 has 74 MA's), (Start: 219 @798 has 15 MA's), (222, 804), (242, 846), (257, 882), (259, 885), (263, 891), (265, 897), (274, 936), (277, 945), (293, 981), (308, 1023), (344, 1071), (355, 1089), (366, 1092), (391, 1143), (422, 1245), (423, 1248), (424, 1257), (426, 1263), (433, 1278), (437, 1290), (449, 1323), (498, 1398), (500, 1404), (514, 1434), (537, 1473), (567, 1533), (572, 1542), (583, 1569), (640, 1647), (670, 1680), (825, 1920), (834, 1935), (837, 1941), (856, 1965), (919, 2043), (922, 2046), (925, 2049), (960, 2091), (969, 2103), (975, 2115),

Gene: MrAK\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for MrAK\_2:

(Start: 144 @378 has 46 MA's), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (243, 528), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (823, 1626), (836, 1647), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005, 1875), (1008, 1881),

Gene: MrGloopy\_5 Start: 3066, Stop: 4631, Start Num: 71

Candidate Starts for MrGloopy\_5:

(Start: 71 @3066 has 81 MA's), (Start: 221 @3276 has 3 MA's), (Start: 223 @3279 has 13 MA's), (263, 3330), (278, 3387), (281, 3396), (289, 3420), (402, 3636), (407, 3648), (408, 3651), (410, 3657), (425, 3717), (443, 3777), (450, 3789), (503, 3876), (520, 3906), (530, 3921), (574, 4002), (620, 4080), (627, 4089), (669, 4125), (684, 4164), (704, 4197), (711, 4206), (728, 4233), (771, 4287), (793, 4329), (835, 4374), (846, 4395), (868, 4419), (941, 4497), (1032, 4617),

Gene: MrGreen\_3 Start: 1092, Stop: 2552, Start Num: 117

Candidate Starts for MrGreen\_3:

(Start: 117 @1092 has 111 MA's), (122, 1098), (Start: 223 @1260 has 13 MA's), (228, 1269), (264, 1329), (283, 1398), (294, 1419), (317, 1470), (424, 1674), (504, 1809), (546, 1887), (551, 1902), (572, 1938), (589, 1980), (610, 2013), (622, 2031), (706, 2151), (708, 2154), (715, 2166), (774, 2241), (810, 2304), (821, 2322), (823, 2325), (958, 2487), (965, 2496), (970, 2505), (995, 2544),

Gene: MrMagoo\_18 Start: 5300, Stop: 6841, Start Num: 93

Candidate Starts for MrMagoo\_18:

(Start: 93 @5300 has 19 MA's), (Start: 96 @5303 has 1 MA's), (218, 5486), (235, 5504), (258, 5537), (264, 5546), (281, 5609), (313, 5684), (407, 5837), (418, 5876), (453, 5969), (467, 5990), (549, 6137), (585, 6197), (724, 6371), (773, 6449), (808, 6509), (824, 6536), (1021, 6791),

Gene: MrSmee\_2 Start: 316, Stop: 1761, Start Num: 164

Candidate Starts for MrSmee\_2:

(Start: 164 @316 has 1 MA's), (Start: 219 @424 has 15 MA's), (222, 430), (238, 466), (242, 472), (313, 658), (317, 667), (405, 805), (410, 820), (420, 853), (422, 862), (423, 865), (433, 895), (434, 898), (436, 904), (437, 907), (451, 943), (566, 1102), (572, 1114), (626, 1210), (666, 1252), (670, 1261), (674, 1273), (722, 1357), (771, 1423), (787, 1453), (789, 1456), (793, 1465), (814, 1492), (831, 1522), (839, 1537), (960, 1693),

Gene: MsGreen\_5 Start: 1190, Stop: 2755, Start Num: 68

Candidate Starts for MsGreen\_5:

(Start: 36 @1139 has 19 MA's), (40, 1148), (Start: 68 @1190 has 59 MA's), (Start: 71 @1196 has 81 MA's), (191, 1367), (207, 1397), (262, 1472), (265, 1478), (267, 1484), (327, 1640), (334, 1649), (336, 1652), (338, 1655), (389, 1730), (407, 1784), (408, 1787), (409, 1790), (515, 2021), (552, 2096), (568, 2117), (572, 2123), (623, 2192), (654, 2216), (666, 2234), (672, 2249), (736, 2363), (770, 2402), (773, 2408), (810, 2474), (850, 2528), (877, 2564), (885, 2576), (933, 2615), (1008, 2702), (1034, 2747), (1036, 2750),

Gene: Mufasa\_4 Start: 652, Stop: 2073, Start Num: 161

Candidate Starts for Mufasa\_4:

(75, 574), (85, 586), (91, 595), (Start: 161 @652 has 150 MA's), (Start: 205 @733 has 1 MA's), (216, 754), (257, 838), (265, 847), (277, 895), (293, 931), (313, 982), (348, 1024), (354, 1030), (376, 1057), (420, 1177), (422, 1186), (423, 1189), (451, 1267), (456, 1276), (458, 1279), (542, 1381), (566, 1429), (572, 1441), (585, 1471), (597, 1495), (608, 1510), (672, 1588), (690, 1630), (717, 1660), (770, 1729), (779, 1744), (787, 1762), (808, 1795), (823, 1819), (856, 1867), (954, 1990), (960, 1996), (1009, 2062),

Gene: Mulch\_6 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for Mulch\_6:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (304, 2176), (308, 2185), (367, 2269), (409, 2353), (413, 2368), (423, 2401), (447, 2467), (517, 2599), (621, 2788), (634, 2800), (666, 2848), (683, 2890), (715, 2941), (770, 3016), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: Murai\_31 Start: 13308, Stop: 14819, Start Num: 74

Candidate Starts for Murai\_31:

(Start: 72 @13305 has 33 MA's), (Start: 74 @13308 has 14 MA's), (Start: 205 @13488 has 1 MA's), (249, 13581), (276, 13656), (287, 13689), (300, 13716), (313, 13746), (407, 13899), (409, 13905), (420, 13941), (422, 13950), (451, 14031), (456, 14040), (458, 14043), (498, 14082), (538, 14139), (553, 14175), (554, 14178), (668, 14334), (672, 14343), (711, 14412), (717, 14421), (722, 14427), (742, 14460), (771, 14496), (823, 14583), (836, 14604), (891, 14667), (893, 14670), (896, 14673), (907, 14691), (920, 14712), (960, 14754), (988, 14790), (1005, 14802),

Gene: Murp\_2 Start: 360, Stop: 1931, Start Num: 113

Candidate Starts for Murp\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (198, 477), (225, 519), (233, 537), (241, 552), (252, 576), (264, 597), (294, 696), (306, 732), (313, 744), (338, 786), (346, 798), (371, 825), (408, 903), (440, 1008), (449, 1023), (457, 1038), (459, 1041), (524, 1116), (548, 1167), (641, 1323), (657, 1344), (667, 1362), (670, 1368), (703, 1434), (711, 1446), (736, 1482), (761, 1521), (771, 1530), (773, 1533), (789, 1563), (814, 1602), (854, 1662), (871, 1683), (885, 1704), (914, 1746), (924, 1761), (952, 1797), (1024, 1893), (1029, 1905), (1038, 1914),

Gene: Murucutumbu\_8 Start: 1562, Stop: 2983, Start Num: 161

Candidate Starts for Murucutumbu\_8:

(85, 1490), (Start: 143 @1550 has 2 MA's), (Start: 161 @1562 has 150 MA's), (Start: 219 @1673 has 15 MA's), (222, 1679), (257, 1757), (265, 1766), (277, 1814), (284, 1832), (293, 1850), (313, 1901), (354, 1949), (376, 1976), (378, 1979), (407, 2054), (420, 2096), (422, 2105), (451, 2186), (542, 2300), (566, 2348), (572, 2360), (585, 2390), (597, 2414), (605, 2426), (617, 2441), (672, 2510), (771, 2654), (789, 2687), (823, 2741), (960, 2918), (1009, 2972),

Gene: Muttlie\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Muttlie\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (239, 992), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Mynx\_8 Start: 1613, Stop: 3034, Start Num: 161

Candidate Starts for Mynx\_8:

(85, 1541), (Start: 143 @1601 has 2 MA's), (Start: 161 @1613 has 150 MA's), (Start: 219 @1724 has 15 MA's), (222, 1730), (257, 1808), (265, 1817), (277, 1865), (284, 1883), (313, 1952), (348, 1994), (354, 2000), (376, 2027), (378, 2030), (420, 2147), (422, 2156), (451, 2237), (542, 2351), (566, 2399), (572, 2411), (585, 2441), (605, 2477), (670, 2555), (672, 2561), (771, 2705), (789, 2738), (823, 2792), (960, 2969), (1009, 3023),

Gene: Naby\_3 Start: 778, Stop: 2235, Start Num: 117

Candidate Starts for Naby\_3:

(Start: 117 @778 has 111 MA's), (Start: 223 @943 has 13 MA's), (283, 1081), (294, 1102), (310, 1138), (317, 1153), (406, 1294), (424, 1357), (431, 1381), (572, 1621), (589, 1663), (610, 1696), (622, 1714), (706, 1834), (715, 1849), (738, 1885), (774, 1924), (810, 1987), (823, 2008), (958, 2170), (970, 2188),

Gene: Nadeem\_6 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for Nadeem\_6:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (304, 2176), (308, 2185), (367, 2269), (409, 2353), (413, 2368), (423, 2401), (447, 2467), (517, 2599), (621, 2788), (634, 2800), (666, 2848), (683, 2890), (715, 2941), (770, 3016), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: Namsahir\_3 Start: 1095, Stop: 2555, Start Num: 117

Candidate Starts for Namsahir\_3:

(Start: 117 @1095 has 111 MA's), (122, 1101), (Start: 223 @1263 has 13 MA's), (228, 1272), (264, 1332), (283, 1401), (294, 1422), (317, 1473), (424, 1677), (504, 1812), (551, 1905), (564, 1923), (572, 1941), (589, 1983), (610, 2016), (622, 2034), (706, 2154), (708, 2157), (715, 2169), (724, 2181), (731, 2193), (774, 2244), (808, 2301), (810, 2307), (817, 2316), (821, 2325), (823, 2328), (958, 2490), (965, 2499), (970, 2508), (995, 2547),

Gene: Nancia\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Nancia\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (266, 699), (273, 732), (278, 747), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: NancyRae\_6 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for NancyRae\_6:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 125 @1816 has 61 MA's), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (304, 2176), (308, 2185), (367, 2269), (409, 2353), (413, 2368), (423, 2401), (447, 2467), (489, 2536), (517, 2599), (621, 2788), (634, 2800), (666, 2848), (683, 2890), (715, 2941), (770, 3016), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: Nandita\_6 Start: 1957, Stop: 3657, Start Num: 110

Candidate Starts for Nandita\_6:

(Start: 68 @1900 has 59 MA's), (92, 1936), (Start: 110 @1957 has 15 MA's), (190, 2080), (Start: 201 @2101 has 6 MA's), (228, 2149), (264, 2194), (265, 2197), (275, 2239), (281, 2257), (282, 2260), (283, 2263), (348, 2386), (392, 2440), (425, 2554), (443, 2614), (455, 2635), (482, 2701), (546, 2866), (574, 2932), (580, 2947), (678, 3118), (695, 3157), (704, 3166), (711, 3175), (738, 3217), (768, 3250), (789, 3289), (821, 3331), (846, 3373), (903, 3421), (918, 3448), (921, 3451), (927, 3457), (941, 3478), (974, 3520), (1050, 3646),

Gene: Nanosmite\_18 Start: 5467, Stop: 7059, Start Num: 93

Candidate Starts for Nanosmite\_18:

(Start: 93 @5467 has 19 MA's), (Start: 96 @5470 has 1 MA's), (179, 5572), (218, 5656), (265, 5719), (313, 5854), (315, 5857), (418, 6046), (515, 6241), (525, 6256), (602, 6397), (679, 6514), (724, 6589), (824, 6754), (1008, 6988), (1021, 7009),

Gene: Nazo\_2 Start: 392, Stop: 2065, Start Num: 42

Candidate Starts for Nazo\_2:

(7, 179), (16, 275), (Start: 42 @392 has 46 MA's), (108, 485), (Start: 124 @503 has 3 MA's), (194, 608), (215, 647), (274, 773), (281, 794), (283, 800), (284, 803), (306, 857), (322, 890), (382, 980), (447, 1169), (524, 1265), (548, 1316), (630, 1457), (640, 1469), (670, 1514), (761, 1667), (771, 1676), (786, 1703), (793, 1718), (810, 1745), (821, 1763), (850, 1799), (899, 1862), (950, 1934), (1038, 2048),

Gene: Necropolis\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Necropolis\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Nenae\_2 Start: 509, Stop: 2044, Start Num: 152

Candidate Starts for Nenae\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Nettuno\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Nettuno\_2:

(Start: 89 @318 has 52 MA's), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Netyap\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Netyap\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: NeumannU\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for NeumannU\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Neville\_12 Start: 4818, Stop: 6263, Start Num: 144

Candidate Starts for Neville\_12:

(Start: 144 @4818 has 46 MA's), (262, 5004), (294, 5097), (333, 5178), (342, 5190), (375, 5229), (389, 5247), (395, 5256), (420, 5340), (422, 5349), (441, 5409), (452, 5427), (525, 5547), (539, 5574), (579, 5643), (600, 5673), (658, 5739), (713, 5844), (773, 5931), (789, 5955), (814, 5994), (856, 6057), (902, 6108), (958, 6165),

Gene: Nibb\_7 Start: 1575, Stop: 2999, Start Num: 161

Candidate Starts for Nibb\_7:

(Start: 161 @1575 has 150 MA's), (194, 1641), (Start: 205 @1662 has 1 MA's), (Start: 219 @1686 has 15 MA's), (240, 1731), (257, 1770), (265, 1779), (277, 1827), (284, 1845), (293, 1863), (313, 1914), (346, 1953), (376, 1989), (407, 2067), (420, 2109), (422, 2118), (451, 2199), (542, 2313), (564, 2355), (566, 2361), (572, 2373), (585, 2403), (605, 2439), (617, 2454), (672, 2523), (690, 2565), (717, 2595), (770, 2664), (787, 2697), (789, 2700), (823, 2754), (844, 2787), (960, 2931), (1009, 2988),



Gene: Nicholas\_5 Start: 1190, Stop: 2755, Start Num: 68

Candidate Starts for Nicholas\_5:

(Start: 36 @1139 has 19 MA's), (40, 1148), (Start: 68 @1190 has 59 MA's), (Start: 71 @1196 has 81 MA's), (191, 1367), (207, 1397), (262, 1472), (265, 1478), (267, 1484), (327, 1640), (334, 1649), (336, 1652), (338, 1655), (389, 1730), (407, 1784), (408, 1787), (409, 1790), (515, 2021), (552, 2096), (568, 2117), (572, 2123), (623, 2192), (654, 2216), (666, 2234), (672, 2249), (736, 2363), (770, 2402), (773, 2408), (810, 2474), (850, 2528), (877, 2564), (885, 2576), (933, 2615), (1008, 2702), (1034, 2747), (1036, 2750),

Gene: Nicholasp3\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Nicholasp3\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Nicky22\_4 Start: 1151, Stop: 2779, Start Num: 125

Candidate Starts for Nicky22\_4:

(Start: 125 @1151 has 61 MA's), (228, 1307), (281, 1415), (289, 1439), (311, 1484), (319, 1499), (392, 1598), (409, 1649), (425, 1712), (439, 1760), (453, 1790), (711, 2261), (941, 2612), (977, 2660), (1050, 2768),

Gene: NiebruSaylor\_30 Start: 13116, Stop: 14630, Start Num: 72

Candidate Starts for NiebruSaylor\_30:

(Start: 72 @13116 has 33 MA's), (Start: 74 @13119 has 14 MA's), (Start: 205 @13299 has 1 MA's), (249, 13392), (276, 13467), (287, 13500), (300, 13527), (313, 13557), (407, 13710), (409, 13716), (420, 13752), (422, 13761), (451, 13842), (456, 13851), (458, 13854), (498, 13893), (538, 13950), (553, 13986), (554, 13989), (668, 14145), (672, 14154), (711, 14223), (717, 14232), (722, 14238), (742, 14271), (771, 14307), (823, 14394), (836, 14415), (891, 14478), (893, 14481), (896, 14484), (907, 14502), (920, 14523), (960, 14565), (988, 14601), (1005, 14613),

Gene: Niffler\_3 Start: 1152, Stop: 2612, Start Num: 117

Candidate Starts for Niffler\_3:

(Start: 117 @1152 has 111 MA's), (122, 1158), (Start: 223 @1320 has 13 MA's), (228, 1329), (264, 1389), (283, 1458), (294, 1479), (317, 1530), (424, 1734), (504, 1869), (546, 1947), (551, 1962), (564, 1980), (572, 1998), (589, 2040), (610, 2073), (622, 2091), (706, 2211), (708, 2214), (715, 2226), (724, 2238), (731, 2250), (774, 2301), (808, 2358), (810, 2364), (817, 2373), (821, 2382), (823, 2385), (958, 2547), (965, 2556), (970, 2565), (995, 2604),

Gene: Nikao\_4 Start: 847, Stop: 2271, Start Num: 161

Candidate Starts for Nikao\_4:

(Start: 143 @835 has 2 MA's), (Start: 161 @847 has 150 MA's), (194, 913), (Start: 219 @958 has 15 MA's), (240, 1003), (257, 1042), (265, 1051), (277, 1099), (284, 1117), (293, 1135), (313, 1186), (354, 1234), (376, 1261), (420, 1381), (422, 1390), (434, 1426), (435, 1429), (451, 1471), (462, 1489), (542, 1585), (564, 1627), (566, 1633), (572, 1645), (585, 1675), (588, 1681), (597, 1699), (617, 1726), (672, 1795), (717, 1867), (771, 1939), (789, 1972), (793, 1981), (810, 2008), (823, 2026), (960, 2203), (1009, 2260), (1014, 2266),

Gene: Niklas\_8 Start: 1660, Stop: 3090, Start Num: 161

Candidate Starts for Niklas\_8:

(109, 1618), (Start: 143 @1648 has 2 MA's), (Start: 161 @1660 has 150 MA's), (Start: 205 @1750 has 1 MA's), (Start: 219 @1774 has 15 MA's), (222, 1780), (240, 1819), (257, 1858), (265, 1867), (267, 1873), (277, 1915), (284, 1933), (293, 1951), (313, 2002), (354, 2050), (420, 2197), (422, 2206), (496, 2335), (542, 2401), (564, 2443), (566, 2449), (572, 2461), (585, 2491), (597, 2515), (617, 2542), (672, 2611), (690, 2653), (717, 2683), (733, 2707), (771, 2755), (808, 2818), (823, 2842), (856, 2893), (893, 2932), (960, 3022), (992, 3061), (1009, 3079), (1014, 3085),

Gene: Nobel\_3 Start: 1179, Stop: 2639, Start Num: 117

Candidate Starts for Nobel\_3:

(Start: 117 @1179 has 111 MA's), (122, 1185), (Start: 223 @1347 has 13 MA's), (228, 1356), (264, 1416), (283, 1485), (294, 1506), (317, 1557), (424, 1761), (504, 1896), (546, 1974), (551, 1989), (564, 2007), (572, 2025), (589, 2067), (610, 2100), (622, 2118), (706, 2238), (708, 2241), (715, 2253), (724, 2265), (731, 2277), (774, 2328), (808, 2385), (810, 2391), (817, 2400), (821, 2409), (823, 2412), (958, 2574), (965, 2583), (970, 2592), (995, 2631),

Gene: Noelani\_3 Start: 1062, Stop: 2522, Start Num: 117

Candidate Starts for Noelani\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (504, 1779), (546, 1857), (551, 1872), (564, 1890), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (724, 2148), (731, 2160), (774, 2211), (808, 2268), (810, 2274), (817, 2283), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: Noely\_2 Start: 539, Stop: 2110, Start Num: 47

Candidate Starts for Noely\_2:

(35, 521), (Start: 47 @539 has 3 MA's), (126, 644), (128, 647), (Start: 152 @674 has 22 MA's), (195, 743), (Start: 201 @755 has 6 MA's), (206, 764), (Start: 221 @791 has 3 MA's), (263, 845), (265, 851), (308, 971), (310, 974), (313, 980), (316, 986), (317, 989), (325, 998), (393, 1097), (428, 1217), (503, 1334), (518, 1364), (532, 1388), (560, 1448), (571, 1469), (628, 1565), (672, 1616), (677, 1631), (682, 1643), (684, 1649), (711, 1691), (762, 1754), (798, 1811), (847, 1895), (958, 2048), (965, 2057), (970, 2066),

Gene: Nubia\_5 Start: 3068, Stop: 4633, Start Num: 71

Candidate Starts for Nubia\_5:

(Start: 71 @3068 has 81 MA's), (Start: 201 @3242 has 6 MA's), (Start: 221 @3278 has 3 MA's), (263, 3332), (266, 3341), (272, 3371), (273, 3374), (278, 3389), (281, 3398), (346, 3524), (408, 3653), (410, 3659), (425, 3719), (443, 3779), (503, 3878), (520, 3908), (530, 3923), (561, 3971), (627, 4091), (684, 4166), (728, 4235), (782, 4310), (793, 4331), (820, 4352), (868, 4421), (941, 4499), (973, 4538), (995, 4568), (1005, 4580), (1032, 4619), (1039, 4628),

Gene: Nutello\_4 Start: 847, Stop: 2271, Start Num: 161

Candidate Starts for Nutello\_4:

(Start: 143 @835 has 2 MA's), (Start: 161 @847 has 150 MA's), (194, 913), (Start: 219 @958 has 15 MA's), (240, 1003), (257, 1042), (265, 1051), (277, 1099), (284, 1117), (293, 1135), (313, 1186), (354, 1234), (376, 1261), (420, 1381), (422, 1390), (434, 1426), (435, 1429), (451, 1471), (462, 1489), (542, 1585), (564, 1627), (566, 1633), (572, 1645), (585, 1675), (588, 1681), (597, 1699), (617, 1726), (672, 1795), (717, 1867), (771, 1939), (789, 1972), (793, 1981), (810, 2008), (823, 2026), (960, 2203), (1009, 2260), (1014, 2266),

Gene: OBUpride\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for OBUpride\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509),

(457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: ODay\_3 Start: 671, Stop: 2188, Start Num: 139

Candidate Starts for ODay\_3:

(Start: 134 @662 has 3 MA's), (Start: 139 @671 has 74 MA's), (211, 788), (Start: 219 @797 has 15 MA's), (224, 806), (244, 851), (250, 869), (259, 884), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (321, 1049), (344, 1070), (355, 1088), (366, 1091), (368, 1094), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (424, 1256), (426, 1262), (433, 1277), (437, 1289), (452, 1328), (503, 1409), (526, 1451), (567, 1532), (572, 1541), (583, 1568), (626, 1634), (652, 1655), (721, 1757), (736, 1784), (834, 1931), (841, 1943), (856, 1961), (919, 2039), (922, 2042), (925, 2045), (960, 2087), (969, 2099), (975, 2111),

Gene: OMalley\_2 Start: 429, Stop: 1994, Start Num: 71

Candidate Starts for OMalley\_2:

(Start: 71 @429 has 81 MA's), (Start: 200 @600 has 2 MA's), (263, 693), (281, 759), (289, 783), (316, 837), (392, 966), (425, 1080), (443, 1140), (461, 1170), (520, 1269), (530, 1284), (574, 1365), (627, 1452), (684, 1527), (685, 1530), (704, 1560), (768, 1644), (793, 1692), (821, 1716), (903, 1806), (941, 1860), (1005, 1941), (1032, 1980),

Gene: Oaklynn\_3 Start: 1080, Stop: 2534, Start Num: 122

Candidate Starts for Oaklynn\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (504, 1791), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Obliviate\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Obliviate\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (405, 891), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911),

Gene: OctaviousRex\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for OctaviousRex\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Octobien14\_13 Start: 6018, Stop: 7493, Start Num: 144

Candidate Starts for Octobien14\_13:

(Start: 144 @6018 has 46 MA's), (235, 6165), (262, 6204), (267, 6216), (310, 6339), (389, 6480), (391, 6483), (410, 6540), (422, 6582), (424, 6594), (434, 6618), (441, 6642), (450, 6657), (452, 6660), (467, 6684), (549, 6828), (552, 6837), (568, 6858), (600, 6906), (664, 6981), (667, 6987), (685, 7032), (700, 7056), (708, 7065), (718, 7083), (728, 7101), (787, 7182), (793, 7194), (814, 7224), (817, 7230), (885,

7320), (902, 7338), (994, 7437), (1010, 7455), (1027, 7485),

Gene: Octopus\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Octopus\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Ogotogo\_4 Start: 925, Stop: 2445, Start Num: 139

Candidate Starts for Ogotogo\_4:

(Start: 132 @913 has 1 MA's), (Start: 139 @925 has 74 MA's), (Start: 219 @1051 has 15 MA's), (224, 1060), (244, 1105), (257, 1135), (259, 1138), (263, 1144), (274, 1189), (283, 1213), (344, 1324), (355, 1342), (366, 1345), (376, 1369), (391, 1396), (409, 1453), (420, 1489), (422, 1498), (424, 1510), (426, 1516), (433, 1531), (437, 1543), (449, 1576), (452, 1582), (472, 1618), (500, 1657), (514, 1687), (516, 1690), (567, 1786), (572, 1795), (583, 1822), (646, 1906), (662, 1921), (731, 2032), (736, 2041), (742, 2050), (787, 2113), (834, 2188), (841, 2200), (856, 2218), (891, 2254), (919, 2296), (925, 2302), (960, 2344), (969, 2356), (975, 2368), (1017, 2434),

Gene: OhShagHennessy\_4 Start: 1031, Stop: 2608, Start Num: 71

Candidate Starts for OhShagHennessy\_4:

(Start: 68 @1025 has 59 MA's), (Start: 71 @1031 has 81 MA's), (191, 1202), (249, 1289), (262, 1307), (265, 1313), (273, 1349), (336, 1487), (338, 1490), (389, 1565), (408, 1622), (409, 1625), (478, 1793), (511, 1847), (515, 1856), (525, 1871), (535, 1892), (552, 1931), (568, 1952), (572, 1958), (586, 1985), (623, 2027), (654, 2051), (666, 2069), (670, 2078), (672, 2084), (685, 2117), (708, 2150), (731, 2189), (734, 2195), (736, 2198), (773, 2243), (810, 2309), (842, 2360), (865, 2384), (877, 2399), (878, 2402), (976, 2504), (1005, 2531), (1034, 2582), (1036, 2585),

Gene: Ohgeesy\_2 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for Ohgeesy\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (494, 1071), (548, 1137), (572, 1179), (612, 1257), (632, 1281), (641, 1293), (655, 1314), (670, 1338), (672, 1344), (680, 1365), (734, 1458), (767, 1500), (771, 1506), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (1002, 1827), (1022, 1857),

Gene: OkiRoe\_6 Start: 1327, Stop: 2754, Start Num: 166

Candidate Starts for OkiRoe\_6:

(75, 1234), (Start: 166 @1327 has 22 MA's), (194, 1384), (Start: 205 @1405 has 1 MA's), (Start: 219 @1429 has 15 MA's), (257, 1513), (265, 1522), (267, 1528), (277, 1570), (284, 1588), (293, 1606), (313, 1657), (376, 1732), (407, 1810), (420, 1852), (422, 1861), (423, 1864), (451, 1942), (542, 2056), (566, 2104), (585, 2146), (597, 2170), (605, 2182), (626, 2209), (667, 2254), (672, 2266), (762, 2413), (787, 2452), (823, 2509), (838, 2533), (856, 2557), (878, 2581), (954, 2680), (960, 2686), (1009, 2743),

Gene: Oksu\_3 Start: 798, Stop: 2159, Start Num: 219

Candidate Starts for Oksu\_3:

(Start: 132 @660 has 1 MA's), (Start: 139 @672 has 74 MA's), (Start: 219 @798 has 15 MA's), (222, 804), (242, 846), (244, 852), (259, 885), (263, 891), (265, 897), (274, 936), (283, 960), (292, 978), (293, 981), (308, 1023), (319, 1044), (344, 1071), (349, 1080), (355, 1089), (366, 1092), (391, 1143), (409, 1200), (414, 1221), (422, 1245), (424, 1257), (433, 1278), (437, 1290), (449, 1323), (452, 1329), (498, 1398), (500, 1404), (516, 1437), (537, 1473), (567, 1533), (572, 1542), (583, 1569), (640, 1647), (694, 1743), (736, 1788), (787, 1860), (810, 1899), (834, 1935), (837, 1941), (856, 1965), (882, 1995), (891, 2001), (919, 2043), (922, 2046), (925, 2049), (960, 2091), (969, 2103), (975, 2115),

Gene: Olga\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Olga\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Olliecat\_3 Start: 953, Stop: 2530, Start Num: 125

Candidate Starts for Olliecat\_3:

(Start: 125 @953 has 61 MA's), (Start: 147 @980 has 1 MA's), (206, 1070), (228, 1109), (264, 1154), (281, 1217), (286, 1232), (316, 1295), (409, 1451), (425, 1514), (442, 1571), (443, 1574), (453, 1592), (464, 1607), (567, 1829), (595, 1892), (610, 1916), (658, 1967), (660, 1970), (669, 1979), (678, 2003), (710, 2057), (728, 2087), (768, 2135), (862, 2273), (908, 2345), (974, 2432), (985, 2450), (1043, 2522),

Gene: OmniCritical\_9 Start: 2570, Stop: 3910, Start Num: 219

Candidate Starts for OmniCritical\_9:

(Start: 161 @2465 has 150 MA's), (Start: 219 @2570 has 15 MA's), (257, 2654), (265, 2663), (273, 2699), (277, 2711), (283, 2726), (293, 2753), (313, 2804), (321, 2822), (354, 2852), (376, 2879), (407, 2957), (420, 2999), (422, 3008), (423, 3011), (451, 3089), (456, 3098), (496, 3137), (542, 3203), (566, 3251), (585, 3293), (672, 3410), (688, 3452), (717, 3497), (770, 3566), (793, 3611), (808, 3632), (823, 3656), (960, 3833), (1009, 3899), (1014, 3905),

Gene: Omnicron\_6 Start: 1387, Stop: 2814, Start Num: 166

Candidate Starts for Omnicron\_6:

(Start: 143 @1366 has 2 MA's), (Start: 166 @1387 has 22 MA's), (194, 1444), (Start: 205 @1465 has 1 MA's), (Start: 219 @1489 has 15 MA's), (257, 1573), (265, 1582), (277, 1630), (284, 1648), (293, 1666), (313, 1717), (320, 1732), (376, 1792), (407, 1870), (420, 1912), (422, 1921), (423, 1924), (436, 1963), (451, 2002), (542, 2116), (553, 2146), (566, 2164), (585, 2206), (605, 2242), (626, 2269), (672, 2326), (717, 2410), (787, 2512), (793, 2524), (823, 2569), (838, 2593), (856, 2617), (960, 2746), (1009, 2803),

Gene: OneDirection\_2 Start: 438, Stop: 1937, Start Num: 159

Candidate Starts for OneDirection\_2:

(Start: 147 @423 has 1 MA's), (151, 429), (Start: 159 @438 has 2 MA's), (Start: 178 @474 has 1 MA's), (Start: 186 @498 has 1 MA's), (199, 525), (Start: 205 @537 has 1 MA's), (210, 549), (263, 651), (264, 654), (269, 675), (293, 741), (294, 744), (313, 792), (317, 801), (319, 804), (391, 912), (401, 948), (409, 969), (422, 1014), (423, 1017), (434, 1059), (437, 1068), (498, 1155), (534, 1206), (561, 1257), (566, 1266), (567, 1269), (583, 1308), (585, 1311), (605, 1341), (664, 1401), (670, 1413), (672, 1419), (701, 1491), (705, 1494), (756, 1566), (777, 1593), (780, 1596), (820, 1659), (827, 1668), (863, 1731), (880, 1755), (894, 1767), (897, 1770), (947, 1836), (952, 1845), (954, 1848), (960, 1854), (965, 1860), (1009, 1926),

Gene: Opie\_2 Start: 520, Stop: 2169, Start Num: 80

Candidate Starts for Opie\_2:

(Start: 80 @520 has 9 MA's), (106, 550), (Start: 125 @571 has 61 MA's), (225, 721), (244, 754), (313, 931), (317, 940), (382, 1054), (425, 1189), (494, 1324), (513, 1339), (548, 1390), (572, 1432), (641, 1546), (651, 1564), (655, 1567), (734, 1711), (741, 1720), (810, 1831), (821, 1849), (877, 1921), (904, 1957), (944, 2011), (986, 2071), (1017, 2122),

Gene: Orcanus\_3 Start: 751, Stop: 2331, Start Num: 137

Candidate Starts for Orcanus\_3:

(Start: 79 @685 has 7 MA's), (Start: 137 @751 has 8 MA's), (Start: 201 @847 has 6 MA's), (206, 856), (Start: 209 @865 has 1 MA's), (Start: 223 @886 has 13 MA's), (233, 910), (263, 937), (267, 949), (275, 985), (281, 1003), (289, 1027), (300, 1048), (392, 1186), (411, 1249), (425, 1300), (430, 1318), (443, 1360), (455, 1381), (481, 1441), (493, 1471), (498, 1480), (527, 1543), (669, 1771), (684, 1810), (699, 1837), (711, 1852), (731, 1882), (765, 1921), (820, 1999), (838, 2029), (851, 2056), (974, 2239), (977, 2245), (995, 2266), (1034, 2320),

Gene: Oregano\_2 Start: 348, Stop: 1907, Start Num: 89

Candidate Starts for Oregano\_2:

(48, 288), (Start: 89 @348 has 52 MA's), (183, 456), (225, 534), (241, 567), (274, 651), (277, 660), (294, 696), (319, 756), (389, 846), (391, 849), (420, 942), (422, 951), (425, 966), (494, 1101), (548, 1167), (572, 1209), (607, 1278), (611, 1284), (641, 1323), (655, 1344), (672, 1374), (680, 1395), (708, 1440), (733, 1476), (734, 1479), (767, 1521), (850, 1650), (888, 1701), (983, 1830), (1034, 1890),

Gene: Oscar\_7 Start: 1482, Stop: 2906, Start Num: 161

Candidate Starts for Oscar\_7:

(Start: 161 @1482 has 150 MA's), (Start: 205 @1569 has 1 MA's), (Start: 219 @1593 has 15 MA's), (222, 1599), (257, 1677), (265, 1686), (267, 1692), (277, 1734), (284, 1752), (293, 1770), (313, 1821), (346, 1860), (376, 1896), (407, 1974), (420, 2016), (422, 2025), (451, 2106), (542, 2220), (564, 2262), (566, 2268), (572, 2280), (585, 2310), (597, 2334), (605, 2346), (617, 2361), (672, 2430), (690, 2472), (770, 2571), (787, 2604), (789, 2607), (810, 2643), (823, 2661), (1009, 2895),

Gene: Otwor\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Otwor\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: OurGirlNessie\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for OurGirlNessie\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (263, 690), (273, 732), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: Ouroboros\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for Ouroboros\_2:

(Start: 144 @378 has 46 MA's), (Start: 156 @387 has 23 MA's), (174, 417), (182, 435), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (454, 1041), (456, 1044), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (653, 1335), (666, 1356), (683, 1398), (708, 1440), (724, 1467), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (796, 1584), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (836, 1647), (842, 1656), (850, 1671), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (970, 1827), (973, 1833), (1005, 1875), (1008, 1881),

Gene: Owens\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Owens\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589,

1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: OwlsT2W\_3 Start: 797, Stop: 2158, Start Num: 219

Candidate Starts for OwlsT2W\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Oxynfrius\_5 Start: 3081, Stop: 4646, Start Num: 71

Candidate Starts for Oxynfrius\_5:

(Start: 71 @3081 has 81 MA's), (Start: 201 @3255 has 6 MA's), (Start: 221 @3291 has 3 MA's), (263, 3345), (266, 3354), (273, 3387), (278, 3402), (281, 3411), (346, 3537), (402, 3651), (408, 3666), (410, 3672), (425, 3732), (503, 3891), (520, 3921), (561, 3984), (574, 4017), (627, 4104), (684, 4179), (704, 4212), (728, 4248), (782, 4323), (793, 4344), (820, 4365), (868, 4434), (941, 4512), (973, 4551), (995, 4581), (1005, 4593), (1032, 4632), (1039, 4641),

Gene: P1.1\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for P1.1\_2:

(Start: 144 @378 has 46 MA's), (165, 402), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (550, 1191), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (850, 1671), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005, 1875), (1008, 1881),

Gene: P100.1\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for P100.1\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (446, 1026), (456, 1044), (458, 1047), (465, 1053), (508, 1134), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: P100A\_2 Start: 383, Stop: 1894, Start Num: 144

Candidate Starts for P100A\_2:

(Start: 144 @383 has 46 MA's), (182, 440), (204, 485), (220, 512), (Start: 221 @515 has 3 MA's), (260, 563), (265, 572), (267, 578), (273, 608), (276, 617), (278, 623), (294, 656), (300, 674), (310, 698), (313, 704), (332, 743), (338, 752), (341, 755), (395, 866), (405, 902), (408, 911), (409, 914), (414, 935), (420, 950), (422, 959), (437, 1010), (446, 1031), (454, 1046), (456, 1049), (458, 1052), (508, 1139), (546, 1184), (561, 1211), (572, 1232), (614, 1292), (636, 1319), (659, 1349), (670, 1370), (715, 1457), (734, 1490), (742, 1502), (744, 1508), (758, 1535), (775, 1556), (778, 1559), (781, 1562), (787, 1574), (810, 1610), (823, 1631), (848, 1673), (872, 1709), (874, 1712), (882, 1724), (893, 1736),

(938, 1796), (942, 1802), (950, 1811), (960, 1826), (1005, 1880), (1008, 1886),

Gene: P100D\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for P100D\_2:

(Start: 144 @373 has 46 MA's), (165, 397), (174, 412), (182, 430), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (273, 598), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (446, 1021), (454, 1036), (456, 1039), (458, 1042), (471, 1063), (508, 1129), (532, 1150), (546, 1174), (550, 1186), (561, 1201), (572, 1222), (619, 1288), (648, 1321), (666, 1351), (683, 1393), (724, 1462), (734, 1480), (742, 1492), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (809, 1597), (823, 1621), (848, 1663), (872, 1699), (874, 1702), (893, 1726), (938, 1786), (942, 1792), (950, 1801), (1005, 1870), (1008, 1876),

Gene: P101A\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for P101A\_2:

(Start: 144 @378 has 46 MA's), (165, 402), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (938, 1791), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005, 1875), (1008, 1881),

Gene: P104A\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for P104A\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (243, 528), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (446, 1026), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (836, 1647), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: P104B\_2 Start: 385, Stop: 1884, Start Num: 158

Candidate Starts for P104B\_2:

(141, 370), (Start: 144 @373 has 46 MA's), (Start: 158 @385 has 20 MA's), (174, 412), (182, 430), (195, 457), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (273, 598), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (446, 1021), (456, 1039), (458, 1042), (465, 1048), (508, 1129), (532, 1150), (546, 1174), (561, 1201), (572, 1222), (619, 1288), (648, 1321), (666, 1351), (683, 1393), (728, 1471), (734, 1480), (742, 1492), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (809, 1597), (820, 1615), (823, 1621), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (942, 1792), (950, 1801), (952, 1807), (973, 1828), (1005, 1870), (1008, 1876),

Gene: P105\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for P105\_2:



(Start: 144 @373 has 46 MA's), (174, 412), (182, 430), (195, 457), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (243, 523), (260, 553), (265, 562), (267, 568), (273, 598), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (389, 847), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (446, 1021), (456, 1039), (458, 1042), (465, 1048), (471, 1063), (508, 1129), (532, 1150), (546, 1174), (561, 1201), (572, 1222), (619, 1288), (648, 1321), (683, 1393), (708, 1435), (728, 1471), (734, 1480), (742, 1492), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (810, 1600), (820, 1615), (823, 1621), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (942, 1792), (950, 1801), (952, 1807), (973, 1828), (1005, 1870), (1008, 1876),

Gene: P106A\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for P106A\_2:

(Start: 144 @378 has 46 MA's), (Start: 158 @390 has 20 MA's), (165, 402), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (572, 1227), (619, 1293), (648, 1326), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: P106C\_2 Start: 390, Stop: 1889, Start Num: 158

Candidate Starts for P106C\_2:

(Start: 144 @378 has 46 MA's), (Start: 158 @390 has 20 MA's), (165, 402), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (572, 1227), (619, 1293), (648, 1326), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: P106I\_2 Start: 390, Stop: 1889, Start Num: 158

Candidate Starts for P106I\_2:

(Start: 144 @378 has 46 MA's), (Start: 158 @390 has 20 MA's), (165, 402), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (572, 1227), (619, 1293), (648, 1326), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: P106L\_2 Start: 390, Stop: 1889, Start Num: 158

Candidate Starts for P106L\_2:

(Start: 144 @378 has 46 MA's), (Start: 158 @390 has 20 MA's), (165, 402), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053),

(471, 1068), (508, 1134), (532, 1155), (572, 1227), (619, 1293), (648, 1326), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: P106M\_2 Start: 390, Stop: 1889, Start Num: 158

Candidate Starts for P106M\_2:

(Start: 144 @378 has 46 MA's), (Start: 158 @390 has 20 MA's), (165, 402), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (572, 1227), (619, 1293), (648, 1326), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: P107A\_2 Start: 386, Stop: 1897, Start Num: 144

Candidate Starts for P107A\_2:

(Start: 144 @386 has 46 MA's), (Start: 156 @395 has 23 MA's), (174, 425), (182, 443), (204, 488), (220, 515), (Start: 221 @518 has 3 MA's), (243, 536), (260, 566), (265, 575), (267, 581), (273, 611), (276, 620), (278, 626), (294, 659), (300, 677), (310, 701), (313, 707), (332, 746), (338, 755), (341, 758), (359, 797), (361, 800), (395, 869), (408, 914), (409, 917), (414, 938), (420, 953), (422, 962), (424, 974), (437, 1013), (446, 1034), (454, 1049), (456, 1052), (458, 1055), (465, 1061), (532, 1163), (550, 1199), (572, 1235), (619, 1301), (666, 1364), (680, 1400), (683, 1406), (742, 1505), (744, 1511), (758, 1538), (775, 1559), (778, 1562), (781, 1565), (787, 1577), (796, 1592), (807, 1607), (809, 1610), (823, 1634), (836, 1655), (842, 1664), (872, 1712), (874, 1715), (882, 1727), (893, 1739), (942, 1805), (950, 1814), (952, 1820), (960, 1829), (1005, 1883), (1008, 1889),

Gene: P107C\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for P107C\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: P108C\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for P108C\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (243, 528), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (561, 1206), (572, 1227), (619, 1293), (666, 1356), (683, 1398), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (781, 1557), (809, 1602), (820, 1620), (823, 1626), (850, 1671), (872, 1704), (874, 1707), (882, 1719), (942, 1797), (950, 1806), (978, 1842), (1005, 1875), (1008, 1881),

Gene: P14.4\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for P14.4\_2:

(Start: 144 @378 has 46 MA's), (Start: 158 @390 has 20 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (243, 528), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (471, 1068), (508, 1134), (522, 1143), (532, 1155), (546, 1179), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (781, 1557), (787, 1569), (809, 1602), (820, 1620), (823, 1626), (872, 1704), (874, 1707), (882, 1719), (942, 1797), (950, 1806), (952, 1812), (970, 1827), (973, 1833), (1005, 1875), (1008, 1881),

Gene: P3MA\_3 Start: 954, Stop: 2408, Start Num: 158

Candidate Starts for P3MA\_3:

(Start: 158 @954 has 20 MA's), (Start: 205 @1038 has 1 MA's), (264, 1149), (265, 1152), (273, 1188), (287, 1230), (293, 1236), (317, 1296), (378, 1365), (405, 1434), (409, 1446), (414, 1467), (422, 1491), (426, 1509), (436, 1533), (437, 1536), (451, 1572), (456, 1581), (503, 1656), (523, 1683), (561, 1746), (564, 1749), (575, 1776), (605, 1836), (672, 1917), (728, 2004), (771, 2058), (787, 2088), (823, 2145), (942, 2298), (954, 2316), (1009, 2397), (1012, 2400),

Gene: P9.1\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for P9.1\_2:

(Start: 144 @373 has 46 MA's), (165, 397), (174, 412), (182, 430), (195, 457), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (389, 847), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (446, 1021), (454, 1036), (456, 1039), (458, 1042), (508, 1129), (532, 1150), (572, 1222), (619, 1288), (648, 1321), (683, 1393), (708, 1435), (728, 1471), (734, 1480), (742, 1492), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (810, 1600), (820, 1615), (823, 1621), (848, 1663), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (942, 1792), (950, 1801), (952, 1807), (973, 1828), (1005, 1870), (1008, 1876),

Gene: PA6\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for PA6\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: PAD20\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for PAD20\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (938, 1791), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005,

1875), (1008, 1881),

Gene: PAS50\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for PAS50\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (446, 1026), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (698, 1428), (724, 1467), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (836, 1647), (850, 1671), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005, 1875), (1008, 1881),

Gene: PCoral7\_2 Start: 378, Stop: 1928, Start Num: 129

Candidate Starts for PCoral7\_2:

(101, 348), (107, 354), (Start: 113 @360 has 34 MA's), (116, 363), (Start: 129 @378 has 6 MA's), (180, 441), (198, 477), (206, 492), (212, 504), (225, 519), (241, 552), (252, 573), (264, 594), (273, 633), (281, 657), (294, 693), (313, 741), (338, 783), (346, 795), (408, 900), (449, 1020), (457, 1035), (524, 1113), (542, 1146), (548, 1164), (641, 1320), (667, 1359), (703, 1431), (736, 1479), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (821, 1614), (885, 1701), (914, 1743), (952, 1794), (1038, 1911), (1042, 1917),

Gene: PFR1\_02 Start: 407, Stop: 1978, Start Num: 127

Candidate Starts for PFR1\_02:

(Start: 127 @407 has 3 MA's), (136, 416), (230, 572), (264, 608), (267, 617), (281, 671), (289, 695), (307, 734), (386, 854), (392, 863), (405, 905), (407, 911), (408, 914), (427, 986), (442, 1037), (443, 1040), (450, 1052), (453, 1058), (455, 1061), (473, 1094), (484, 1136), (497, 1160), (670, 1451), (672, 1457), (688, 1499), (704, 1523), (710, 1529), (711, 1532), (728, 1559), (765, 1601), (770, 1610), (771, 1613), (817, 1667), (833, 1694), (851, 1730), (889, 1763), (918, 1808), (974, 1880), (1000, 1910), (1036, 1964),

Gene: PFR2\_02 Start: 407, Stop: 1978, Start Num: 127

Candidate Starts for PFR2\_02:

(Start: 127 @407 has 3 MA's), (136, 416), (230, 572), (264, 608), (267, 617), (281, 671), (289, 695), (307, 734), (386, 854), (392, 863), (405, 905), (407, 911), (408, 914), (427, 986), (442, 1037), (443, 1040), (450, 1052), (453, 1058), (455, 1061), (473, 1094), (484, 1136), (497, 1160), (670, 1451), (672, 1457), (688, 1499), (704, 1523), (710, 1529), (711, 1532), (728, 1559), (765, 1601), (770, 1610), (771, 1613), (817, 1667), (833, 1694), (851, 1730), (889, 1763), (918, 1808), (974, 1880), (1000, 1910), (1036, 1964),

Gene: PHL010M04\_02 Start: 377, Stop: 1888, Start Num: 144

Candidate Starts for PHL010M04\_02:

(Start: 144 @377 has 46 MA's), (Start: 156 @386 has 23 MA's), (174, 416), (182, 434), (204, 479), (220, 506), (Start: 221 @509 has 3 MA's), (253, 545), (260, 557), (265, 566), (267, 572), (273, 602), (276, 611), (278, 617), (294, 650), (300, 668), (310, 692), (332, 737), (338, 746), (341, 749), (359, 788), (361, 791), (395, 860), (408, 905), (409, 908), (414, 929), (420, 944), (422, 953), (424, 965), (437, 1004), (446, 1025), (454, 1040), (456, 1043), (465, 1052), (508, 1133), (561, 1205), (572, 1226), (614, 1286), (619, 1292), (653, 1334), (666, 1355), (683, 1397), (715, 1451), (744, 1502), (758, 1529), (775, 1550), (787, 1568), (796, 1583), (807, 1598), (810, 1604), (842, 1655), (872, 1703), (874, 1706), (882, 1718), (942, 1796), (950, 1805), (970, 1826), (973, 1832), (1005, 1874), (1008, 1880),

Gene: PHL037M02\_02 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for PHL037M02\_02:

(Start: 144 @378 has 46 MA's), (165, 402), (174, 417), (182, 435), (195, 462), (204, 480), (206, 483), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (471, 1068), (532, 1155), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (724, 1467), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (809, 1602), (820, 1620), (823, 1626), (872, 1704), (874, 1707), (942, 1797), (950, 1806), (1005, 1875), (1008, 1881),

Gene: PHL060L00\_02 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for PHL060L00\_02:

(141, 370), (Start: 144 @373 has 46 MA's), (Start: 158 @385 has 20 MA's), (174, 412), (182, 430), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (454, 1036), (456, 1039), (458, 1042), (471, 1063), (508, 1129), (546, 1174), (561, 1201), (572, 1222), (619, 1288), (648, 1321), (657, 1336), (708, 1435), (728, 1471), (734, 1480), (742, 1492), (744, 1498), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (807, 1594), (810, 1600), (820, 1615), (823, 1621), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (942, 1792), (950, 1801), (952, 1807), (973, 1828), (1005, 1870), (1008, 1876),

Gene: PHL067M10\_02 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for PHL067M10\_02:

(Start: 144 @378 has 46 MA's), (182, 435), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (243, 528), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (389, 852), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (437, 1005), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (471, 1068), (508, 1134), (546, 1179), (561, 1206), (572, 1227), (619, 1293), (648, 1326), (683, 1398), (698, 1428), (708, 1440), (728, 1476), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (848, 1668), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005, 1875), (1008, 1881),

Gene: PHL071N05\_02 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for PHL071N05\_02:

(Start: 144 @373 has 46 MA's), (165, 397), (182, 430), (195, 457), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (389, 847), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (446, 1021), (454, 1036), (456, 1039), (458, 1042), (471, 1063), (508, 1129), (572, 1222), (619, 1288), (648, 1321), (666, 1351), (683, 1393), (728, 1471), (734, 1480), (742, 1492), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (809, 1597), (820, 1615), (823, 1621), (850, 1666), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (942, 1792), (950, 1801), (952, 1807), (960, 1816), (1005, 1870), (1008, 1876),

Gene: PHL111M01\_02 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for PHL111M01\_02:

(Start: 144 @378 has 46 MA's), (Start: 158 @390 has 20 MA's), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (454, 1041), (456, 1044), (458, 1047), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (619, 1293), (648, 1326), (666, 1356), (683, 1398), (698, 1428), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551),

(778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (823, 1626), (850, 1671), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (978, 1842), (1005, 1875), (1008, 1881),

Gene: PHL112N00\_02 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for PHL112N00\_02:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (243, 528), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (446, 1026), (456, 1044), (458, 1047), (465, 1053), (471, 1068), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (648, 1326), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (823, 1626), (850, 1671), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (960, 1821), (1005, 1875), (1008, 1881),

Gene: PHL113M01\_02 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for PHL113M01\_02:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (446, 1026), (454, 1041), (456, 1044), (458, 1047), (465, 1053), (508, 1134), (532, 1155), (546, 1179), (572, 1227), (619, 1293), (648, 1326), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (744, 1503), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (810, 1605), (820, 1620), (823, 1626), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (978, 1842), (1005, 1875), (1008, 1881),

Gene: PHL114L00\_02 Start: 386, Stop: 1897, Start Num: 144

Candidate Starts for PHL114L00\_02:

(Start: 144 @386 has 46 MA's), (182, 443), (204, 488), (220, 515), (Start: 221 @518 has 3 MA's), (260, 566), (265, 575), (267, 581), (273, 611), (276, 620), (278, 626), (294, 659), (300, 677), (310, 701), (313, 707), (338, 755), (341, 758), (359, 797), (361, 800), (395, 869), (408, 914), (409, 917), (414, 938), (420, 953), (422, 962), (446, 1034), (454, 1049), (456, 1052), (458, 1055), (532, 1163), (561, 1214), (572, 1235), (619, 1301), (666, 1364), (683, 1406), (708, 1448), (728, 1484), (742, 1505), (744, 1511), (758, 1538), (775, 1559), (778, 1562), (781, 1565), (787, 1577), (807, 1607), (809, 1610), (820, 1628), (823, 1634), (842, 1664), (850, 1679), (872, 1712), (874, 1715), (882, 1727), (942, 1805), (950, 1814), (952, 1820), (960, 1829), (974, 1844), (1005, 1883), (1008, 1889),

Gene: Pace1224\_2 Start: 359, Stop: 1903, Start Num: 72

Candidate Starts for Pace1224\_2:

(Start: 72 @359 has 33 MA's), (264, 632), (277, 683), (293, 719), (317, 779), (327, 800), (409, 932), (420, 968), (424, 989), (436, 1019), (451, 1058), (456, 1067), (566, 1220), (608, 1298), (656, 1364), (672, 1391), (736, 1490), (808, 1604), (823, 1628), (836, 1649), (878, 1700), (891, 1715), (960, 1808), (1009, 1892), (1014, 1898),

Gene: Padfoot\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Padfoot\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Padpat\_8 Start: 1593, Stop: 3017, Start Num: 161

Candidate Starts for Padpat\_8:

(85, 1521), (Start: 143 @1581 has 2 MA's), (Start: 161 @1593 has 150 MA's), (Start: 219 @1704 has 15 MA's), (222, 1710), (257, 1788), (265, 1797), (277, 1845), (284, 1863), (313, 1932), (348, 1974), (354, 1980), (376, 2007), (378, 2010), (420, 2127), (422, 2136), (451, 2217), (542, 2331), (566, 2379), (572, 2391), (585, 2421), (597, 2445), (605, 2457), (670, 2535), (672, 2541), (771, 2688), (789, 2721), (823, 2775), (960, 2952), (1009, 3006),

Gene: Paito\_2 Start: 555, Stop: 1928, Start Num: 205

Candidate Starts for Paito\_2:

(Start: 51 @354 has 3 MA's), (Start: 186 @516 has 1 MA's), (Start: 205 @555 has 1 MA's), (264, 666), (277, 717), (293, 753), (317, 813), (327, 834), (409, 978), (420, 1014), (424, 1035), (436, 1065), (451, 1104), (456, 1113), (566, 1266), (595, 1326), (656, 1395), (672, 1422), (678, 1437), (736, 1521), (787, 1602), (803, 1629), (808, 1635), (810, 1641), (823, 1659), (836, 1680), (874, 1725), (891, 1746), (960, 1839), (1012, 1920),

Gene: Panchino\_2 Start: 509, Stop: 2044, Start Num: 152

Candidate Starts for Panchino\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (218, 635), (220, 638), (256, 686), (270, 722), (273, 737), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: PantheRoc\_1 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for PantheRoc\_1:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (494, 1071), (548, 1137), (572, 1179), (612, 1257), (632, 1281), (641, 1293), (655, 1314), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (1002, 1827), (1022, 1857),

Gene: PaoPu\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for PaoPu\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Paola\_6 Start: 1326, Stop: 2753, Start Num: 166

Candidate Starts for Paola\_6:

(75, 1233), (Start: 166 @1326 has 22 MA's), (194, 1383), (Start: 205 @1404 has 1 MA's), (Start: 219 @1428 has 15 MA's), (257, 1512), (265, 1521), (267, 1527), (277, 1569), (284, 1587), (293, 1605), (313, 1656), (376, 1731), (407, 1809), (420, 1851), (422, 1860), (423, 1863), (451, 1941), (542, 2055), (566, 2103), (585, 2145), (597, 2169), (605, 2181), (626, 2208), (667, 2253), (672, 2265), (762, 2412), (787, 2451), (823, 2508), (838, 2532), (856, 2556), (878, 2580), (954, 2679), (960, 2685), (1009, 2742),

Gene: Parada\_6 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for Parada\_6:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (304, 2176), (308, 2185), (367, 2269), (409, 2353),

(413, 2368), (423, 2401), (447, 2467), (517, 2599), (621, 2788), (634, 2800), (666, 2848), (683, 2890), (715, 2941), (770, 3016), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: Parmesanjohn\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Parmesanjohn\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: PartyCup\_5 Start: 3290, Stop: 4672, Start Num: 206

Candidate Starts for PartyCup\_5:

(Start: 71 @3104 has 81 MA's), (206, 3290), (263, 3371), (267, 3383), (273, 3413), (278, 3428), (289, 3461), (346, 3563), (392, 3644), (408, 3692), (425, 3758), (439, 3806), (442, 3815), (480, 3890), (503, 3917), (520, 3947), (669, 4166), (704, 4238), (728, 4274), (793, 4370), (846, 4436), (889, 4466), (894, 4472), (941, 4538), (1032, 4658),

Gene: Patt\_9 Start: 2502, Stop: 3842, Start Num: 219

Candidate Starts for Patt\_9:

(Start: 161 @2397 has 150 MA's), (Start: 219 @2502 has 15 MA's), (257, 2586), (265, 2595), (273, 2631), (277, 2643), (293, 2685), (313, 2736), (321, 2754), (354, 2784), (407, 2889), (420, 2931), (422, 2940), (423, 2943), (451, 3021), (456, 3030), (542, 3135), (564, 3177), (566, 3183), (585, 3225), (672, 3342), (688, 3384), (717, 3429), (770, 3498), (793, 3543), (808, 3564), (823, 3588), (891, 3672), (960, 3765), (1009, 3831), (1014, 3837),

Gene: Peanam\_8 Start: 1660, Stop: 3090, Start Num: 161

Candidate Starts for Peanam\_8:

(109, 1618), (Start: 143 @1648 has 2 MA's), (Start: 161 @1660 has 150 MA's), (Start: 205 @1750 has 1 MA's), (Start: 219 @1774 has 15 MA's), (222, 1780), (240, 1819), (257, 1858), (265, 1867), (267, 1873), (277, 1915), (284, 1933), (293, 1951), (313, 2002), (354, 2050), (420, 2197), (422, 2206), (496, 2335), (542, 2401), (564, 2443), (566, 2449), (572, 2461), (585, 2491), (597, 2515), (617, 2542), (672, 2611), (690, 2653), (717, 2683), (733, 2707), (771, 2755), (808, 2818), (823, 2842), (856, 2893), (893, 2932), (960, 3022), (992, 3061), (1009, 3079), (1014, 3085),

Gene: Peeb\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Peeb\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (498, 1118), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (682, 1409), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Peel\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Peel\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),



Gene: PegLeg\_14 Start: 4718, Stop: 6262, Start Num: 93

Candidate Starts for PegLeg\_14:

(Start: 93 @4718 has 19 MA's), (133, 4766), (264, 4967), (313, 5105), (418, 5297), (525, 5507), (549, 5558), (591, 5630), (670, 5693), (679, 5717), (685, 5732), (724, 5792), (731, 5804), (770, 5864), (787, 5897), (808, 5930), (824, 5957), (857, 6005), (1008, 6191), (1021, 6212),

Gene: PensacolaC28\_1 Start: 37, Stop: 1611, Start Num: 132

Candidate Starts for PensacolaC28\_1:

(100, 4), (Start: 132 @37 has 1 MA's), (171, 91), (Start: 201 @142 has 6 MA's), (208, 151), (230, 193), (239, 211), (251, 220), (266, 253), (267, 256), (323, 400), (360, 439), (364, 445), (386, 493), (408, 550), (419, 586), (467, 706), (578, 877), (683, 1042), (728, 1117), (777, 1168), (891, 1348), (936, 1408), (1041, 1576),

Gene: Periodt\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Periodt\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Periwinkle\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for Periwinkle\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (Start: 205 @775 has 1 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (224, 808), (242, 847), (244, 853), (259, 886), (273, 934), (274, 937), (277, 946), (292, 979), (293, 982), (308, 1024), (326, 1057), (344, 1072), (355, 1090), (366, 1093), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (422, 1246), (423, 1249), (424, 1258), (433, 1279), (437, 1291), (445, 1318), (449, 1324), (452, 1330), (498, 1399), (503, 1411), (542, 1483), (550, 1507), (572, 1543), (583, 1570), (652, 1657), (670, 1681), (721, 1759), (736, 1786), (742, 1795), (834, 1933), (841, 1945), (856, 1963), (919, 2041), (925, 2047), (960, 2089), (969, 2101), (975, 2113), (1018, 2182),

Gene: Petra\_2 Start: 334, Stop: 1959, Start Num: 89

Candidate Starts for Petra\_2:

(Start: 89 @334 has 52 MA's), (107, 355), (Start: 113 @361 has 34 MA's), (198, 475), (202, 484), (225, 517), (233, 535), (241, 550), (252, 571), (264, 592), (281, 655), (294, 691), (306, 727), (313, 739), (338, 781), (341, 784), (425, 961), (440, 1003), (449, 1018), (457, 1033), (459, 1036), (524, 1111), (548, 1162), (641, 1318), (657, 1339), (659, 1342), (703, 1429), (711, 1441), (734, 1474), (736, 1477), (761, 1516), (770, 1522), (771, 1525), (810, 1594), (814, 1597), (854, 1657), (856, 1660), (865, 1669), (914, 1738), (1049, 1942),

Gene: Phabuloso\_3 Start: 671, Stop: 2188, Start Num: 139

Candidate Starts for Phabuloso\_3:

(Start: 134 @662 has 3 MA's), (Start: 139 @671 has 74 MA's), (211, 788), (Start: 219 @797 has 15 MA's), (224, 806), (244, 851), (250, 869), (259, 884), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (321, 1049), (344, 1070), (355, 1088), (366, 1091), (368, 1094), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (424, 1256), (426, 1262), (433, 1277), (437, 1289), (452, 1328), (503, 1409), (526, 1451), (567, 1532), (572, 1541), (583, 1568), (626, 1634), (652, 1655), (721, 1757), (736, 1784), (834, 1931), (841, 1943), (856, 1961), (919, 2039), (922, 2042), (925, 2045), (960, 2087), (969, 2099), (975, 2111),

Gene: Phalm\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for Phalm\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (252, 718), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (630, 1465), (640, 1477), (670, 1522), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: PhancyPhin\_2 Start: 509, Stop: 2044, Start Num: 152

Candidate Starts for PhancyPhin\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Pharb\_7 Start: 1288, Stop: 2712, Start Num: 161

Candidate Starts for Pharb\_7:

(91, 1225), (100, 1237), (Start: 143 @1276 has 2 MA's), (Start: 161 @1288 has 150 MA's), (Start: 184 @1333 has 5 MA's), (Start: 205 @1375 has 1 MA's), (Start: 219 @1399 has 15 MA's), (257, 1483), (265, 1492), (276, 1537), (277, 1540), (284, 1558), (313, 1627), (348, 1669), (354, 1675), (376, 1702), (407, 1780), (420, 1822), (422, 1831), (451, 1912), (462, 1930), (542, 2026), (566, 2074), (572, 2086), (585, 2116), (597, 2140), (605, 2152), (617, 2167), (672, 2236), (690, 2278), (694, 2290), (770, 2377), (771, 2380), (793, 2422), (803, 2437), (808, 2443), (821, 2464), (823, 2467), (960, 2644),

Gene: Phayonce\_2 Start: 401, Stop: 2080, Start Num: 42

Candidate Starts for Phayonce\_2:

(8, 191), (11, 239), (Start: 42 @401 has 46 MA's), (165, 563), (189, 608), (194, 617), (215, 656), (248, 713), (252, 719), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (315, 881), (317, 887), (322, 899), (382, 989), (447, 1178), (466, 1208), (541, 1304), (630, 1466), (640, 1478), (670, 1523), (682, 1553), (734, 1634), (771, 1685), (810, 1754), (821, 1772), (885, 1856), (888, 1859), (899, 1871), (1038, 2063),

Gene: Phegasus\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Phegasus\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (720, 1622), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: PhelpsODU\_7 Start: 1549, Stop: 2976, Start Num: 161

Candidate Starts for PhelpsODU\_7:

(Start: 161 @1549 has 150 MA's), (Start: 205 @1639 has 1 MA's), (Start: 219 @1663 has 15 MA's), (222, 1669), (257, 1747), (265, 1756), (277, 1804), (284, 1822), (313, 1891), (346, 1930), (354, 1939), (376, 1966), (407, 2044), (420, 2086), (422, 2095), (451, 2176), (496, 2224), (542, 2290), (564, 2332), (566, 2338), (572, 2350), (575, 2356), (585, 2380), (601, 2410), (617, 2431), (672, 2500), (690, 2542), (762, 2635), (789, 2677), (808, 2707), (823, 2731), (856, 2779), (960, 2908), (1009, 2965), (1014, 2971),

Gene: Philonius\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Philonius\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572,

1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Phineas\_2 Start: 401, Stop: 2077, Start Num: 42

Candidate Starts for Phineas\_2:

(Start: 42 @401 has 46 MA's), (194, 617), (215, 656), (248, 713), (252, 719), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (317, 887), (322, 899), (382, 989), (447, 1178), (524, 1274), (541, 1304), (548, 1325), (640, 1478), (761, 1676), (771, 1685), (786, 1712), (810, 1754), (821, 1772), (885, 1856), (899, 1871), (1038, 2060),

Gene: Phisb\_3 Start: 677, Stop: 2305, Start Num: 125

Candidate Starts for Phisb\_3:

(Start: 125 @677 has 61 MA's), (228, 833), (281, 941), (319, 1025), (331, 1049), (346, 1067), (392, 1124), (409, 1175), (410, 1178), (425, 1238), (430, 1256), (439, 1286), (453, 1316), (699, 1772), (711, 1787), (850, 2015), (941, 2138), (977, 2186), (1050, 2294),

Gene: Phish\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Phish\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Phistory\_3 Start: 672, Stop: 2189, Start Num: 139

Candidate Starts for Phistory\_3:

(Start: 134 @663 has 3 MA's), (Start: 139 @672 has 74 MA's), (211, 789), (Start: 219 @798 has 15 MA's), (244, 852), (259, 885), (274, 936), (277, 945), (293, 981), (308, 1023), (319, 1044), (326, 1056), (344, 1071), (355, 1089), (366, 1092), (368, 1095), (376, 1116), (391, 1143), (409, 1200), (422, 1245), (424, 1257), (433, 1278), (437, 1290), (445, 1317), (452, 1329), (503, 1410), (542, 1482), (550, 1506), (567, 1533), (572, 1542), (583, 1569), (601, 1602), (652, 1656), (711, 1746), (721, 1758), (736, 1785), (834, 1932), (841, 1944), (856, 1962), (919, 2040), (925, 2046), (960, 2088), (969, 2100), (975, 2112),

Gene: Phloss\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Phloss\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: PhluffyCoco\_2 Start: 370, Stop: 1992, Start Num: 95

Candidate Starts for PhluffyCoco\_2:

(Start: 79 @349 has 7 MA's), (Start: 95 @370 has 42 MA's), (263, 601), (264, 604), (267, 613), (275, 649), (281, 667), (316, 745), (392, 850), (425, 964), (432, 988), (443, 1024), (455, 1045), (466, 1060), (485, 1120), (527, 1204), (658, 1420), (669, 1432), (679, 1459), (699, 1498), (704, 1504), (731, 1543), (755, 1570), (765, 1582), (782, 1615), (789, 1627), (820, 1660), (918, 1831), (974, 1900), (977, 1906), (995, 1927), (1010, 1948), (1032, 1978), (1034, 1981), (1036, 1984),

Gene: PhorbesPhlower\_2 Start: 375, Stop: 1757, Start Num: 184

Candidate Starts for PhorbesPhlower\_2:

(Start: 127 @312 has 3 MA's), (Start: 184 @375 has 5 MA's), (242, 486), (293, 615), (317, 675), (354, 714), (401, 804), (414, 846), (422, 870), (428, 894), (433, 903), (436, 912), (437, 915), (523, 1041), (585, 1158), (652, 1239), (670, 1266), (672, 1272), (717, 1341), (748, 1383), (770, 1410), (779, 1425), (793, 1455), (803, 1470), (808, 1476), (823, 1500), (878, 1575), (893, 1590), (954, 1674), (960, 1680), (965, 1686), (969, 1692), (971, 1695),

Gene: Phrank\_7 Start: 1515, Stop: 2942, Start Num: 161

Candidate Starts for Phrank\_7:

(Start: 161 @1515 has 150 MA's), (Start: 205 @1605 has 1 MA's), (Start: 219 @1629 has 15 MA's), (222, 1635), (257, 1713), (265, 1722), (277, 1770), (284, 1788), (313, 1857), (346, 1896), (354, 1905), (376, 1932), (407, 2010), (420, 2052), (422, 2061), (451, 2142), (496, 2190), (542, 2256), (564, 2298), (566, 2304), (572, 2316), (575, 2322), (585, 2346), (597, 2370), (601, 2376), (617, 2397), (672, 2466), (690, 2508), (762, 2601), (770, 2607), (771, 2610), (789, 2643), (808, 2673), (823, 2697), (856, 2745), (960, 2874), (1009, 2931), (1014, 2937),

Gene: Phrann\_2 Start: 509, Stop: 2044, Start Num: 152

Candidate Starts for Phrann\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (218, 635), (220, 638), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Phreak\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Phreak\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: PhriskyACE\_2 Start: 318, Stop: 1877, Start Num: 89

Candidate Starts for PhriskyACE\_2:

(48, 258), (Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (327, 744), (389, 816), (391, 819), (401, 855), (420, 912), (422, 921), (425, 936), (466, 1020), (494, 1071), (548, 1137), (572, 1179), (641, 1293), (672, 1344), (680, 1365), (708, 1410), (733, 1446), (734, 1449), (767, 1491), (771, 1497), (789, 1530), (850, 1620), (856, 1632), (888, 1671), (1034, 1860),

Gene: PhrostedPhlake\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for PhrostedPhlake\_2:

(Start: 36 @255 has 19 MA's), (Start: 89 @333 has 52 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911),

Gene: Piatt\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Piatt\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423),

(572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Pickett\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Pickett\_2:

(Start: 89 @318 has 52 MA's), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Picnic\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Picnic\_3:

(Start: 117 @1074 has 111 MA's), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Piku\_2 Start: 175, Stop: 1761, Start Num: 169

Candidate Starts for Piku\_2:

(50, 22), (Start: 89 @76 has 52 MA's), (169, 175), (Start: 201 @229 has 6 MA's), (208, 244), (227, 274), (228, 277), (239, 304), (276, 391), (313, 475), (316, 481), (323, 490), (364, 535), (428, 712), (449, 775), (516, 856), (550, 928), (560, 946), (583, 997), (710, 1183), (711, 1186), (794, 1300), (798, 1306), (825, 1348), (829, 1354), (845, 1384), (891, 1456), (931, 1510), (965, 1552), (1051, 1711),

Gene: Pimento\_5 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for Pimento\_5:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 125 @1816 has 61 MA's), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (308, 2185), (367, 2269), (409, 2353), (413, 2368), (423, 2401), (447, 2467), (489, 2536), (517, 2599), (621, 2788), (634, 2800), (666, 2848), (683, 2890), (715, 2941), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: PinkFriday\_2 Start: 599, Stop: 1993, Start Num: 200

Candidate Starts for PinkFriday\_2:

(Start: 71 @428 has 81 MA's), (Start: 200 @599 has 2 MA's), (263, 692), (266, 701), (273, 734), (278, 749), (281, 758), (289, 782), (316, 836), (381, 947), (392, 965), (410, 1019), (425, 1079), (443, 1139), (461, 1169), (520, 1268), (551, 1316), (620, 1442), (627, 1451), (669, 1487), (672, 1493), (685, 1529), (710, 1565), (762, 1637), (768, 1643), (941, 1859), (1005, 1940), (1032, 1979),

Gene: PinkYoshi\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for PinkYoshi\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Pinnie\_3 Start: 905, Stop: 2404, Start Num: 129

Candidate Starts for Pinnie\_3:

(39, 803), (Start: 51 @818 has 3 MA's), (Start: 129 @905 has 6 MA's), (Start: 158 @929 has 20 MA's), (194, 986), (293, 1205), (317, 1265), (409, 1430), (420, 1466), (424, 1487), (434, 1511), (436, 1517), (456, 1565), (566, 1718), (605, 1793), (672, 1892), (682, 1916), (771, 2042), (795, 2087), (836, 2150),

(878, 2201), (891, 2216), (960, 2309), (975, 2333), (986, 2351), (1012, 2396),

Gene: Piper2020\_3 Start: 674, Stop: 2161, Start Num: 139

Candidate Starts for Piper2020\_3:

(Start: 132 @662 has 1 MA's), (Start: 139 @674 has 74 MA's), (Start: 219 @800 has 15 MA's), (222, 806), (242, 848), (244, 854), (259, 887), (263, 893), (265, 899), (274, 938), (283, 962), (292, 980), (293, 983), (308, 1025), (344, 1073), (349, 1082), (355, 1091), (366, 1094), (391, 1145), (414, 1223), (422, 1247), (424, 1259), (433, 1280), (437, 1292), (449, 1325), (452, 1331), (498, 1400), (500, 1406), (516, 1439), (537, 1475), (567, 1535), (572, 1544), (583, 1571), (640, 1649), (694, 1745), (736, 1790), (787, 1862), (810, 1901), (834, 1937), (837, 1943), (856, 1967), (882, 1997), (891, 2003), (919, 2045), (922, 2048), (925, 2051), (960, 2093), (969, 2105), (975, 2117),

Gene: Pipp\_2 Start: 359, Stop: 1927, Start Num: 113

Candidate Starts for Pipp\_2:

(Start: 36 @254 has 19 MA's), (40, 263), (Start: 113 @359 has 34 MA's), (198, 476), (225, 518), (233, 536), (241, 551), (252, 572), (264, 593), (271, 626), (273, 632), (294, 692), (306, 728), (313, 740), (341, 785), (346, 794), (371, 821), (408, 899), (440, 1004), (449, 1019), (457, 1034), (524, 1112), (548, 1163), (641, 1319), (667, 1358), (670, 1364), (703, 1430), (711, 1442), (742, 1487), (743, 1490), (747, 1496), (761, 1517), (771, 1526), (773, 1529), (789, 1559), (814, 1598), (854, 1658), (885, 1700), (914, 1742), (924, 1757), (942, 1778), (952, 1793), (1024, 1889), (1029, 1901), (1038, 1910),

Gene: Pipsqueaks\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Pipsqueaks\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Pirate\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for Pirate\_2:

(Start: 144 @373 has 46 MA's), (165, 397), (182, 430), (195, 457), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (437, 1000), (446, 1021), (454, 1036), (456, 1039), (458, 1042), (471, 1063), (546, 1174), (572, 1222), (619, 1288), (648, 1321), (666, 1351), (683, 1393), (728, 1471), (734, 1480), (742, 1492), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (809, 1597), (820, 1615), (823, 1621), (850, 1666), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (942, 1792), (950, 1801), (952, 1807), (960, 1816), (1005, 1870), (1008, 1876),

Gene: PitaDog\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for PitaDog\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (208, 615), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (273, 732), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: Pitbull\_2 Start: 374, Stop: 1795, Start Num: 184

Candidate Starts for Pitbull\_2:

(Start: 125 @278 has 61 MA's), (Start: 132 @287 has 1 MA's), (Start: 159 @317 has 2 MA's), (Start: 184 @374 has 5 MA's), (Start: 186 @377 has 1 MA's), (194, 395), (Start: 219 @437 has 15 MA's), (264, 533), (265, 536), (275, 578), (281, 593), (283, 599), (294, 623), (305, 656), (313, 671), (317, 680), (391, 773), (422, 875), (423, 878), (434, 920), (437, 929), (500, 1022), (561, 1118), (566, 1127), (572, 1139), (637, 1232), (655, 1250), (682, 1310), (697, 1349), (702, 1355), (768, 1436), (775, 1448), (810, 1505), (814, 1508), (835, 1538), (853, 1571), (863, 1586), (866, 1589), (881, 1610), (895, 1622), (901, 1628), (980, 1745), (990, 1757), (1005, 1784), (1006, 1787),

Gene: Pixie\_7 Start: 1239, Stop: 2663, Start Num: 161

Candidate Starts for Pixie\_7:

(Start: 143 @1227 has 2 MA's), (Start: 161 @1239 has 150 MA's), (Start: 205 @1326 has 1 MA's), (Start: 219 @1350 has 15 MA's), (257, 1434), (265, 1443), (284, 1509), (293, 1527), (313, 1578), (348, 1620), (354, 1626), (376, 1653), (407, 1731), (420, 1773), (422, 1782), (451, 1863), (462, 1881), (542, 1977), (566, 2025), (572, 2037), (585, 2067), (597, 2091), (605, 2103), (672, 2187), (690, 2229), (694, 2241), (770, 2328), (771, 2331), (793, 2373), (803, 2388), (808, 2394), (821, 2415), (823, 2418), (960, 2595), (1014, 2658),

Gene: Plagueis\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Plagueis\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Plumbus\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Plumbus\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (257, 881), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (293, 980), (294, 983), (308, 1022), (319, 1043), (344, 1070), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102),

Gene: PoRanda\_3 Start: 1104, Stop: 2564, Start Num: 117

Candidate Starts for PoRanda\_3:

(Start: 117 @1104 has 111 MA's), (122, 1110), (Start: 223 @1272 has 13 MA's), (228, 1281), (264, 1341), (283, 1410), (294, 1431), (310, 1467), (317, 1482), (424, 1686), (504, 1821), (546, 1899), (551, 1914), (564, 1932), (572, 1950), (589, 1992), (610, 2025), (622, 2043), (706, 2163), (708, 2166), (715, 2178), (724, 2190), (774, 2253), (808, 2310), (810, 2316), (817, 2325), (821, 2334), (823, 2337), (958, 2499), (965, 2508), (970, 2517), (995, 2556),

Gene: Pokerus\_7 Start: 1547, Stop: 2968, Start Num: 161

Candidate Starts for Pokerus\_7:

(85, 1475), (Start: 143 @1535 has 2 MA's), (Start: 161 @1547 has 150 MA's), (Start: 219 @1658 has 15 MA's), (222, 1664), (257, 1742), (265, 1751), (277, 1799), (284, 1817), (313, 1886), (348, 1928), (354, 1934), (376, 1961), (378, 1964), (420, 2081), (422, 2090), (451, 2171), (542, 2285), (566, 2333), (572, 2345), (585, 2375), (597, 2399), (605, 2411), (670, 2489), (672, 2495), (771, 2639), (789, 2672), (823, 2726), (960, 2903), (1009, 2957),

Gene: Polka\_3 Start: 684, Stop: 2330, Start Num: 79

Candidate Starts for Polka\_3:

(Start: 79 @684 has 7 MA's), (Start: 201 @849 has 6 MA's), (Start: 223 @888 has 13 MA's), (263, 939), (267, 951), (275, 987), (281, 1005), (392, 1188), (425, 1302), (429, 1314), (443, 1362), (455, 1383), (466, 1398), (485, 1455), (669, 1770), (699, 1836), (731, 1881), (765, 1920), (771, 1932), (820, 1998), (838, 2028), (860, 2073), (880, 2115), (903, 2142), (905, 2145), (974, 2238), (977, 2244), (995, 2265), (1005, 2277), (1032, 2316), (1034, 2319),

Gene: Polkaroo\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Polkaroo\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (630, 1478), (640, 1490), (670, 1535), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Pollywog\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Pollywog\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Pondwater\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Pondwater\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Popper\_4 Start: 1461, Stop: 3161, Start Num: 110

Candidate Starts for Popper\_4:

(92, 1440), (Start: 110 @1461 has 15 MA's), (Start: 201 @1605 has 6 MA's), (208, 1620), (228, 1653), (264, 1698), (265, 1701), (275, 1743), (281, 1761), (282, 1764), (289, 1785), (348, 1890), (392, 1944), (425, 2058), (455, 2139), (483, 2214), (546, 2370), (574, 2436), (580, 2451), (670, 2598), (678, 2622), (682, 2631), (695, 2661), (711, 2679), (738, 2721), (789, 2793), (821, 2835), (918, 2952), (921, 2955), (927, 2961), (968, 3012), (974, 3024), (1008, 3069), (1027, 3102), (1047, 3141), (1050, 3150),

Gene: Porcelain\_10 Start: 3527, Stop: 5059, Start Num: 158

Candidate Starts for Porcelain\_10:

(88, 3443), (Start: 121 @3485 has 4 MA's), (128, 3494), (Start: 158 @3527 has 20 MA's), (218, 3641), (247, 3704), (266, 3737), (267, 3740), (278, 3785), (308, 3860), (313, 3869), (388, 3971), (390, 3974), (401, 4010), (412, 4043), (540, 4292), (572, 4355), (584, 4382), (684, 4541), (708, 4577), (728, 4607), (734, 4616), (780, 4670), (792, 4694), (976, 4928), (988, 4940),

Gene: Potatoes\_5 Start: 3127, Stop: 4692, Start Num: 71

Candidate Starts for Potatoes\_5:

(Start: 71 @3127 has 81 MA's), (Start: 221 @3337 has 3 MA's), (263, 3391), (281, 3457), (289, 3481), (402, 3697), (408, 3712), (410, 3718), (425, 3778), (443, 3838), (503, 3937), (520, 3967), (530, 3982), (574, 4063), (620, 4141), (627, 4150), (669, 4186), (684, 4225), (704, 4258), (711, 4267), (728, 4294), (771, 4348), (793, 4390), (835, 4435), (846, 4456), (941, 4558), (1032, 4678),

Gene: Powerball\_2 Start: 318, Stop: 1877, Start Num: 89



Candidate Starts for Powerball\_2:

(48, 258), (Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (327, 744), (389, 816), (391, 819), (401, 855), (420, 912), (422, 921), (425, 936), (457, 1008), (466, 1020), (494, 1071), (548, 1137), (572, 1179), (641, 1293), (672, 1344), (680, 1365), (708, 1410), (733, 1446), (734, 1449), (767, 1491), (771, 1497), (850, 1620), (856, 1632), (888, 1671), (1034, 1860),

Gene: Preamble\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Preamble\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (263, 690), (265, 696), (276, 741), (281, 756), (283, 762), (289, 780), (408, 1011), (410, 1017), (425, 1077), (503, 1236), (520, 1266), (530, 1281), (581, 1380), (620, 1440), (627, 1449), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (846, 1755), (941, 1857), (1032, 1977),

Gene: PrincePatrick\_2 Start: 379, Stop: 1929, Start Num: 129

Candidate Starts for PrincePatrick\_2:

(Start: 89 @334 has 52 MA's), (101, 349), (107, 355), (Start: 113 @361 has 34 MA's), (116, 364), (Start: 129 @379 has 6 MA's), (180, 442), (198, 478), (212, 505), (225, 520), (241, 553), (252, 574), (264, 595), (273, 634), (281, 658), (294, 694), (313, 742), (338, 784), (346, 796), (408, 901), (449, 1021), (457, 1036), (524, 1114), (542, 1147), (548, 1165), (641, 1321), (657, 1342), (667, 1360), (703, 1432), (736, 1480), (747, 1498), (761, 1519), (771, 1528), (773, 1531), (789, 1561), (821, 1615), (885, 1702), (914, 1744), (952, 1795), (1038, 1912), (1042, 1918),

Gene: Prithvi\_8 Start: 1562, Stop: 2983, Start Num: 161

Candidate Starts for Prithvi\_8:

(85, 1490), (Start: 143 @1550 has 2 MA's), (Start: 161 @1562 has 150 MA's), (Start: 219 @1673 has 15 MA's), (222, 1679), (257, 1757), (265, 1766), (277, 1814), (284, 1832), (313, 1901), (348, 1943), (354, 1949), (376, 1976), (378, 1979), (420, 2096), (422, 2105), (451, 2186), (542, 2300), (566, 2348), (572, 2360), (585, 2390), (597, 2414), (605, 2426), (670, 2504), (672, 2510), (771, 2654), (789, 2687), (823, 2741), (960, 2918), (1009, 2972),

Gene: Procrass1\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for Procrass1\_2:

(141, 370), (Start: 144 @373 has 46 MA's), (Start: 158 @385 has 20 MA's), (165, 397), (174, 412), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (260, 553), (265, 562), (267, 568), (273, 598), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (437, 1000), (446, 1021), (454, 1036), (456, 1039), (458, 1042), (465, 1048), (471, 1063), (508, 1129), (532, 1150), (546, 1174), (561, 1201), (572, 1222), (619, 1288), (648, 1321), (666, 1351), (683, 1393), (728, 1471), (734, 1480), (742, 1492), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (810, 1600), (820, 1615), (823, 1621), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (942, 1792), (952, 1807), (978, 1837), (1005, 1870), (1008, 1876),

Gene: Prospero\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Prospero\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Psycho\_6 Start: 1349, Stop: 2776, Start Num: 166

Candidate Starts for Psycho\_6:

(Start: 166 @1349 has 22 MA's), (194, 1406), (Start: 205 @1427 has 1 MA's), (Start: 219 @1451 has 15 MA's), (257, 1535), (265, 1544), (267, 1550), (276, 1589), (277, 1592), (284, 1610), (293, 1628), (313, 1679), (346, 1718), (376, 1754), (391, 1781), (407, 1832), (420, 1874), (422, 1883), (423, 1886), (451, 1964), (542, 2078), (566, 2126), (572, 2138), (585, 2168), (605, 2204), (626, 2231), (672, 2288), (717, 2372), (733, 2396), (787, 2474), (823, 2531), (838, 2555), (856, 2579), (960, 2708), (1009, 2765),

Gene: Pterodactyl\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Pterodactyl\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (202, 603), (263, 690), (273, 732), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: Publix\_3 Start: 1095, Stop: 2555, Start Num: 117

Candidate Starts for Publix\_3:

(Start: 117 @1095 has 111 MA's), (122, 1101), (Start: 223 @1263 has 13 MA's), (228, 1272), (264, 1332), (283, 1401), (294, 1422), (317, 1473), (424, 1677), (504, 1812), (551, 1905), (564, 1923), (572, 1941), (589, 1983), (610, 2016), (622, 2034), (706, 2154), (708, 2157), (715, 2169), (724, 2181), (731, 2193), (774, 2244), (808, 2301), (810, 2307), (817, 2316), (821, 2325), (823, 2328), (958, 2490), (965, 2499), (970, 2508), (995, 2547),

Gene: Puddles3\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Puddles3\_3:

(Start: 117 @1074 has 111 MA's), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: PuffyCat\_3 Start: 1104, Stop: 2564, Start Num: 117

Candidate Starts for PuffyCat\_3:

(Start: 117 @1104 has 111 MA's), (122, 1110), (Start: 223 @1272 has 13 MA's), (228, 1281), (264, 1341), (283, 1410), (294, 1431), (317, 1482), (424, 1686), (504, 1821), (546, 1899), (551, 1914), (564, 1932), (572, 1950), (589, 1992), (610, 2025), (622, 2043), (706, 2163), (708, 2166), (715, 2178), (724, 2190), (731, 2202), (774, 2253), (808, 2310), (810, 2316), (817, 2325), (821, 2334), (823, 2337), (958, 2499), (965, 2508), (970, 2517), (995, 2556),

Gene: Pumancara\_2 Start: 428, Stop: 1993, Start Num: 71

Candidate Starts for Pumancara\_2:

(Start: 71 @428 has 81 MA's), (Start: 200 @599 has 2 MA's), (263, 692), (266, 701), (273, 734), (281, 758), (289, 782), (316, 836), (381, 947), (392, 965), (408, 1013), (410, 1019), (425, 1079), (443, 1139), (461, 1169), (520, 1268), (620, 1442), (627, 1451), (669, 1487), (672, 1493), (685, 1529), (710, 1565), (759, 1634), (762, 1637), (768, 1643), (886, 1784), (941, 1859), (1005, 1940), (1032, 1979),

Gene: Puppies\_2 Start: 482, Stop: 2065, Start Num: 111

Candidate Starts for Puppies\_2:

(2, 53), (3, 59), (6, 158), (Start: 111 @482 has 7 MA's), (228, 656), (263, 698), (273, 740), (304, 824), (340, 884), (390, 947), (394, 953), (408, 998), (430, 1082), (442, 1121), (505, 1190), (541, 1253), (567, 1307), (587, 1355), (622, 1406), (658, 1442), (679, 1487), (684, 1499), (704, 1535), (711, 1544), (724, 1562), (786, 1673), (821, 1745), (823, 1748), (835, 1766), (858, 1802), (918, 1901), (1035, 2057),

Gene: Purgamenstris\_2 Start: 512, Stop: 2044, Start Num: 156

Candidate Starts for Purgamenstris\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Purky\_2 Start: 401, Stop: 2077, Start Num: 42

Candidate Starts for Purky\_2:

(12, 248), (13, 275), (Start: 42 @401 has 46 MA's), (Start: 124 @512 has 3 MA's), (165, 563), (194, 617), (215, 656), (248, 713), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (317, 887), (322, 899), (382, 989), (524, 1274), (548, 1325), (630, 1466), (640, 1478), (659, 1502), (711, 1601), (734, 1634), (761, 1676), (771, 1685), (786, 1712), (792, 1724), (810, 1754), (821, 1772), (885, 1856), (899, 1871), (1038, 2060),

Gene: Pygmy\_2 Start: 401, Stop: 2077, Start Num: 42

Candidate Starts for Pygmy\_2:

(Start: 42 @401 has 46 MA's), (194, 617), (215, 656), (248, 713), (252, 719), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (317, 887), (322, 899), (382, 989), (447, 1178), (524, 1274), (548, 1325), (640, 1478), (761, 1676), (771, 1685), (786, 1712), (810, 1754), (821, 1772), (885, 1856), (899, 1871), (1038, 2060),

Gene: QMacho\_4 Start: 1159, Stop: 2787, Start Num: 125

Candidate Starts for QMacho\_4:

(Start: 125 @1159 has 61 MA's), (228, 1315), (281, 1423), (311, 1492), (319, 1507), (409, 1657), (410, 1660), (425, 1720), (439, 1768), (453, 1798), (699, 2254), (711, 2269), (941, 2620), (977, 2668), (1050, 2776),

Gene: Quaker\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Quaker\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (431, 1677), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (995, 2523),

Gene: QueenBey\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for QueenBey\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (273, 603), (276, 612), (278, 618), (281, 627), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (405, 897), (408, 906), (409, 909), (414, 930), (420, 945), (422, 954), (424, 966), (437, 1005), (446, 1026), (456, 1044), (458, 1047), (471, 1068), (508, 1134), (546, 1179), (561, 1206), (572, 1227), (614, 1287), (619, 1293), (653, 1335), (664, 1353), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (836, 1647), (842, 1656), (850, 1671), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (942, 1797), (950, 1806), (952, 1812), (973, 1833), (1005, 1875), (1008, 1881),

Gene: Quenya\_4 Start: 931, Stop: 2496, Start Num: 125

Candidate Starts for Quenya\_4:

(Start: 125 @931 has 61 MA's), (Start: 200 @1039 has 2 MA's), (228, 1087), (263, 1129), (281, 1195), (283, 1201), (286, 1210), (319, 1279), (333, 1306), (351, 1330), (392, 1378), (409, 1429), (425, 1492), (443, 1552), (453, 1570), (580, 1843), (678, 1981), (768, 2113), (787, 2149), (1010, 2443), (1043, 2488),

Gene: Quico\_3 Start: 672, Stop: 2159, Start Num: 139

Candidate Starts for Quico\_3:

(Start: 132 @660 has 1 MA's), (Start: 139 @672 has 74 MA's), (211, 789), (Start: 219 @798 has 15 MA's), (224, 807), (257, 882), (259, 885), (263, 891), (274, 936), (275, 939), (283, 960), (292, 978), (344, 1071), (355, 1089), (366, 1092), (376, 1116), (409, 1200), (422, 1245), (424, 1257), (433, 1278), (437, 1290), (445, 1317), (452, 1329), (500, 1404), (514, 1434), (516, 1437), (542, 1482), (567, 1533), (572, 1542), (583, 1569), (601, 1602), (640, 1647), (670, 1680), (825, 1920), (834, 1935), (837, 1941), (856, 1965), (919, 2043), (922, 2046), (925, 2049), (960, 2091), (969, 2103), (975, 2115),

Gene: QuincyRose\_7 Start: 1613, Stop: 3034, Start Num: 161

Candidate Starts for QuincyRose\_7:

(85, 1541), (Start: 143 @1601 has 2 MA's), (Start: 161 @1613 has 150 MA's), (Start: 219 @1724 has 15 MA's), (222, 1730), (257, 1808), (265, 1817), (277, 1865), (284, 1883), (313, 1952), (348, 1994), (354, 2000), (376, 2027), (378, 2030), (420, 2147), (422, 2156), (451, 2237), (542, 2351), (566, 2399), (572, 2411), (585, 2441), (597, 2465), (605, 2477), (670, 2555), (672, 2561), (771, 2705), (789, 2738), (823, 2792), (960, 2969), (1009, 3023),

Gene: RAP15\_5 Start: 3133, Stop: 4698, Start Num: 71

Candidate Starts for RAP15\_5:

(Start: 71 @3133 has 81 MA's), (Start: 221 @3343 has 3 MA's), (263, 3397), (281, 3463), (289, 3487), (402, 3703), (408, 3718), (410, 3724), (425, 3784), (443, 3844), (503, 3943), (520, 3973), (530, 3988), (574, 4069), (620, 4147), (627, 4156), (669, 4192), (684, 4231), (704, 4264), (711, 4273), (728, 4300), (771, 4354), (793, 4396), (835, 4441), (846, 4462), (868, 4486), (941, 4564), (1032, 4684),

Gene: REQ1\_66 Start: 29500, Stop: 31053, Start Num: 144

Candidate Starts for REQ1\_66:

(Start: 144 @29500 has 46 MA's), (220, 29638), (266, 29734), (343, 29911), (365, 29947), (367, 29950), (412, 30061), (418, 30079), (423, 30094), (432, 30121), (572, 30373), (584, 30394), (743, 30646), (867, 30820), (920, 30898), (945, 30922), (1013, 31000),

Gene: REQ2\_02 Start: 393, Stop: 1919, Start Num: 159

Candidate Starts for REQ2\_02:

(Start: 159 @393 has 2 MA's), (263, 606), (293, 696), (313, 747), (317, 756), (319, 759), (378, 825), (391, 849), (401, 885), (409, 906), (415, 933), (422, 951), (423, 954), (434, 996), (498, 1092), (561, 1194), (566, 1203), (585, 1248), (680, 1389), (816, 1617), (918, 1770), (961, 1821), (1009, 1902),

Gene: RRH1\_02 Start: 655, Stop: 1965, Start Num: 209

Candidate Starts for RRH1\_02:

(Start: 113 @541 has 34 MA's), (Start: 209 @655 has 1 MA's), (230, 694), (272, 766), (282, 796), (289, 817), (316, 868), (350, 913), (373, 940), (376, 949), (389, 964), (421, 1063), (436, 1117), (440, 1132), (571, 1324), (680, 1492), (695, 1525), (710, 1540), (774, 1621), (819, 1696), (858, 1759), (887, 1798), (915, 1834), (966, 1903),

Gene: Rabbitrun\_14 Start: 5332, Stop: 6777, Start Num: 144

Candidate Starts for Rabbitrun\_14:

(Start: 144 @5332 has 46 MA's), (204, 5437), (207, 5443), (262, 5518), (294, 5611), (333, 5692), (389, 5761), (410, 5821), (420, 5854), (422, 5863), (427, 5884), (441, 5923), (525, 6061), (539, 6088), (579, 6157), (728, 6385), (770, 6439), (789, 6469), (814, 6508), (898, 6616), (902, 6622), (958, 6679),

Gene: Rabbs\_2 Start: 456, Stop: 1892, Start Num: 162

Candidate Starts for Rabbs\_2:

(Start: 72 @360 has 33 MA's), (Start: 162 @456 has 39 MA's), (Start: 168 @459 has 3 MA's), (Start: 186 @495 has 1 MA's), (Start: 205 @534 has 1 MA's), (277, 696), (313, 783), (317, 792), (327, 810), (346, 822), (409, 942), (420, 978), (424, 999), (433, 1020), (451, 1068), (456, 1077), (566, 1230), (595, 1290), (608, 1308), (656, 1359), (672, 1386), (678, 1401), (679, 1404), (736, 1485), (768, 1530), (810, 1605), (823, 1623), (836, 1644), (874, 1689), (888, 1707), (891, 1710), (960, 1803), (1012, 1884),

Gene: Rahul\_2 Start: 517, Stop: 1917, Start Num: 156

Candidate Starts for Rahul\_2:

(Start: 156 @517 has 23 MA's), (Start: 197 @583 has 2 MA's), (Start: 209 @610 has 1 MA's), (264, 685), (267, 694), (272, 721), (273, 724), (277, 736), (283, 754), (312, 814), (316, 823), (317, 826), (423, 1027), (591, 1321), (658, 1399), (672, 1414), (680, 1438), (683, 1444), (687, 1453), (695, 1471), (773, 1561), (815, 1627), (840, 1672), (868, 1723), (906, 1768), (923, 1795), (970, 1858), (998, 1900),

Gene: Ramen\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for Ramen\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: Ramsey\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Ramsey\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Rando14\_6 Start: 1416, Stop: 2843, Start Num: 166

Candidate Starts for Rando14\_6:

(Start: 159 @1404 has 2 MA's), (Start: 166 @1416 has 22 MA's), (194, 1473), (Start: 205 @1494 has 1 MA's), (Start: 219 @1518 has 15 MA's), (257, 1602), (265, 1611), (276, 1656), (277, 1659), (284, 1677), (293, 1695), (313, 1746), (320, 1761), (376, 1821), (407, 1899), (420, 1941), (422, 1950), (423, 1953), (436, 1992), (451, 2031), (542, 2145), (553, 2175), (566, 2193), (585, 2235), (605, 2271), (626, 2298), (672, 2355), (717, 2439), (787, 2541), (823, 2598), (838, 2622), (856, 2646), (960, 2775), (1009, 2832),

Gene: Rapunzel97\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for Rapunzel97\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: Raqqa\_3 Start: 1118, Stop: 2458, Start Num: 216

Candidate Starts for Raqqa\_3:

(Start: 157 @1001 has 1 MA's), (216, 1118), (Start: 219 @1121 has 15 MA's), (263, 1214), (287, 1298), (293, 1304), (313, 1355), (317, 1364), (420, 1550), (422, 1559), (423, 1562), (436, 1601), (437, 1604), (468, 1667), (537, 1742), (566, 1799), (674, 1970), (679, 1985), (715, 2045), (722, 2054), (734,

2075), (789, 2153), (793, 2162), (823, 2207), (831, 2219), (839, 2234), (856, 2264), (877, 2285), (960, 2390),

Gene: RayTheFireFly\_2 Start: 586, Stop: 2196, Start Num: 120

Candidate Starts for RayTheFireFly\_2:

(Start: 120 @586 has 15 MA's), (239, 769), (294, 904), (313, 952), (362, 1024), (425, 1177), (440, 1219), (457, 1249), (494, 1312), (518, 1354), (524, 1363), (548, 1414), (566, 1444), (567, 1447), (574, 1465), (596, 1510), (619, 1543), (641, 1570), (734, 1735), (771, 1786), (792, 1825), (809, 1852), (810, 1855), (821, 1873), (885, 1957), (1005, 2131),

Gene: Raymond7\_2 Start: 509, Stop: 2044, Start Num: 152

Candidate Starts for Raymond7\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (218, 635), (220, 638), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: RcigaStruga\_5 Start: 3080, Stop: 4645, Start Num: 71

Candidate Starts for RcigaStruga\_5:

(Start: 71 @3080 has 81 MA's), (Start: 201 @3254 has 6 MA's), (Start: 221 @3290 has 3 MA's), (263, 3344), (273, 3386), (281, 3410), (346, 3536), (402, 3650), (408, 3665), (410, 3671), (425, 3731), (443, 3791), (477, 3857), (503, 3890), (520, 3920), (530, 3935), (551, 3968), (561, 3983), (574, 4016), (627, 4103), (782, 4322), (793, 4343), (820, 4364), (868, 4433), (941, 4511), (973, 4550), (995, 4580), (1005, 4592), (1032, 4631), (1039, 4640),

Gene: Rebel\_2 Start: 509, Stop: 2044, Start Num: 152

Candidate Starts for Rebel\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: RedFox\_2 Start: 370, Stop: 1992, Start Num: 95

Candidate Starts for RedFox\_2:

(Start: 79 @349 has 7 MA's), (Start: 95 @370 has 42 MA's), (263, 601), (264, 604), (267, 613), (275, 649), (281, 667), (316, 745), (392, 850), (425, 964), (432, 988), (443, 1024), (455, 1045), (466, 1060), (485, 1120), (527, 1204), (658, 1420), (669, 1432), (679, 1459), (699, 1498), (704, 1504), (731, 1543), (755, 1570), (765, 1582), (782, 1615), (789, 1627), (820, 1660), (918, 1831), (974, 1900), (977, 1906), (995, 1927), (1010, 1948), (1032, 1978), (1034, 1981), (1036, 1984),

Gene: Redi\_2 Start: 512, Stop: 2044, Start Num: 156

Candidate Starts for Redi\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Reindeer\_12 Start: 4590, Stop: 6134, Start Num: 93

Candidate Starts for Reindeer\_12:

(Start: 93 @4590 has 19 MA's), (133, 4638), (313, 4977), (418, 5169), (424, 5193), (525, 5379), (549, 5430), (568, 5460), (572, 5466), (591, 5502), (670, 5565), (679, 5589), (685, 5604), (724, 5664), (731, 5676), (746, 5706), (770, 5736), (787, 5769), (808, 5802), (824, 5829), (857, 5877), (885, 5910), (1008, 6063), (1021, 6084),

Gene: Rem711\_3 Start: 871, Stop: 2538, Start Num: 46

Candidate Starts for Rem711\_3:

(Start: 19 @787 has 3 MA's), (23, 814), (32, 844), (37, 859), (Start: 46 @871 has 1 MA's), (Start: 223 @1078 has 13 MA's), (281, 1231), (283, 1237), (398, 1453), (401, 1465), (457, 1624), (466, 1636), (479, 1669), (494, 1687), (519, 1738), (541, 1774), (548, 1795), (561, 1816), (580, 1861), (619, 1924), (641, 1951), (738, 2113), (743, 2122), (786, 2185), (793, 2200), (821, 2245), (836, 2269), (907, 2359), (914, 2371), (969, 2440),

Gene: RemusLoopin\_2 Start: 597, Stop: 2147, Start Num: 120

Candidate Starts for RemusLoopin\_2:

(Start: 120 @597 has 15 MA's), (175, 669), (261, 816), (265, 825), (277, 873), (298, 918), (313, 954), (326, 978), (346, 1008), (352, 1017), (394, 1062), (400, 1092), (410, 1113), (419, 1146), (430, 1191), (434, 1203), (466, 1266), (477, 1296), (516, 1356), (565, 1455), (616, 1551), (618, 1554), (671, 1623), (691, 1674), (693, 1680), (700, 1689), (727, 1731), (802, 1833), (804, 1836), (812, 1854), (825, 1881), (850, 1929), (924, 2010), (943, 2034), (946, 2037), (1004, 2112), (1025, 2133),

Gene: Remy19\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Remy19\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Renaissance\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Renaissance\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Renna12\_3 Start: 538, Stop: 2160, Start Num: 95

Candidate Starts for Renna12\_3:

(Start: 79 @517 has 7 MA's), (Start: 95 @538 has 42 MA's), (Start: 201 @679 has 6 MA's), (264, 772), (267, 781), (275, 817), (281, 835), (316, 913), (392, 1018), (425, 1132), (443, 1192), (455, 1213), (466, 1228), (496, 1309), (527, 1372), (658, 1588), (669, 1600), (679, 1627), (699, 1666), (704, 1672), (731, 1711), (765, 1750), (782, 1783), (820, 1828), (918, 1999), (974, 2068), (977, 2074), (995, 2095), (1032, 2146), (1034, 2149),

Gene: Reptar3000\_9 Start: 2501, Stop: 3841, Start Num: 219

Candidate Starts for Reptar3000\_9:

(Start: 161 @2396 has 150 MA's), (Start: 219 @2501 has 15 MA's), (257, 2585), (265, 2594), (273, 2630), (277, 2642), (293, 2684), (313, 2735), (321, 2753), (354, 2783), (407, 2888), (420, 2930), (422, 2939), (423, 2942), (451, 3020), (456, 3029), (542, 3134), (564, 3176), (566, 3182), (585, 3224), (672, 3341), (688, 3383), (717, 3428), (770, 3497), (793, 3542), (808, 3563), (823, 3587), (891, 3671), (960, 3764), (1009, 3830), (1014, 3836),

Gene: Rey\_18 Start: 5535, Stop: 7073, Start Num: 96

Candidate Starts for Rey\_18:

(Start: 93 @5532 has 19 MA's), (Start: 96 @5535 has 1 MA's), (218, 5718), (235, 5736), (258, 5769), (264, 5778), (281, 5841), (313, 5916), (418, 6108), (453, 6201), (467, 6222), (549, 6369), (585, 6429), (724, 6603), (773, 6681), (787, 6708), (808, 6741), (824, 6768), (1008, 7002), (1021, 7023),

Gene: Reyja\_3 Start: 640, Stop: 2217, Start Num: 110

Candidate Starts for Reyja\_3:

(45, 547), (Start: 110 @640 has 15 MA's), (230, 823), (265, 862), (267, 868), (273, 898), (319, 1006), (365, 1075), (392, 1105), (411, 1168), (431, 1240), (440, 1270), (442, 1276), (443, 1279), (567, 1525), (574, 1546), (580, 1561), (581, 1564), (588, 1576), (630, 1636), (672, 1681), (678, 1699), (682, 1708), (695, 1738), (771, 1831), (782, 1852), (787, 1861), (820, 1921), (908, 2041), (977, 2134), (993, 2152), (1034, 2206),

Gene: Rhogar\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Rhogar\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Rhysand\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Rhysand\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Rialto\_3 Start: 672, Stop: 2159, Start Num: 139

Candidate Starts for Rialto\_3:

(Start: 132 @660 has 1 MA's), (Start: 139 @672 has 74 MA's), (Start: 219 @798 has 15 MA's), (222, 804), (242, 846), (244, 852), (259, 885), (263, 891), (265, 897), (274, 936), (283, 960), (292, 978), (293, 981), (308, 1023), (319, 1044), (344, 1071), (349, 1080), (355, 1089), (366, 1092), (391, 1143), (414, 1221), (422, 1245), (424, 1257), (433, 1278), (437, 1290), (449, 1323), (452, 1329), (498, 1398), (500, 1404), (516, 1437), (537, 1473), (567, 1533), (572, 1542), (583, 1569), (640, 1647), (694, 1743), (736, 1788), (787, 1860), (810, 1899), (834, 1935), (837, 1941), (856, 1965), (882, 1995), (891, 2001), (919, 2043), (922, 2046), (925, 2049), (960, 2091), (969, 2103), (975, 2115),

Gene: Rileysaurus\_2 Start: 377, Stop: 1888, Start Num: 144

Candidate Starts for Rileysaurus\_2:

(Start: 144 @377 has 46 MA's), (174, 416), (182, 434), (204, 479), (220, 506), (Start: 221 @509 has 3 MA's), (260, 557), (265, 566), (267, 572), (276, 611), (278, 617), (300, 668), (310, 692), (313, 698), (332, 737), (338, 746), (341, 749), (359, 788), (361, 791), (389, 851), (395, 860), (408, 905), (409, 908), (414, 929), (420, 944), (422, 953), (424, 965), (446, 1025), (454, 1040), (456, 1043), (458, 1046), (508, 1133), (546, 1178), (561, 1205), (572, 1226), (619, 1292), (666, 1355), (683, 1397), (758, 1529), (775, 1550), (778, 1553), (781, 1556), (787, 1568), (807, 1598), (809, 1601), (820, 1619), (823, 1625), (842, 1655), (872, 1703), (874, 1706), (950, 1805), (970, 1826), (973, 1832), (974, 1835), (1005, 1874), (1008, 1880),

Gene: Riovina\_2 Start: 429, Stop: 1994, Start Num: 71

Candidate Starts for Riovina\_2:

(Start: 71 @429 has 81 MA's), (Start: 200 @600 has 2 MA's), (263, 693), (281, 759), (289, 783), (316, 837), (392, 966), (425, 1080), (443, 1140), (461, 1170), (520, 1269), (530, 1284), (574, 1365), (627,



1452), (684, 1527), (685, 1530), (704, 1560), (768, 1644), (793, 1692), (821, 1716), (903, 1806), (941, 1860), (1005, 1941), (1032, 1980),

Gene: Riverdale\_5 Start: 3064, Stop: 4629, Start Num: 71

Candidate Starts for Riverdale\_5:

(Start: 71 @3064 has 81 MA's), (Start: 221 @3274 has 3 MA's), (263, 3328), (281, 3394), (289, 3418), (402, 3634), (408, 3649), (410, 3655), (425, 3715), (503, 3874), (520, 3904), (530, 3919), (574, 4000), (620, 4078), (627, 4087), (669, 4123), (684, 4162), (704, 4195), (711, 4204), (728, 4231), (771, 4285), (793, 4327), (835, 4372), (846, 4393), (868, 4417), (941, 4495), (1032, 4615),

Gene: RockyHorror\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for RockyHorror\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Rollins\_2 Start: 653, Stop: 2215, Start Num: 125

Candidate Starts for Rollins\_2:

(Start: 125 @653 has 61 MA's), (Start: 200 @761 has 2 MA's), (228, 809), (281, 917), (283, 923), (286, 932), (288, 938), (289, 941), (343, 1037), (392, 1100), (425, 1214), (443, 1274), (453, 1292), (564, 1520), (580, 1565), (678, 1703), (908, 2030), (1039, 2204), (1043, 2207),

Gene: Rona\_3 Start: 944, Stop: 2563, Start Num: 125

Candidate Starts for Rona\_3:

(1, 410), (Start: 119 @938 has 2 MA's), (Start: 125 @944 has 61 MA's), (228, 1100), (275, 1190), (281, 1208), (286, 1223), (319, 1292), (331, 1316), (346, 1334), (392, 1391), (409, 1442), (410, 1445), (425, 1505), (431, 1526), (439, 1553), (453, 1583), (622, 1922), (710, 2045), (912, 2360), (941, 2399), (1032, 2516),

Gene: Ronaldo\_37 Start: 10775, Stop: 12181, Start Num: 176

Candidate Starts for Ronaldo\_37:

(133, 10718), (Start: 176 @10775 has 6 MA's), (247, 10901), (272, 10961), (275, 10970), (310, 11054), (339, 11108), (408, 11234), (410, 11240), (414, 11258), (434, 11324), (463, 11378), (488, 11411), (506, 11456), (572, 11549), (631, 11627), (664, 11672), (672, 11690), (710, 11753), (715, 11759), (793, 11885), (822, 11930), (833, 11948), (970, 12122),

Gene: Ronnie\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Ronnie\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: RoscoWindex\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for RoscoWindex\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589,

1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Rose5\_4 Start: 1052, Stop: 2635, Start Num: 68

Candidate Starts for Rose5\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (407, 1646), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (856, 2402), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: Rosmarinus\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Rosmarinus\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Rozby\_5 Start: 3064, Stop: 4629, Start Num: 71

Candidate Starts for Rozby\_5:

(Start: 71 @3064 has 81 MA's), (Start: 221 @3274 has 3 MA's), (263, 3328), (281, 3394), (289, 3418), (402, 3634), (407, 3646), (408, 3649), (410, 3655), (425, 3715), (443, 3775), (503, 3874), (520, 3904), (530, 3919), (574, 4000), (620, 4078), (627, 4087), (669, 4123), (684, 4162), (704, 4195), (711, 4204), (728, 4231), (771, 4285), (793, 4327), (835, 4372), (846, 4393), (868, 4417), (941, 4495), (1032, 4615),

Gene: Rubeelu\_2 Start: 495, Stop: 2030, Start Num: 152

Candidate Starts for Rubeelu\_2:

(Start: 152 @495 has 22 MA's), (Start: 156 @498 has 23 MA's), (Start: 166 @513 has 22 MA's), (190, 570), (Start: 200 @588 has 2 MA's), (206, 600), (256, 672), (272, 720), (275, 729), (300, 792), (336, 864), (367, 912), (408, 1011), (423, 1062), (450, 1134), (459, 1149), (469, 1167), (528, 1275), (540, 1299), (572, 1362), (631, 1446), (670, 1503), (675, 1518), (708, 1575), (719, 1593), (735, 1620), (780, 1689), (814, 1746), (827, 1755), (849, 1776), (873, 1809), (902, 1845), (911, 1860), (976, 1941), (982, 1947),

Gene: Ruchi\_3 Start: 1027, Stop: 2607, Start Num: 137

Candidate Starts for Ruchi\_3:

(64, 937), (Start: 79 @961 has 7 MA's), (Start: 137 @1027 has 8 MA's), (Start: 201 @1123 has 6 MA's), (202, 1126), (206, 1132), (267, 1225), (276, 1264), (281, 1279), (289, 1303), (346, 1405), (425, 1576), (429, 1588), (443, 1636), (455, 1657), (481, 1717), (493, 1747), (498, 1756), (527, 1819), (581, 1936), (658, 2035), (669, 2047), (699, 2113), (711, 2128), (731, 2158), (765, 2197), (770, 2206), (774, 2215), (793, 2251), (838, 2305), (974, 2515), (1006, 2557), (1034, 2596),

Gene: Rumpelstiltskin\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Rumpelstiltskin\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (278, 1408), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (452, 1795), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Ruthiejr\_8 Start: 2201, Stop: 3646, Start Num: 161

Candidate Starts for Ruthiejr\_8:

(Start: 161 @2201 has 150 MA's), (Start: 219 @2306 has 15 MA's), (257, 2390), (265, 2399), (277, 2447), (283, 2462), (293, 2489), (313, 2540), (321, 2558), (354, 2588), (376, 2615), (407, 2693), (420, 2735), (422, 2744), (423, 2747), (451, 2825), (456, 2834), (496, 2873), (542, 2939), (566, 2987), (585, 3029), (597, 3053), (672, 3146), (688, 3188), (717, 3233), (770, 3302), (793, 3347), (808, 3368), (823, 3392), (960, 3569), (1009, 3635), (1014, 3641),

Gene: Ruthy\_2 Start: 434, Stop: 1993, Start Num: 134

Candidate Starts for Ruthy\_2:

(28, 278), (33, 302), (55, 335), (73, 365), (Start: 134 @434 has 3 MA's), (185, 500), (217, 560), (225, 569), (245, 608), (303, 758), (313, 779), (315, 782), (341, 824), (387, 878), (422, 986), (455, 1070), (457, 1073), (494, 1136), (512, 1166), (521, 1184), (524, 1187), (627, 1376), (666, 1430), (670, 1439), (672, 1445), (711, 1514), (736, 1550), (742, 1559), (747, 1568), (770, 1595), (771, 1598), (786, 1625), (821, 1685), (835, 1706), (914, 1811), (937, 1844), (1035, 1973),

Gene: Ryadel\_33 Start: 13890, Stop: 15404, Start Num: 72

Candidate Starts for Ryadel\_33:

(Start: 72 @13890 has 33 MA's), (Start: 74 @13893 has 14 MA's), (Start: 205 @14073 has 1 MA's), (249, 14166), (276, 14241), (287, 14274), (300, 14301), (313, 14331), (407, 14484), (409, 14490), (420, 14526), (422, 14535), (451, 14616), (456, 14625), (458, 14628), (498, 14667), (538, 14724), (553, 14760), (554, 14763), (668, 14919), (672, 14928), (711, 14997), (717, 15006), (722, 15012), (742, 15045), (771, 15081), (823, 15168), (836, 15189), (891, 15252), (893, 15255), (896, 15258), (907, 15276), (920, 15297), (960, 15339), (988, 15375), (1005, 15387),

Gene: Ryan\_6 Start: 2079, Stop: 3779, Start Num: 110

Candidate Starts for Ryan\_6:

(Start: 68 @2022 has 59 MA's), (92, 2058), (Start: 110 @2079 has 15 MA's), (190, 2202), (Start: 201 @2223 has 6 MA's), (228, 2271), (264, 2316), (265, 2319), (275, 2361), (281, 2379), (282, 2382), (300, 2424), (346, 2505), (348, 2508), (392, 2562), (425, 2676), (443, 2736), (455, 2757), (546, 2988), (574, 3054), (580, 3069), (678, 3240), (711, 3297), (738, 3339), (768, 3372), (789, 3411), (821, 3453), (908, 3552), (918, 3570), (921, 3573), (927, 3579), (974, 3642), (1008, 3687), (1050, 3768),

Gene: SKKY\_2 Start: 385, Stop: 1896, Start Num: 144

Candidate Starts for SKKY\_2:

(Start: 144 @385 has 46 MA's), (174, 424), (182, 442), (204, 487), (220, 514), (Start: 221 @517 has 3 MA's), (260, 565), (265, 574), (267, 580), (273, 610), (276, 619), (278, 625), (294, 658), (300, 676), (310, 700), (313, 706), (332, 745), (338, 754), (341, 757), (359, 796), (361, 799), (395, 868), (408, 913), (409, 916), (414, 937), (420, 952), (422, 961), (424, 973), (437, 1012), (446, 1033), (454, 1048), (456, 1051), (458, 1054), (465, 1060), (471, 1075), (508, 1141), (532, 1162), (572, 1234), (619, 1300), (648, 1333), (728, 1483), (734, 1492), (742, 1504), (758, 1537), (775, 1558), (778, 1561), (781, 1564), (787, 1576), (807, 1606), (823, 1633), (836, 1654), (848, 1675), (872, 1711), (874, 1714), (882, 1726), (893, 1738), (942, 1804), (950, 1813), (952, 1819), (973, 1840), (1005, 1882), (1008, 1888),

Gene: Sage7\_3 Start: 1092, Stop: 2546, Start Num: 122

Candidate Starts for Sage7\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Sahara\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Sahara\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: SallySpecial\_2 Start: 441, Stop: 1871, Start Num: 156

Candidate Starts for SallySpecial\_2:

(61, 354), (84, 387), (Start: 113 @420 has 34 MA's), (Start: 156 @441 has 23 MA's), (Start: 201 @519 has 6 MA's), (Start: 209 @537 has 1 MA's), (263, 609), (265, 615), (267, 621), (272, 648), (278, 666), (283, 681), (316, 747), (317, 750), (356, 801), (374, 837), (397, 882), (425, 978), (435, 1011), (505, 1092), (534, 1149), (649, 1335), (657, 1341), (682, 1386), (691, 1404), (751, 1479), (773, 1506), (791, 1539), (829, 1596), (887, 1692), (898, 1704), (966, 1797), (998, 1845),

Gene: SamScheppers\_7 Start: 2180, Stop: 3520, Start Num: 219

Candidate Starts for SamScheppers\_7:

(Start: 161 @2075 has 150 MA's), (Start: 219 @2180 has 15 MA's), (257, 2264), (265, 2273), (273, 2309), (277, 2321), (283, 2336), (293, 2363), (313, 2414), (321, 2432), (354, 2462), (376, 2489), (407, 2567), (422, 2618), (423, 2621), (451, 2699), (456, 2708), (496, 2747), (542, 2813), (566, 2861), (585, 2903), (672, 3020), (688, 3062), (717, 3107), (770, 3176), (793, 3221), (808, 3242), (823, 3266), (960, 3443), (1009, 3509), (1014, 3515),

Gene: SamW\_2 Start: 374, Stop: 1957, Start Num: 121

Candidate Starts for SamW\_2:

(Start: 118 @371 has 4 MA's), (Start: 121 @374 has 4 MA's), (126, 380), (232, 551), (263, 629), (266, 638), (340, 812), (404, 914), (407, 920), (410, 929), (411, 938), (428, 998), (442, 1046), (443, 1049), (505, 1112), (551, 1205), (581, 1271), (686, 1427), (696, 1445), (732, 1490), (755, 1532), (778, 1568), (786, 1583), (801, 1610), (803, 1613), (811, 1628), (826, 1661), (835, 1676), (865, 1724), (898, 1754), (909, 1772), (965, 1847), (1016, 1922), (1032, 1946),

Gene: Samba\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Samba\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (877, 1689), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Samman98\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for Samman98\_3:

(48, 760), (Start: 89 @820 has 52 MA's), (183, 928), (204, 973), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (319, 1228), (389, 1318), (391, 1321), (420, 1414), (425, 1438), (457, 1510), (494, 1573), (548, 1639), (572, 1681), (607, 1750), (611, 1756), (641, 1795), (655, 1816), (670, 1840), (672, 1846), (680, 1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (850, 2122), (888, 2173), (983, 2302), (1034, 2362),

Gene: Samora\_2 Start: 588, Stop: 2150, Start Num: 120

Candidate Starts for Samora\_2:

(Start: 120 @588 has 15 MA's), (265, 816), (267, 822), (277, 864), (313, 945), (315, 948), (326, 969), (327, 972), (346, 999), (394, 1053), (400, 1083), (408, 1098), (419, 1137), (422, 1149), (430, 1182), (477, 1287), (576, 1479), (613, 1542), (658, 1590), (664, 1602), (671, 1617), (691, 1668), (693, 1674), (700, 1683), (726, 1722), (802, 1827), (804, 1830), (838, 1899), (918, 1998), (924, 2004), (935, 2016),

(943, 2028), (946, 2031),

Gene: Samty\_5 Start: 1186, Stop: 2751, Start Num: 68

Candidate Starts for Samty\_5:

(Start: 68 @1186 has 59 MA's), (Start: 71 @1192 has 81 MA's), (191, 1363), (262, 1468), (267, 1480), (327, 1636), (334, 1645), (336, 1648), (338, 1651), (389, 1726), (407, 1780), (408, 1783), (409, 1786), (515, 2017), (552, 2092), (568, 2113), (572, 2119), (623, 2188), (654, 2212), (666, 2230), (672, 2245), (736, 2359), (770, 2398), (773, 2404), (810, 2470), (877, 2560), (885, 2572), (933, 2611), (1008, 2698), (1034, 2743), (1036, 2746),

Gene: SamuelLPlaqson\_8 Start: 1566, Stop: 2987, Start Num: 161

Candidate Starts for SamuelLPlaqson\_8:

(85, 1494), (Start: 127 @1533 has 3 MA's), (Start: 143 @1554 has 2 MA's), (Start: 161 @1566 has 150 MA's), (Start: 219 @1677 has 15 MA's), (222, 1683), (257, 1761), (265, 1770), (277, 1818), (284, 1836), (313, 1905), (348, 1947), (354, 1953), (376, 1980), (378, 1983), (391, 2007), (420, 2100), (422, 2109), (451, 2190), (462, 2208), (542, 2304), (566, 2352), (572, 2364), (585, 2394), (597, 2418), (605, 2430), (670, 2508), (672, 2514), (771, 2658), (789, 2691), (823, 2745), (960, 2922), (1009, 2976),

Gene: SanaSana\_4 Start: 960, Stop: 2585, Start Num: 125

Candidate Starts for SanaSana\_4:

(Start: 125 @960 has 61 MA's), (228, 1116), (281, 1224), (286, 1239), (319, 1308), (348, 1353), (409, 1458), (410, 1461), (425, 1521), (430, 1539), (431, 1542), (439, 1569), (453, 1599), (527, 1761), (660, 1977), (699, 2052), (710, 2064), (941, 2418), (977, 2466),

Gene: Sandman\_4 Start: 874, Stop: 2364, Start Num: 95

Candidate Starts for Sandman\_4:

(Start: 95 @874 has 42 MA's), (Start: 150 @919 has 1 MA's), (Start: 209 @1021 has 1 MA's), (Start: 221 @1039 has 3 MA's), (227, 1048), (263, 1099), (264, 1102), (267, 1111), (273, 1141), (282, 1168), (341, 1267), (399, 1366), (408, 1390), (409, 1393), (410, 1396), (423, 1441), (555, 1675), (578, 1723), (583, 1735), (610, 1774), (622, 1792), (635, 1804), (636, 1807), (649, 1828), (657, 1834), (670, 1846), (711, 1924), (755, 1978), (791, 2032), (800, 2044), (829, 2089), (852, 2137), (915, 2221), (958, 2278), (1004, 2347),

Gene: SansAfet\_3 Start: 677, Stop: 2305, Start Num: 125

Candidate Starts for SansAfet\_3:

(Start: 125 @677 has 61 MA's), (228, 833), (281, 941), (319, 1025), (331, 1049), (346, 1067), (392, 1124), (409, 1175), (410, 1178), (425, 1238), (430, 1256), (439, 1286), (453, 1316), (699, 1772), (711, 1787), (941, 2138), (977, 2186), (1050, 2294),

Gene: SantasSleigh\_3 Start: 1110, Stop: 2570, Start Num: 117

Candidate Starts for SantasSleigh\_3:

(Start: 117 @1110 has 111 MA's), (122, 1116), (Start: 223 @1278 has 13 MA's), (228, 1287), (264, 1347), (283, 1416), (294, 1437), (317, 1488), (424, 1692), (546, 1905), (551, 1920), (572, 1956), (589, 1998), (610, 2031), (622, 2049), (706, 2169), (708, 2172), (715, 2184), (774, 2259), (810, 2322), (821, 2340), (823, 2343), (958, 2505), (965, 2514), (970, 2523), (995, 2562),

Gene: Santhid\_2 Start: 511, Stop: 2100, Start Num: 110

Candidate Starts for Santhid\_2:

(Start: 110 @511 has 15 MA's), (206, 646), (208, 652), (230, 694), (265, 733), (273, 769), (289, 817), (319, 877), (346, 919), (348, 922), (365, 946), (367, 949), (392, 976), (411, 1039), (431, 1111), (440, 1141), (442, 1147), (443, 1150), (574, 1417), (580, 1432), (581, 1435), (588, 1447), (630, 1507), (672, 1552), (678, 1570), (682, 1579), (695, 1609), (771, 1702), (782, 1723), (787, 1732), (820, 1792), (835, 1816), (858, 1852), (977, 2017), (993, 2035), (1034, 2089),

Gene: Saphira\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Saphira\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (227, 974), (263, 1025), (267, 1037), (273, 1067), (277, 1079), (282, 1094), (313, 1160), (348, 1205), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (429, 1391), (431, 1400), (463, 1466), (516, 1529), (521, 1541), (546, 1583), (555, 1601), (583, 1661), (622, 1718), (635, 1730), (649, 1754), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (806, 1979), (848, 2054), (852, 2063), (868, 2090), (915, 2147), (955, 2201), (1004, 2273),

Gene: Sapo\_1 Start: 60, Stop: 1748, Start Num: 19

Candidate Starts for Sapo\_1:

(Start: 19 @60 has 3 MA's), (407, 750), (411, 768), (431, 840), (443, 879), (549, 1032), (584, 1107), (599, 1134), (682, 1245), (684, 1251), (687, 1257), (711, 1293), (771, 1383), (808, 1437), (821, 1470), (993, 1680), (995, 1683),

Gene: SarBear\_3 Start: 676, Stop: 2304, Start Num: 125

Candidate Starts for SarBear\_3:

(Start: 125 @676 has 61 MA's), (228, 832), (281, 940), (319, 1024), (331, 1048), (392, 1123), (409, 1174), (410, 1177), (425, 1237), (430, 1255), (439, 1285), (453, 1315), (699, 1771), (711, 1786), (941, 2137), (1050, 2293),

Gene: Sara\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Sara\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Sarge\_2 Start: 371, Stop: 1759, Start Num: 184

Candidate Starts for Sarge\_2:

(45, 170), (48, 173), (55, 185), (Start: 104 @257 has 1 MA's), (Start: 148 @311 has 1 MA's), (Start: 184 @371 has 5 MA's), (194, 392), (Start: 205 @413 has 1 MA's), (226, 446), (242, 482), (263, 527), (264, 530), (272, 566), (277, 581), (287, 611), (300, 638), (354, 716), (391, 770), (422, 872), (423, 875), (468, 980), (561, 1106), (566, 1115), (667, 1256), (670, 1262), (672, 1268), (707, 1328), (711, 1334), (736, 1373), (755, 1400), (762, 1409), (810, 1487), (823, 1505), (865, 1562), (965, 1682), (981, 1703), (1009, 1748),

Gene: Sarma624\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Sarma624\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Savage\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Savage\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733,

1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Savage2526\_5 Start: 3127, Stop: 4692, Start Num: 71

Candidate Starts for Savage2526\_5:

(Start: 71 @3127 has 81 MA's), (Start: 221 @3337 has 3 MA's), (Start: 223 @3340 has 13 MA's), (263, 3391), (281, 3457), (289, 3481), (402, 3697), (408, 3712), (410, 3718), (425, 3778), (450, 3850), (503, 3937), (520, 3967), (530, 3982), (574, 4063), (620, 4141), (627, 4150), (669, 4186), (684, 4225), (704, 4258), (711, 4267), (728, 4294), (771, 4348), (793, 4390), (835, 4435), (846, 4456), (868, 4480), (941, 4558), (1032, 4678),

Gene: Sbash\_2 Start: 488, Stop: 2038, Start Num: 150

Candidate Starts for Sbash\_2:

(Start: 150 @488 has 1 MA's), (190, 566), (Start: 200 @584 has 2 MA's), (264, 677), (281, 740), (300, 785), (315, 818), (372, 914), (389, 950), (401, 989), (408, 1004), (420, 1043), (423, 1055), (427, 1073), (434, 1088), (450, 1127), (472, 1166), (528, 1268), (540, 1292), (644, 1454), (670, 1496), (685, 1535), (735, 1610), (750, 1640), (795, 1709), (797, 1712), (827, 1754), (883, 1844), (911, 1880), (920, 1895), (972, 1952), (976, 1961), (982, 1967), (994, 1979), (1006, 1988), (1026, 2015),

Gene: Scamander\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Scamander\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Scarlett\_7 Start: 1481, Stop: 2905, Start Num: 161

Candidate Starts for Scarlett\_7:

(Start: 161 @1481 has 150 MA's), (Start: 205 @1568 has 1 MA's), (Start: 219 @1592 has 15 MA's), (222, 1598), (257, 1676), (265, 1685), (267, 1691), (277, 1733), (284, 1751), (293, 1769), (313, 1820), (346, 1859), (376, 1895), (407, 1973), (420, 2015), (422, 2024), (451, 2105), (542, 2219), (564, 2261), (566, 2267), (572, 2279), (585, 2309), (597, 2333), (605, 2345), (617, 2360), (672, 2429), (690, 2471), (770, 2570), (787, 2603), (789, 2606), (810, 2642), (823, 2660), (1009, 2894),

Gene: Schiebel\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Schiebel\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Schiebs\_2 Start: 487, Stop: 1824, Start Num: 197

Candidate Starts for Schiebs\_2:

(Start: 113 @397 has 34 MA's), (Start: 197 @487 has 2 MA's), (Start: 201 @496 has 6 MA's), (Start: 209 @514 has 1 MA's), (220, 529), (230, 553), (267, 598), (274, 631), (278, 643), (289, 676), (323, 730), (364, 772), (376, 802), (378, 805), (410, 886), (416, 910), (423, 931), (440, 994), (586, 1222), (635, 1282), (647, 1294), (651, 1306), (658, 1309), (672, 1324), (682, 1351), (683, 1354), (710, 1396), (751, 1447), (773, 1474), (776, 1480), (829, 1564), (832, 1570), (905, 1666), (913, 1681), (926, 1699), (963, 1747), (970, 1759),

Gene: Schmidt\_5 Start: 1915, Stop: 3552, Start Num: 59

Candidate Starts for Schmidt\_5:

(Start: 49 @1897 has 3 MA's), (Start: 59 @1915 has 1 MA's), (Start: 132 @1987 has 1 MA's), (141, 1999), (Start: 201 @2089 has 6 MA's), (206, 2098), (264, 2182), (265, 2185), (266, 2188), (278, 2236), (289, 2269), (392, 2428), (408, 2476), (410, 2482), (432, 2566), (433, 2569), (434, 2572), (442, 2599), (443, 2602), (551, 2761), (574, 2809), (580, 2824), (587, 2839), (622, 2893), (653, 2941), (667, 2965), (683, 3007), (701, 3040), (710, 3049), (728, 3079), (755, 3109), (768, 3127), (771, 3133), (789, 3166), (809, 3199), (868, 3304), (889, 3331), (894, 3337), (949, 3412), (1001, 3475), (1031, 3523), (1044, 3544),

Gene: Schnabeltier\_2 Start: 521, Stop: 2170, Start Num: 80

Candidate Starts for Schnabeltier\_2:

(Start: 80 @521 has 9 MA's), (Start: 223 @719 has 13 MA's), (225, 722), (313, 932), (317, 941), (327, 962), (358, 1007), (425, 1190), (494, 1325), (548, 1391), (572, 1433), (641, 1547), (651, 1565), (655, 1568), (734, 1712), (741, 1721), (810, 1832), (821, 1850), (877, 1922), (904, 1958), (944, 2012), (986, 2072), (1017, 2123),

Gene: Schnauzer\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Schnauzer\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: SchoolBus\_30 Start: 13077, Stop: 14591, Start Num: 72

Candidate Starts for SchoolBus\_30:

(Start: 72 @13077 has 33 MA's), (Start: 74 @13080 has 14 MA's), (Start: 205 @13260 has 1 MA's), (249, 13353), (276, 13428), (287, 13461), (300, 13488), (313, 13518), (407, 13671), (409, 13677), (420, 13713), (422, 13722), (451, 13803), (456, 13812), (458, 13815), (498, 13854), (538, 13911), (553, 13947), (554, 13950), (668, 14106), (672, 14115), (711, 14184), (717, 14193), (722, 14199), (742, 14232), (771, 14268), (823, 14355), (836, 14376), (891, 14439), (893, 14442), (896, 14445), (907, 14463), (920, 14484), (960, 14526), (988, 14562), (1005, 14574),

Gene: Schuy\_32 Start: 13466, Stop: 14977, Start Num: 74

Candidate Starts for Schuy\_32:

(Start: 72 @13463 has 33 MA's), (Start: 74 @13466 has 14 MA's), (Start: 205 @13646 has 1 MA's), (249, 13739), (276, 13814), (287, 13847), (300, 13874), (313, 13904), (407, 14057), (409, 14063), (420, 14099), (422, 14108), (451, 14189), (456, 14198), (458, 14201), (498, 14240), (538, 14297), (553, 14333), (554, 14336), (668, 14492), (672, 14501), (711, 14570), (717, 14579), (722, 14585), (742, 14618), (771, 14654), (823, 14741), (836, 14762), (891, 14825), (893, 14828), (896, 14831), (907, 14849), (920, 14870), (960, 14912), (988, 14948), (1005, 14960),

Gene: Scitech\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Scitech\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Scrunchy\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Scrunchy\_3:



(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Scuttle\_5 Start: 3343, Stop: 4698, Start Num: 221

Candidate Starts for Scuttle\_5:

(Start: 71 @3133 has 81 MA's), (Start: 221 @3343 has 3 MA's), (263, 3397), (278, 3454), (281, 3463), (289, 3487), (402, 3703), (408, 3718), (410, 3724), (425, 3784), (443, 3844), (503, 3943), (520, 3973), (530, 3988), (574, 4069), (620, 4147), (627, 4156), (669, 4192), (684, 4231), (704, 4264), (711, 4273), (728, 4300), (771, 4354), (793, 4396), (835, 4441), (846, 4462), (868, 4486), (941, 4564), (1032, 4684),

Gene: SeaWolves\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for SeaWolves\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Seagreen\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Seagreen\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102),

Gene: Sebastisaurus\_2 Start: 597, Stop: 2150, Start Num: 120

Candidate Starts for Sebastisaurus\_2:

(Start: 120 @597 has 15 MA's), (175, 669), (261, 816), (265, 825), (277, 873), (281, 885), (313, 954), (326, 978), (346, 1008), (352, 1017), (394, 1062), (400, 1092), (410, 1113), (419, 1146), (430, 1191), (434, 1203), (466, 1266), (477, 1296), (516, 1356), (616, 1551), (618, 1554), (671, 1623), (691, 1674), (693, 1680), (700, 1689), (716, 1713), (727, 1731), (802, 1833), (804, 1836), (812, 1854), (825, 1881), (850, 1929), (924, 2010), (943, 2034), (946, 2037), (1004, 2112), (1025, 2133),

Gene: Sekhmet\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for Sekhmet\_3:

(48, 760), (Start: 89 @820 has 52 MA's), (183, 928), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (319, 1228), (389, 1318), (391, 1321), (401, 1357), (420, 1414), (422, 1423), (425, 1438), (457, 1510), (466, 1522), (494, 1573), (548, 1639), (572, 1681), (607, 1750), (611, 1756), (641, 1795), (655, 1816), (672, 1846), (680, 1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (850, 2122), (888, 2173), (983, 2302), (1034, 2362),

Gene: Sephiroth\_13 Start: 5118, Stop: 6593, Start Num: 144

Candidate Starts for Sephiroth\_13:

(Start: 144 @5118 has 46 MA's), (235, 5265), (262, 5304), (267, 5316), (310, 5439), (313, 5445), (364, 5526), (389, 5580), (391, 5583), (410, 5640), (422, 5682), (424, 5694), (434, 5718), (441, 5742), (467, 5784), (572, 5964), (600, 6006), (667, 6087), (685, 6132), (700, 6156), (728, 6201), (773, 6261), (814, 6324), (817, 6330), (871, 6402), (885, 6420), (902, 6438), (994, 6537), (1010, 6555), (1027, 6585),

Gene: Sergei\_2 Start: 428, Stop: 1993, Start Num: 71

Candidate Starts for Sergei\_2:

(Start: 71 @428 has 81 MA's), (Start: 200 @599 has 2 MA's), (263, 692), (266, 701), (273, 734), (278, 749), (281, 758), (289, 782), (316, 836), (381, 947), (408, 1013), (410, 1019), (425, 1079), (443, 1139), (461, 1169), (520, 1268), (620, 1442), (627, 1451), (669, 1487), (672, 1493), (685, 1529), (710, 1565), (731, 1598), (762, 1637), (768, 1643), (886, 1784), (941, 1859), (1005, 1940), (1032, 1979),

Gene: SerialPhiller\_2 Start: 412, Stop: 1926, Start Num: 76

Candidate Starts for SerialPhiller\_2:

(44, 361), (Start: 76 @412 has 1 MA's), (Start: 86 @424 has 2 MA's), (106, 448), (Start: 127 @472 has 3 MA's), (Start: 209 @583 has 1 MA's), (227, 610), (267, 673), (273, 703), (276, 712), (282, 730), (348, 841), (376, 874), (409, 955), (423, 1003), (447, 1084), (546, 1219), (560, 1246), (583, 1297), (603, 1330), (728, 1513), (800, 1606), (825, 1645), (829, 1651), (833, 1660), (852, 1699), (915, 1783), (926, 1798), (970, 1858), (988, 1888),

Gene: Seume\_4 Start: 596, Stop: 2086, Start Num: 95

Candidate Starts for Seume\_4:

(Start: 95 @596 has 42 MA's), (Start: 150 @641 has 1 MA's), (Start: 209 @743 has 1 MA's), (Start: 221 @761 has 3 MA's), (227, 770), (263, 821), (264, 824), (267, 833), (273, 863), (282, 890), (341, 989), (399, 1088), (408, 1112), (409, 1115), (410, 1118), (423, 1163), (509, 1313), (555, 1397), (578, 1445), (583, 1457), (610, 1496), (622, 1514), (635, 1526), (636, 1529), (649, 1550), (657, 1556), (670, 1568), (711, 1646), (755, 1700), (791, 1754), (800, 1766), (852, 1859), (915, 1943), (958, 2000), (1004, 2069),

Gene: SgtBeansprout\_4 Start: 847, Stop: 2271, Start Num: 161

Candidate Starts for SgtBeansprout\_4:

(Start: 143 @835 has 2 MA's), (Start: 161 @847 has 150 MA's), (194, 913), (Start: 219 @958 has 15 MA's), (240, 1003), (257, 1042), (265, 1051), (277, 1099), (284, 1117), (293, 1135), (313, 1186), (354, 1234), (376, 1261), (420, 1381), (422, 1390), (434, 1426), (435, 1429), (451, 1471), (462, 1489), (542, 1585), (564, 1627), (566, 1633), (572, 1645), (585, 1675), (588, 1681), (597, 1699), (617, 1726), (672, 1795), (717, 1867), (771, 1939), (789, 1972), (793, 1981), (810, 2008), (823, 2026), (960, 2203), (1009, 2260), (1014, 2266),

Gene: ShaboiShabazz\_2 Start: 458, Stop: 1891, Start Num: 168

Candidate Starts for ShaboiShabazz\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Shadow1\_6 Start: 1423, Stop: 2850, Start Num: 161

Candidate Starts for Shadow1\_6:

(75, 1339), (Start: 161 @1423 has 150 MA's), (Start: 205 @1513 has 1 MA's), (Start: 219 @1537 has 15 MA's), (257, 1621), (265, 1630), (277, 1678), (284, 1696), (313, 1765), (346, 1804), (376, 1840), (407, 1918), (420, 1960), (422, 1969), (451, 2050), (496, 2098), (542, 2164), (564, 2206), (566, 2212), (572, 2224), (575, 2230), (585, 2254), (597, 2278), (601, 2284), (617, 2305), (672, 2374), (690, 2416), (762, 2509), (770, 2515), (771, 2518), (789, 2551), (808, 2581), (823, 2605), (856, 2653), (960, 2782), (1009, 2839), (1014, 2845),

Gene: Shagrat\_8 Start: 5149, Stop: 6693, Start Num: 138

Candidate Starts for Shagrat\_8:

(Start: 138 @5149 has 2 MA's), (316, 5524), (410, 5680), (412, 5692), (414, 5698), (423, 5725), (424, 5734), (437, 5776), (572, 6013), (624, 6088), (684, 6193), (708, 6229), (744, 6286), (777, 6334), (793, 6364), (864, 6466), (911, 6532), (953, 6583), (1018, 6652),

Gene: Shaobing\_8 Start: 1660, Stop: 3090, Start Num: 161

Candidate Starts for Shaobing\_8:

(109, 1618), (Start: 143 @1648 has 2 MA's), (Start: 161 @1660 has 150 MA's), (Start: 205 @1750 has 1 MA's), (Start: 219 @1774 has 15 MA's), (222, 1780), (240, 1819), (257, 1858), (265, 1867), (267, 1873), (277, 1915), (284, 1933), (293, 1951), (313, 2002), (354, 2050), (420, 2197), (422, 2206), (496, 2335), (542, 2401), (564, 2443), (566, 2449), (572, 2461), (585, 2491), (597, 2515), (617, 2542), (672, 2611), (690, 2653), (717, 2683), (733, 2707), (771, 2755), (808, 2818), (823, 2842), (856, 2893), (893, 2932), (960, 3022), (992, 3061), (1009, 3079), (1014, 3085),

Gene: Sharkboy\_3 Start: 943, Stop: 2562, Start Num: 125

Candidate Starts for Sharkboy\_3:

(1, 409), (Start: 119 @937 has 2 MA's), (Start: 125 @943 has 61 MA's), (228, 1099), (275, 1189), (281, 1207), (286, 1222), (319, 1291), (331, 1315), (346, 1333), (392, 1390), (409, 1441), (410, 1444), (425, 1504), (431, 1525), (439, 1552), (453, 1582), (622, 1921), (710, 2044), (912, 2359), (941, 2398), (1032, 2515),

Gene: Shawty\_2 Start: 588, Stop: 2165, Start Num: 114

Candidate Starts for Shawty\_2:

(Start: 114 @588 has 3 MA's), (229, 771), (230, 774), (265, 825), (267, 831), (277, 873), (281, 885), (313, 954), (326, 978), (327, 981), (346, 1008), (363, 1029), (394, 1062), (408, 1107), (419, 1146), (430, 1191), (432, 1197), (516, 1356), (569, 1467), (587, 1512), (616, 1557), (618, 1560), (691, 1680), (693, 1686), (802, 1839), (924, 2016), (946, 2043), (996, 2115), (1031, 2160),

Gene: Shayna\_2 Start: 648, Stop: 2282, Start Num: 125

Candidate Starts for Shayna\_2:

(Start: 125 @648 has 61 MA's), (190, 738), (206, 765), (281, 912), (319, 996), (348, 1041), (384, 1086), (392, 1095), (425, 1209), (439, 1257), (453, 1287), (464, 1302), (496, 1383), (658, 1671), (941, 2115), (977, 2163), (1050, 2271),

Gene: ShedlockHolmes\_7 Start: 1488, Stop: 2912, Start Num: 161

Candidate Starts for ShedlockHolmes\_7:

(Start: 143 @1476 has 2 MA's), (Start: 161 @1488 has 150 MA's), (Start: 205 @1575 has 1 MA's), (Start: 219 @1599 has 15 MA's), (257, 1683), (265, 1692), (277, 1740), (284, 1758), (293, 1776), (313, 1827), (348, 1869), (354, 1875), (376, 1902), (407, 1980), (420, 2022), (422, 2031), (451, 2112), (462, 2130), (542, 2226), (566, 2274), (572, 2286), (585, 2316), (597, 2340), (605, 2352), (672, 2436), (690, 2478), (770, 2577), (771, 2580), (793, 2622), (803, 2637), (808, 2643), (821, 2664), (823, 2667), (960, 2844), (1014, 2907),

Gene: ShiaSurprise\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for ShiaSurprise\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Shida\_31 Start: 13370, Stop: 14884, Start Num: 72

Candidate Starts for Shida\_31:

(Start: 72 @13370 has 33 MA's), (Start: 74 @13373 has 14 MA's), (Start: 205 @13553 has 1 MA's), (249, 13646), (250, 13649), (276, 13721), (287, 13754), (300, 13781), (313, 13811), (407, 13964), (409, 13970), (420, 14006), (422, 14015), (451, 14096), (456, 14105), (458, 14108), (498, 14147), (538, 14204), (553, 14240), (554, 14243), (668, 14399), (672, 14408), (711, 14477), (717, 14486), (722, 14492), (742, 14525), (771, 14561), (823, 14648), (836, 14669), (891, 14732), (893, 14735), (896, 14738), (907, 14756), (920, 14777), (960, 14819), (988, 14855), (1005, 14867),

Gene: Shipwreck\_2 Start: 401, Stop: 2077, Start Num: 42

Candidate Starts for Shipwreck\_2:

(Start: 42 @401 has 46 MA's), (194, 617), (215, 656), (248, 713), (252, 719), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (317, 887), (322, 899), (382, 989), (447, 1178), (524, 1274), (548, 1325), (640, 1478), (761, 1676), (771, 1685), (786, 1712), (810, 1754), (821, 1772), (885, 1856), (899, 1871), (1038, 2060),

Gene: Shlim410\_2 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for Shlim410\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (273, 618), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (401, 855), (420, 912), (422, 921), (425, 936), (457, 1008), (466, 1020), (494, 1071), (548, 1137), (572, 1179), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (767, 1500), (787, 1536), (789, 1539), (810, 1575), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (964, 1785), (1002, 1827),

Gene: Shoya\_2 Start: 342, Stop: 1781, Start Num: 163

Candidate Starts for Shoya\_2:

(Start: 163 @342 has 2 MA's), (Start: 205 @417 has 1 MA's), (263, 525), (265, 531), (269, 549), (276, 576), (277, 579), (302, 642), (313, 666), (374, 744), (391, 774), (410, 834), (420, 867), (422, 876), (424, 888), (436, 918), (437, 921), (451, 957), (458, 969), (536, 1077), (548, 1104), (601, 1203), (670, 1284), (683, 1320), (707, 1350), (711, 1356), (736, 1395), (743, 1407), (755, 1422), (762, 1431), (770, 1437), (823, 1527), (900, 1623),

Gene: ShrimpFriedEgg\_2 Start: 512, Stop: 2044, Start Num: 156

Candidate Starts for ShrimpFriedEgg\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Shweta\_2 Start: 512, Stop: 2044, Start Num: 156

Candidate Starts for Shweta\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (218, 635), (220, 638), (256, 686), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Sidious\_2 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for Sidious\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (372, 798), (391, 819), (420, 912), (425, 936), (440, 978), (494, 1071), (548, 1137), (572, 1179), (611, 1254), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (767, 1500), (771, 1506), (789, 1539), (810, 1575), (821, 1593), (850, 1629), (877, 1665), (885, 1677), (888, 1680), (934, 1743), (964, 1785), (1002, 1827), (1022, 1857),

Gene: Silvafighter\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Silvafighter\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Silverleaf\_4 Start: 1052, Stop: 2635, Start Num: 68

Candidate Starts for Silverleaf\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (407, 1646), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (856, 2402), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: Silvy\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Silvy\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: SimranZ1\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for SimranZ1\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Sippinontea\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Sippinontea\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (431, 1677), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (995, 2523),

Gene: SirPhilip\_7 Start: 1382, Stop: 2806, Start Num: 161

Candidate Starts for SirPhilip\_7:

(75, 1298), (Start: 143 @1370 has 2 MA's), (Start: 161 @1382 has 150 MA's), (Start: 205 @1469 has 1 MA's), (Start: 219 @1493 has 15 MA's), (222, 1499), (257, 1577), (265, 1586), (277, 1634), (284, 1652), (293, 1670), (300, 1691), (313, 1721), (315, 1724), (420, 1916), (422, 1925), (451, 2006), (542, 2120), (564, 2162), (566, 2168), (572, 2180), (585, 2210), (597, 2234), (605, 2246), (617, 2261), (672, 2330), (690, 2372), (770, 2471), (771, 2474), (787, 2504), (789, 2507), (810, 2543), (823, 2561), (960, 2738), (1009, 2795), (1014, 2801),

Gene: Sizemore\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Sizemore\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Skinny\_15 Start: 4718, Stop: 6262, Start Num: 93

Candidate Starts for Skinny\_15:

(Start: 93 @4718 has 19 MA's), (133, 4766), (218, 4907), (264, 4967), (313, 5105), (418, 5297), (525, 5507), (549, 5558), (591, 5630), (670, 5693), (679, 5717), (685, 5732), (724, 5792), (731, 5804), (770, 5864), (787, 5897), (808, 5930), (824, 5957), (857, 6005), (1008, 6191), (1021, 6212),

Gene: SkinnyPete\_2 Start: 509, Stop: 2044, Start Num: 152

Candidate Starts for SkinnyPete\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (218, 635), (220, 638), (256, 686), (270, 722), (273, 737), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Skylord\_2 Start: 593, Stop: 2155, Start Num: 125

Candidate Starts for Skylord\_2:

(Start: 125 @593 has 61 MA's), (Start: 200 @701 has 2 MA's), (228, 749), (281, 857), (283, 863), (286, 872), (288, 878), (289, 881), (343, 977), (392, 1040), (425, 1154), (443, 1214), (453, 1232), (564, 1460), (580, 1505), (678, 1643), (908, 1970), (1039, 2144), (1043, 2147),

Gene: Slarp\_9 Start: 2478, Stop: 3920, Start Num: 161

Candidate Starts for Slarp\_9:

(Start: 161 @2478 has 150 MA's), (Start: 219 @2583 has 15 MA's), (257, 2667), (265, 2676), (273, 2712), (277, 2724), (283, 2739), (293, 2766), (313, 2817), (321, 2835), (354, 2865), (376, 2892), (407, 2970), (422, 3021), (423, 3024), (451, 3102), (456, 3111), (496, 3150), (542, 3216), (566, 3264), (585, 3306), (672, 3423), (688, 3465), (717, 3510), (770, 3579), (793, 3624), (808, 3645), (823, 3669), (960, 3846), (1009, 3909), (1014, 3915),

Gene: Slay\_3 Start: 1159, Stop: 2781, Start Num: 125

Candidate Starts for Slay\_3:

(Start: 125 @1159 has 61 MA's), (228, 1315), (281, 1423), (286, 1438), (300, 1468), (311, 1492), (319, 1507), (340, 1540), (392, 1606), (409, 1657), (410, 1660), (425, 1720), (453, 1798), (699, 2248), (711, 2263), (941, 2614), (1050, 2770),

Gene: Sleepyhead\_2 Start: 439, Stop: 1917, Start Num: 131

Candidate Starts for Sleepyhead\_2:

(Start: 131 @439 has 1 MA's), (281, 712), (324, 808), (409, 967), (410, 970), (472, 1126), (552, 1243), (592, 1309), (715, 1486), (723, 1498), (748, 1537), (760, 1555), (772, 1567), (793, 1609), (822, 1654), (973, 1864),

Gene: Slentz\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Slentz\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: SlimJimmy\_13 Start: 4718, Stop: 6262, Start Num: 93

Candidate Starts for SlimJimmy\_13:

(Start: 93 @4718 has 19 MA's), (133, 4766), (218, 4907), (264, 4967), (313, 5105), (418, 5297), (525, 5507), (549, 5558), (591, 5630), (670, 5693), (679, 5717), (685, 5732), (724, 5792), (731, 5804), (770, 5864), (787, 5897), (808, 5930), (824, 5957), (857, 6005), (1008, 6191), (1021, 6212),

Gene: Slimphazie\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for Slimphazie\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: Slizam\_3 Start: 1113, Stop: 2573, Start Num: 117

Candidate Starts for Slizam\_3:

(Start: 117 @1113 has 111 MA's), (122, 1119), (Start: 223 @1281 has 13 MA's), (228, 1290), (264, 1350), (283, 1419), (294, 1440), (317, 1491), (424, 1695), (504, 1830), (546, 1908), (551, 1923), (564, 1941), (572, 1959), (589, 2001), (610, 2034), (622, 2052), (706, 2172), (708, 2175), (715, 2187), (724, 2199), (731, 2211), (774, 2262), (808, 2319), (810, 2325), (817, 2334), (821, 2343), (823, 2346), (958, 2508), (965, 2517), (970, 2526), (995, 2565),

Gene: Smilerella\_2 Start: 176, Stop: 1804, Start Num: 98

Candidate Starts for Smilerella\_2:

(98, 176), (140, 224), (177, 278), (233, 380), (237, 389), (261, 422), (273, 467), (277, 479), (289, 515), (296, 527), (319, 575), (360, 620), (367, 632), (393, 686), (407, 731), (422, 782), (428, 806), (436, 833), (537, 971), (551, 1007), (578, 1067), (728, 1307), (806, 1409), (815, 1421), (846, 1475), (868, 1511), (869, 1514), (908, 1559), (930, 1589), (942, 1607), (1037, 1751), (1048, 1778),

Gene: Smooch\_33 Start: 14621, Stop: 16135, Start Num: 72

Candidate Starts for Smooch\_33:

(Start: 72 @14621 has 33 MA's), (Start: 74 @14624 has 14 MA's), (Start: 205 @14804 has 1 MA's), (249, 14897), (276, 14972), (287, 15005), (300, 15032), (313, 15062), (407, 15215), (409, 15221), (420, 15257), (422, 15266), (451, 15347), (456, 15356), (458, 15359), (498, 15398), (538, 15455), (553, 15491), (554, 15494), (668, 15650), (672, 15659), (711, 15728), (717, 15737), (722, 15743), (742, 15776), (771, 15812), (823, 15899), (836, 15920), (891, 15983), (893, 15986), (896, 15989), (907, 16007), (920, 16028), (960, 16070), (988, 16106), (1005, 16118),

Gene: Smurph\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Smurph\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Sneeze\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for Sneeze\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Snekmaggedon\_2 Start: 512, Stop: 2044, Start Num: 156

Candidate Starts for Snekmaggedon\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Snenia\_5 Start: 1190, Stop: 2755, Start Num: 68

Candidate Starts for Snenia\_5:

(Start: 36 @1139 has 19 MA's), (40, 1148), (Start: 68 @1190 has 59 MA's), (Start: 71 @1196 has 81 MA's), (191, 1367), (207, 1397), (262, 1472), (265, 1478), (267, 1484), (327, 1640), (334, 1649), (336, 1652), (338, 1655), (389, 1730), (407, 1784), (408, 1787), (409, 1790), (515, 2021), (552, 2096), (568, 2117), (572, 2123), (623, 2192), (654, 2216), (666, 2234), (672, 2249), (736, 2363), (770, 2402), (773, 2408), (810, 2474), (850, 2528), (877, 2564), (885, 2576), (933, 2615), (1008, 2702), (1034, 2747), (1036, 2750),

Gene: Snuffles\_4 Start: 1283, Stop: 2743, Start Num: 117

Candidate Starts for Snuffles\_4:

(Start: 117 @1283 has 111 MA's), (122, 1289), (Start: 223 @1451 has 13 MA's), (228, 1460), (264, 1520), (283, 1589), (294, 1610), (317, 1661), (424, 1865), (504, 2000), (551, 2093), (564, 2111), (572, 2129), (589, 2171), (610, 2204), (622, 2222), (706, 2342), (708, 2345), (715, 2357), (724, 2369), (731, 2381), (774, 2432), (808, 2489), (810, 2495), (817, 2504), (821, 2513), (823, 2516), (958, 2678), (965, 2687), (970, 2696), (995, 2735),

Gene: SoSeph\_6 Start: 1347, Stop: 2774, Start Num: 166

Candidate Starts for SoSeph\_6:

(75, 1254), (Start: 166 @1347 has 22 MA's), (194, 1404), (Start: 205 @1425 has 1 MA's), (Start: 219 @1449 has 15 MA's), (257, 1533), (265, 1542), (267, 1548), (277, 1590), (284, 1608), (293, 1626), (313, 1677), (376, 1752), (407, 1830), (420, 1872), (422, 1881), (423, 1884), (451, 1962), (542, 2076), (566, 2124), (585, 2166), (597, 2190), (605, 2202), (626, 2229), (667, 2274), (672, 2286), (762, 2433), (787, 2472), (823, 2529), (838, 2553), (856, 2577), (878, 2601), (954, 2700), (960, 2706), (1009, 2763),

Gene: SoilAssassin\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for SoilAssassin\_2:

(Start: 89 @318 has 52 MA's), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Solid\_2 Start: 377, Stop: 1888, Start Num: 144

Candidate Starts for Solid\_2:

(Start: 144 @377 has 46 MA's), (174, 416), (182, 434), (195, 461), (204, 479), (220, 506), (Start: 221 @509 has 3 MA's), (260, 557), (265, 566), (267, 572), (276, 611), (278, 617), (294, 650), (300, 668),



(310, 692), (313, 698), (332, 737), (338, 746), (341, 749), (359, 788), (361, 791), (395, 860), (408, 905), (409, 908), (414, 929), (420, 944), (422, 953), (446, 1025), (456, 1043), (458, 1046), (465, 1052), (471, 1067), (508, 1133), (532, 1154), (546, 1178), (572, 1226), (619, 1292), (648, 1325), (666, 1355), (683, 1397), (728, 1475), (734, 1484), (742, 1496), (758, 1529), (775, 1550), (778, 1553), (781, 1556), (787, 1568), (807, 1598), (810, 1604), (823, 1625), (836, 1646), (848, 1667), (872, 1703), (874, 1706), (882, 1718), (942, 1796), (950, 1805), (952, 1811), (960, 1820), (1005, 1874), (1008, 1880),

Gene: Sonah\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Sonah\_2:

(Start: 42 @413 has 46 MA's), (Start: 124 @524 has 3 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (720, 1622), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Soul22\_3 Start: 663, Stop: 2183, Start Num: 139

Candidate Starts for Soul22\_3:

(Start: 132 @651 has 1 MA's), (Start: 139 @663 has 74 MA's), (Start: 219 @789 has 15 MA's), (224, 798), (244, 843), (257, 873), (259, 876), (263, 882), (274, 927), (283, 951), (293, 972), (308, 1014), (319, 1035), (344, 1062), (355, 1080), (366, 1083), (376, 1107), (391, 1134), (409, 1191), (420, 1227), (422, 1236), (424, 1248), (426, 1254), (433, 1269), (437, 1281), (449, 1314), (452, 1320), (472, 1356), (474, 1365), (500, 1395), (514, 1425), (516, 1428), (567, 1524), (572, 1533), (583, 1560), (646, 1644), (662, 1659), (731, 1770), (736, 1779), (742, 1788), (787, 1851), (834, 1926), (841, 1938), (856, 1956), (891, 1992), (919, 2034), (925, 2040), (960, 2082), (969, 2094), (975, 2106), (1017, 2172),

Gene: Sourignavong\_5 Start: 901, Stop: 2391, Start Num: 95

Candidate Starts for Sourignavong\_5:

(Start: 95 @901 has 42 MA's), (Start: 150 @946 has 1 MA's), (Start: 201 @1030 has 6 MA's), (Start: 209 @1048 has 1 MA's), (Start: 221 @1066 has 3 MA's), (227, 1075), (263, 1126), (264, 1129), (267, 1138), (273, 1168), (282, 1195), (341, 1294), (399, 1393), (408, 1417), (409, 1420), (410, 1423), (423, 1468), (555, 1702), (578, 1750), (583, 1762), (610, 1801), (622, 1819), (635, 1831), (636, 1834), (649, 1855), (657, 1861), (670, 1873), (711, 1951), (755, 2005), (791, 2059), (800, 2071), (852, 2164), (915, 2248), (958, 2305), (1004, 2374),

Gene: Spartoi\_2 Start: 378, Stop: 1808, Start Num: 164

Candidate Starts for Spartoi\_2:

(130, 339), (Start: 143 @357 has 2 MA's), (Start: 164 @378 has 1 MA's), (203, 450), (Start: 219 @474 has 15 MA's), (238, 516), (249, 543), (269, 591), (272, 606), (293, 657), (313, 708), (319, 720), (405, 855), (410, 870), (420, 903), (422, 912), (423, 915), (436, 954), (437, 957), (566, 1152), (585, 1197), (670, 1302), (736, 1422), (771, 1464), (782, 1485), (789, 1497), (839, 1581), (848, 1596), (947, 1719), (976, 1764),

Gene: Spikelee\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Spikelee\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Splinter\_7 Start: 3467, Stop: 5074, Start Num: 105

Candidate Starts for Splinter\_7:

(Start: 49 @3389 has 3 MA's), (Start: 105 @3467 has 6 MA's), (265, 3695), (289, 3779), (300, 3800), (309, 3821), (392, 3959), (410, 4013), (433, 4100), (434, 4103), (443, 4133), (527, 4238), (574, 4340), (650, 4463), (689, 4550), (699, 4565), (711, 4580), (759, 4643), (800, 4712), (825, 4754), (840, 4778), (865, 4829), (868, 4832), (894, 4865), (941, 4931), (979, 4982), (1039, 5060), (1044, 5066),

Gene: Spock\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Spock\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: SpongeBob\_2 Start: 509, Stop: 2044, Start Num: 152

Candidate Starts for SpongeBob\_2:

(Start: 152 @509 has 22 MA's), (Start: 156 @512 has 23 MA's), (Start: 166 @527 has 22 MA's), (190, 584), (Start: 200 @602 has 2 MA's), (206, 614), (256, 686), (270, 722), (275, 743), (300, 806), (367, 926), (401, 1010), (423, 1076), (450, 1148), (452, 1151), (459, 1163), (528, 1289), (540, 1313), (572, 1376), (631, 1460), (670, 1517), (675, 1532), (719, 1607), (729, 1625), (827, 1769), (849, 1790), (873, 1823), (883, 1838), (911, 1874), (975, 1952), (976, 1955), (982, 1961),

Gene: Spooky\_3 Start: 672, Stop: 2189, Start Num: 139

Candidate Starts for Spooky\_3:

(Start: 134 @663 has 3 MA's), (Start: 139 @672 has 74 MA's), (211, 789), (Start: 219 @798 has 15 MA's), (224, 807), (259, 885), (265, 897), (274, 936), (283, 960), (292, 978), (293, 981), (308, 1023), (321, 1050), (344, 1071), (355, 1089), (366, 1092), (368, 1095), (376, 1116), (391, 1143), (409, 1200), (414, 1221), (424, 1257), (426, 1263), (433, 1278), (437, 1290), (452, 1329), (503, 1410), (526, 1452), (567, 1533), (572, 1542), (583, 1569), (605, 1608), (626, 1635), (652, 1656), (721, 1758), (736, 1785), (834, 1932), (841, 1944), (856, 1962), (919, 2040), (922, 2043), (925, 2046), (960, 2088), (969, 2100), (975, 2112),

Gene: Sproutie\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Sproutie\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Sputnik\_3 Start: 604, Stop: 2115, Start Num: 87

Candidate Starts for Sputnik\_3:

(58, 562), (Start: 87 @604 has 2 MA's), (Start: 209 @763 has 1 MA's), (239, 808), (265, 847), (267, 853), (273, 883), (277, 895), (283, 913), (341, 1009), (399, 1108), (408, 1132), (409, 1135), (423, 1183), (430, 1213), (435, 1228), (438, 1237), (440, 1246), (452, 1270), (560, 1426), (562, 1429), (583, 1477), (622, 1537), (630, 1546), (649, 1573), (682, 1624), (748, 1711), (760, 1729), (807, 1801), (832, 1843), (833, 1846), (848, 1876), (865, 1909), (868, 1912), (876, 1930),

Gene: Squiddly\_4 Start: 1362, Stop: 2879, Start Num: 139

Candidate Starts for Squiddly\_4:

(Start: 134 @1353 has 3 MA's), (Start: 139 @1362 has 74 MA's), (211, 1479), (Start: 219 @1488 has 15 MA's), (224, 1497), (250, 1560), (259, 1575), (265, 1587), (274, 1626), (292, 1668), (293, 1671), (308, 1713), (321, 1740), (344, 1761), (355, 1779), (366, 1782), (368, 1785), (376, 1806), (391, 1833),

(409, 1890), (424, 1947), (426, 1953), (433, 1968), (437, 1980), (503, 2100), (526, 2142), (567, 2223), (572, 2232), (583, 2259), (605, 2298), (626, 2325), (652, 2346), (721, 2448), (736, 2475), (834, 2622), (841, 2634), (856, 2652), (919, 2730), (922, 2733), (925, 2736), (960, 2778), (969, 2790), (975, 2802),

Gene: Squint\_10 Start: 3458, Stop: 4990, Start Num: 158

Candidate Starts for Squint\_10:

(88, 3374), (Start: 121 @3416 has 4 MA's), (128, 3425), (Start: 158 @3458 has 20 MA's), (218, 3572), (247, 3635), (266, 3668), (267, 3671), (278, 3716), (308, 3791), (313, 3800), (388, 3902), (390, 3905), (401, 3941), (412, 3974), (540, 4223), (572, 4286), (584, 4313), (684, 4472), (708, 4508), (728, 4538), (734, 4547), (780, 4601), (792, 4625), (976, 4859), (988, 4871),

Gene: Squirty\_3 Start: 670, Stop: 2157, Start Num: 139

Candidate Starts for Squirty\_3:

(Start: 132 @658 has 1 MA's), (Start: 139 @670 has 74 MA's), (Start: 219 @796 has 15 MA's), (222, 802), (242, 844), (244, 850), (259, 883), (263, 889), (265, 895), (274, 934), (283, 958), (292, 976), (293, 979), (308, 1021), (319, 1042), (344, 1069), (349, 1078), (355, 1087), (366, 1090), (391, 1141), (409, 1198), (414, 1219), (422, 1243), (424, 1255), (433, 1276), (437, 1288), (449, 1321), (452, 1327), (498, 1396), (500, 1402), (516, 1435), (537, 1471), (567, 1531), (572, 1540), (583, 1567), (640, 1645), (694, 1741), (736, 1786), (787, 1858), (810, 1897), (834, 1933), (837, 1939), (856, 1963), (882, 1993), (891, 1999), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101), (975, 2113),

Gene: StAB\_2 Start: 376, Stop: 1959, Start Num: 121

Candidate Starts for StAB\_2:

(Start: 118 @373 has 4 MA's), (Start: 121 @376 has 4 MA's), (126, 382), (172, 442), (230, 550), (232, 553), (263, 631), (266, 640), (340, 814), (404, 916), (408, 925), (410, 931), (411, 940), (428, 1000), (442, 1048), (443, 1051), (505, 1114), (551, 1207), (686, 1429), (696, 1447), (732, 1492), (755, 1534), (778, 1570), (786, 1585), (801, 1612), (803, 1615), (811, 1630), (826, 1663), (835, 1678), (865, 1726), (898, 1756), (909, 1774), (965, 1849), (1016, 1924), (1032, 1948),

Gene: Stap\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Stap\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Starcevich\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Starcevich\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Stargaze\_2 Start: 344, Stop: 1912, Start Num: 51

Candidate Starts for Stargaze\_2:

(Start: 51 @344 has 3 MA's), (264, 647), (277, 698), (293, 734), (317, 794), (405, 947), (407, 953), (409, 959), (420, 995), (424, 1016), (436, 1046), (451, 1085), (456, 1094), (566, 1247), (579, 1277),

(605, 1322), (608, 1325), (672, 1403), (682, 1427), (717, 1472), (771, 1553), (789, 1586), (793, 1595), (803, 1610), (808, 1616), (810, 1622), (878, 1712), (888, 1724), (891, 1727), (960, 1820), (1009, 1901),

Gene: Stem\_3 Start: 1119, Stop: 2573, Start Num: 122

Candidate Starts for Stem\_3:

(Start: 117 @1113 has 111 MA's), (122, 1119), (Start: 223 @1281 has 13 MA's), (228, 1290), (264, 1350), (283, 1419), (294, 1440), (317, 1491), (424, 1695), (504, 1830), (546, 1908), (551, 1923), (564, 1941), (572, 1959), (589, 2001), (610, 2034), (622, 2052), (706, 2172), (708, 2175), (715, 2187), (724, 2199), (731, 2211), (774, 2262), (808, 2319), (810, 2325), (817, 2334), (821, 2343), (823, 2346), (958, 2508), (965, 2517), (970, 2526), (995, 2565),

Gene: StevieRay\_2 Start: 401, Stop: 2077, Start Num: 42

Candidate Starts for StevieRay\_2:

(Start: 42 @401 has 46 MA's), (194, 617), (215, 656), (248, 713), (252, 719), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (317, 887), (322, 899), (382, 989), (447, 1178), (524, 1274), (541, 1304), (548, 1325), (630, 1466), (640, 1478), (670, 1523), (761, 1676), (771, 1685), (786, 1712), (810, 1754), (821, 1772), (885, 1856), (899, 1871), (1038, 2060),

Gene: StewieGriff\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for StewieGriff\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (227, 974), (263, 1025), (267, 1037), (273, 1067), (277, 1079), (282, 1094), (313, 1160), (348, 1205), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (429, 1391), (431, 1400), (463, 1466), (516, 1529), (521, 1541), (546, 1583), (555, 1601), (583, 1661), (622, 1718), (635, 1730), (649, 1754), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (806, 1979), (848, 2054), (852, 2063), (868, 2090), (915, 2147), (955, 2201), (1004, 2273),

Gene: Stiles\_2 Start: 373, Stop: 1959, Start Num: 118

Candidate Starts for Stiles\_2:

(Start: 118 @373 has 4 MA's), (Start: 121 @376 has 4 MA's), (126, 382), (232, 553), (263, 631), (266, 640), (340, 814), (404, 916), (408, 925), (410, 931), (411, 940), (428, 1000), (442, 1048), (443, 1051), (505, 1114), (551, 1207), (686, 1429), (696, 1447), (732, 1492), (755, 1534), (778, 1570), (786, 1585), (801, 1612), (803, 1615), (811, 1630), (813, 1636), (826, 1663), (835, 1678), (865, 1726), (909, 1774), (965, 1849), (1016, 1924), (1032, 1948),

Gene: Stinson\_8 Start: 1568, Stop: 2989, Start Num: 161

Candidate Starts for Stinson\_8:

(85, 1496), (Start: 143 @1556 has 2 MA's), (Start: 161 @1568 has 150 MA's), (Start: 219 @1679 has 15 MA's), (222, 1685), (257, 1763), (265, 1772), (277, 1820), (284, 1838), (293, 1856), (313, 1907), (348, 1949), (354, 1955), (376, 1982), (378, 1985), (407, 2060), (420, 2102), (422, 2111), (451, 2192), (542, 2306), (566, 2354), (572, 2366), (585, 2396), (597, 2420), (605, 2432), (617, 2447), (672, 2516), (771, 2660), (789, 2693), (823, 2747), (960, 2924), (1009, 2978),

Gene: Stoor\_3 Start: 957, Stop: 2582, Start Num: 125

Candidate Starts for Stoor\_3:

(Start: 125 @957 has 61 MA's), (228, 1113), (267, 1167), (281, 1221), (286, 1236), (319, 1305), (348, 1350), (392, 1404), (409, 1455), (410, 1458), (425, 1518), (430, 1536), (431, 1539), (439, 1566), (453, 1596), (527, 1758), (660, 1974), (699, 2049), (710, 2061), (941, 2415), (977, 2463),

Gene: Stormborn\_2 Start: 379, Stop: 1890, Start Num: 144

Candidate Starts for Stormborn\_2:

(Start: 144 @379 has 46 MA's), (182, 436), (204, 481), (220, 508), (Start: 221 @511 has 3 MA's), (260, 559), (265, 568), (267, 574), (273, 604), (276, 613), (278, 619), (294, 652), (300, 670), (310, 694), (313, 700), (332, 739), (338, 748), (341, 751), (359, 790), (361, 793), (389, 853), (395, 862), (408, 907), (409, 910), (414, 931), (420, 946), (424, 967), (446, 1027), (454, 1042), (456, 1045), (458, 1048), (508, 1135), (546, 1180), (572, 1228), (614, 1288), (619, 1294), (648, 1327), (659, 1345), (666, 1357), (728, 1477), (734, 1486), (758, 1531), (775, 1552), (778, 1555), (781, 1558), (787, 1570), (796, 1585), (807, 1600), (809, 1603), (820, 1621), (823, 1627), (872, 1705), (874, 1708), (882, 1720), (950, 1807), (970, 1828), (973, 1834), (1005, 1876), (1008, 1882),

Gene: Stratus\_4 Start: 874, Stop: 2364, Start Num: 95

Candidate Starts for Stratus\_4:

(Start: 95 @874 has 42 MA's), (Start: 150 @919 has 1 MA's), (Start: 209 @1021 has 1 MA's), (Start: 221 @1039 has 3 MA's), (227, 1048), (263, 1099), (264, 1102), (267, 1111), (273, 1141), (282, 1168), (341, 1267), (399, 1366), (408, 1390), (409, 1393), (410, 1396), (423, 1441), (555, 1675), (578, 1723), (583, 1735), (610, 1774), (622, 1792), (635, 1804), (636, 1807), (649, 1828), (657, 1834), (670, 1846), (711, 1924), (755, 1978), (791, 2032), (800, 2044), (829, 2089), (852, 2137), (915, 2221), (958, 2278), (1004, 2347),

Gene: StressBall\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for StressBall\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (252, 718), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (630, 1465), (640, 1477), (670, 1522), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: Strobilo\_4 Start: 652, Stop: 2076, Start Num: 161

Candidate Starts for Strobilo\_4:

(75, 574), (85, 586), (91, 595), (Start: 161 @652 has 150 MA's), (194, 712), (Start: 205 @733 has 1 MA's), (216, 754), (257, 838), (265, 847), (277, 895), (293, 931), (313, 982), (348, 1024), (354, 1030), (376, 1057), (408, 1138), (420, 1177), (422, 1186), (423, 1189), (451, 1267), (456, 1276), (542, 1381), (566, 1429), (572, 1441), (585, 1471), (597, 1495), (608, 1510), (667, 1576), (672, 1588), (690, 1630), (717, 1660), (734, 1687), (770, 1729), (779, 1744), (808, 1795), (823, 1819), (856, 1867), (954, 1990), (1009, 2065),

Gene: Stromboli\_3 Start: 957, Stop: 2582, Start Num: 125

Candidate Starts for Stromboli\_3:

(Start: 125 @957 has 61 MA's), (228, 1113), (267, 1167), (281, 1221), (286, 1236), (319, 1305), (348, 1350), (392, 1404), (409, 1455), (410, 1458), (425, 1518), (430, 1536), (431, 1539), (439, 1566), (453, 1596), (527, 1758), (660, 1974), (699, 2049), (710, 2061), (941, 2415), (977, 2463),

Gene: Suerte\_2 Start: 318, Stop: 1877, Start Num: 89

Candidate Starts for Suerte\_2:

(48, 258), (Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (422, 921), (425, 936), (494, 1071), (548, 1137), (572, 1179), (607, 1248), (611, 1254), (641, 1293), (655, 1314), (672, 1344), (680, 1365), (708, 1410), (733, 1446), (734, 1449), (767, 1491), (787, 1527), (850, 1620), (888, 1671), (964, 1776), (983, 1800), (1034, 1860),

Gene: Sulley\_8 Start: 1575, Stop: 2996, Start Num: 161

Candidate Starts for Sulley\_8:

(85, 1503), (Start: 143 @1563 has 2 MA's), (Start: 161 @1575 has 150 MA's), (Start: 219 @1686 has 15 MA's), (222, 1692), (257, 1770), (265, 1779), (277, 1827), (284, 1845), (313, 1914), (348, 1956), (354, 1962), (420, 2109), (422, 2118), (462, 2217), (542, 2313), (566, 2361), (572, 2373), (585, 2403),

(597, 2427), (605, 2439), (617, 2454), (672, 2523), (771, 2667), (823, 2754), (960, 2931), (1009, 2985),

Gene: Sunflower1121\_6 Start: 1422, Stop: 2849, Start Num: 161

Candidate Starts for Sunflower1121\_6:

(75, 1338), (Start: 161 @1422 has 150 MA's), (Start: 205 @1512 has 1 MA's), (Start: 219 @1536 has 15 MA's), (257, 1620), (265, 1629), (277, 1677), (284, 1695), (313, 1764), (346, 1803), (376, 1839), (407, 1917), (420, 1959), (422, 1968), (451, 2049), (496, 2097), (542, 2163), (564, 2205), (566, 2211), (572, 2223), (575, 2229), (585, 2253), (597, 2277), (601, 2283), (617, 2304), (672, 2373), (690, 2415), (762, 2508), (770, 2514), (771, 2517), (789, 2550), (808, 2580), (823, 2604), (856, 2652), (960, 2781), (1009, 2838), (1014, 2844),

Gene: SunnyD\_2 Start: 648, Stop: 2282, Start Num: 125

Candidate Starts for SunnyD\_2:

(Start: 125 @648 has 61 MA's), (190, 738), (206, 765), (281, 912), (319, 996), (348, 1041), (384, 1086), (392, 1095), (409, 1146), (425, 1209), (439, 1257), (453, 1287), (464, 1302), (496, 1383), (658, 1671), (941, 2115), (977, 2163), (1050, 2271),

Gene: Supakev\_2 Start: 428, Stop: 1993, Start Num: 71

Candidate Starts for Supakev\_2:

(Start: 71 @428 has 81 MA's), (Start: 200 @599 has 2 MA's), (263, 692), (266, 701), (273, 734), (281, 758), (289, 782), (316, 836), (381, 947), (392, 965), (408, 1013), (410, 1019), (425, 1079), (443, 1139), (461, 1169), (520, 1268), (620, 1442), (627, 1451), (669, 1487), (672, 1493), (685, 1529), (710, 1565), (759, 1634), (762, 1637), (768, 1643), (886, 1784), (941, 1859), (1005, 1940), (1032, 1979),

Gene: Supernova\_2 Start: 373, Stop: 1884, Start Num: 144

Candidate Starts for Supernova\_2:

(Start: 144 @373 has 46 MA's), (174, 412), (182, 430), (195, 457), (204, 475), (220, 502), (Start: 221 @505 has 3 MA's), (243, 523), (260, 553), (265, 562), (273, 598), (276, 607), (278, 613), (294, 646), (300, 664), (310, 688), (313, 694), (332, 733), (338, 742), (341, 745), (359, 784), (361, 787), (395, 856), (408, 901), (409, 904), (414, 925), (420, 940), (422, 949), (424, 961), (437, 1000), (446, 1021), (454, 1036), (456, 1039), (458, 1042), (471, 1063), (508, 1129), (532, 1150), (550, 1186), (561, 1201), (572, 1222), (619, 1288), (648, 1321), (659, 1339), (683, 1393), (728, 1471), (734, 1480), (742, 1492), (744, 1498), (758, 1525), (775, 1546), (778, 1549), (781, 1552), (787, 1564), (807, 1594), (809, 1597), (820, 1615), (823, 1621), (836, 1642), (848, 1663), (872, 1699), (874, 1702), (882, 1714), (893, 1726), (942, 1792), (950, 1801), (952, 1807), (973, 1828), (1005, 1870), (1008, 1876),

Gene: Superphikiman\_10 Start: 3708, Stop: 5240, Start Num: 158

Candidate Starts for Superphikiman\_10:

(Start: 121 @3666 has 4 MA's), (128, 3675), (Start: 158 @3708 has 20 MA's), (218, 3822), (247, 3885), (266, 3918), (278, 3966), (308, 4041), (327, 4077), (388, 4152), (390, 4155), (401, 4191), (412, 4224), (540, 4473), (572, 4536), (584, 4563), (684, 4722), (708, 4758), (728, 4788), (734, 4797), (780, 4851), (792, 4875), (976, 5109), (988, 5121),

Gene: Suppi\_5 Start: 3104, Stop: 4672, Start Num: 71

Candidate Starts for Suppi\_5:

(Start: 71 @3104 has 81 MA's), (206, 3290), (Start: 223 @3320 has 13 MA's), (263, 3371), (267, 3383), (273, 3413), (278, 3428), (289, 3461), (346, 3563), (392, 3644), (408, 3692), (425, 3758), (439, 3806), (442, 3815), (444, 3821), (480, 3890), (503, 3917), (520, 3947), (544, 3986), (669, 4166), (704, 4238), (728, 4274), (793, 4370), (846, 4436), (889, 4466), (894, 4472), (941, 4538), (1032, 4658),

Gene: Sweets\_2 Start: 458, Stop: 1891, Start Num: 168

Candidate Starts for Sweets\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Swenson\_4 Start: 923, Stop: 2413, Start Num: 95

Candidate Starts for Swenson\_4:

(Start: 95 @923 has 42 MA's), (Start: 150 @968 has 1 MA's), (Start: 209 @1070 has 1 MA's), (227, 1097), (263, 1148), (267, 1160), (273, 1190), (277, 1202), (282, 1217), (313, 1283), (348, 1328), (399, 1415), (408, 1439), (409, 1442), (410, 1445), (423, 1490), (429, 1514), (431, 1523), (463, 1589), (516, 1652), (521, 1664), (546, 1706), (555, 1724), (583, 1784), (622, 1841), (635, 1853), (649, 1877), (670, 1895), (711, 1973), (755, 2027), (791, 2081), (800, 2093), (806, 2102), (848, 2177), (852, 2186), (868, 2213), (915, 2270), (955, 2324), (1004, 2396),

Gene: Swervy\_3 Start: 676, Stop: 2304, Start Num: 125

Candidate Starts for Swervy\_3:

(Start: 125 @676 has 61 MA's), (228, 832), (281, 940), (319, 1024), (331, 1048), (392, 1123), (409, 1174), (410, 1177), (425, 1237), (430, 1255), (439, 1285), (453, 1315), (699, 1771), (711, 1786), (941, 2137), (1050, 2293),

Gene: Syleon\_13 Start: 5040, Stop: 6515, Start Num: 144

Candidate Starts for Syleon\_13:

(Start: 144 @5040 has 46 MA's), (235, 5187), (262, 5226), (267, 5238), (310, 5361), (313, 5367), (364, 5448), (389, 5502), (391, 5505), (410, 5562), (422, 5604), (424, 5616), (434, 5640), (441, 5664), (467, 5706), (572, 5886), (600, 5928), (667, 6009), (685, 6054), (700, 6078), (728, 6123), (773, 6183), (814, 6246), (817, 6252), (871, 6324), (885, 6342), (902, 6360), (994, 6459), (1010, 6477), (1027, 6507),

Gene: Syra333\_7 Start: 1527, Stop: 2954, Start Num: 161

Candidate Starts for Syra333\_7:

(Start: 161 @1527 has 150 MA's), (Start: 205 @1617 has 1 MA's), (Start: 219 @1641 has 15 MA's), (222, 1647), (257, 1725), (265, 1734), (277, 1782), (284, 1800), (313, 1869), (346, 1908), (376, 1944), (378, 1947), (407, 2022), (420, 2064), (422, 2073), (451, 2154), (496, 2202), (542, 2268), (564, 2310), (566, 2316), (572, 2328), (575, 2334), (585, 2358), (601, 2388), (617, 2409), (672, 2478), (690, 2520), (762, 2613), (771, 2622), (789, 2655), (808, 2685), (823, 2709), (856, 2757), (960, 2886), (1009, 2943), (1014, 2949),

Gene: TBond007\_7 Start: 1226, Stop: 2662, Start Num: 143

Candidate Starts for TBond007\_7:

(Start: 143 @1226 has 2 MA's), (Start: 161 @1238 has 150 MA's), (Start: 205 @1325 has 1 MA's), (Start: 219 @1349 has 15 MA's), (257, 1433), (265, 1442), (284, 1508), (293, 1526), (313, 1577), (348, 1619), (354, 1625), (376, 1652), (420, 1772), (422, 1781), (451, 1862), (462, 1880), (542, 1976), (566, 2024), (572, 2036), (585, 2066), (597, 2090), (605, 2102), (672, 2186), (690, 2228), (694, 2240), (770, 2327), (771, 2330), (793, 2372), (803, 2387), (808, 2393), (821, 2414), (823, 2417), (960, 2594), (1014, 2657),

Gene: TClif\_7 Start: 1462, Stop: 2889, Start Num: 161

Candidate Starts for TClif\_7:

(75, 1378), (Start: 143 @1450 has 2 MA's), (Start: 161 @1462 has 150 MA's), (Start: 205 @1552 has 1 MA's), (Start: 219 @1576 has 15 MA's), (257, 1660), (265, 1669), (277, 1717), (284, 1735), (293, 1753), (313, 1804), (346, 1843), (354, 1852), (376, 1879), (407, 1957), (420, 1999), (422, 2008), (451, 2089), (496, 2137), (542, 2203), (564, 2245), (566, 2251), (585, 2293), (617, 2344), (672, 2413), (690, 2455), (717, 2485), (770, 2554), (771, 2557), (789, 2590), (793, 2599), (823, 2644), (856, 2692), (960,

2821), (1009, 2878), (1014, 2884),

Gene: TG1\_2 Start: 587, Stop: 2161, Start Num: 114

Candidate Starts for TG1\_2:

(Start: 114 @587 has 3 MA's), (Start: 209 @734 has 1 MA's), (265, 824), (277, 872), (281, 884), (313, 953), (326, 977), (346, 1007), (363, 1028), (394, 1061), (430, 1190), (432, 1196), (516, 1355), (569, 1466), (581, 1499), (616, 1553), (618, 1556), (671, 1625), (693, 1682), (802, 1835), (812, 1856), (845, 1919), (918, 2006), (924, 2012), (935, 2024), (943, 2036), (946, 2039), (996, 2111),

Gene: TM4\_4 Start: 664, Stop: 2088, Start Num: 161

Candidate Starts for TM4\_4:

(75, 586), (85, 598), (91, 607), (Start: 161 @664 has 150 MA's), (194, 727), (Start: 205 @748 has 1 MA's), (216, 769), (257, 853), (265, 862), (277, 910), (293, 946), (313, 997), (348, 1039), (354, 1045), (376, 1072), (420, 1192), (422, 1201), (423, 1204), (451, 1282), (456, 1291), (458, 1294), (542, 1396), (566, 1444), (572, 1456), (585, 1486), (597, 1510), (608, 1525), (672, 1603), (690, 1645), (717, 1675), (770, 1744), (779, 1759), (808, 1810), (823, 1834), (856, 1882), (954, 2005), (960, 2011), (1009, 2077), (1014, 2083),

Gene: TZGordon\_9 Start: 3612, Stop: 5219, Start Num: 105

Candidate Starts for TZGordon\_9:

(Start: 49 @3534 has 3 MA's), (Start: 105 @3612 has 6 MA's), (265, 3840), (275, 3882), (289, 3924), (300, 3945), (309, 3966), (392, 4104), (410, 4158), (432, 4242), (433, 4245), (434, 4248), (443, 4278), (574, 4485), (650, 4608), (689, 4695), (699, 4710), (711, 4725), (759, 4788), (793, 4848), (800, 4857), (825, 4899), (865, 4974), (868, 4977), (894, 5010), (941, 5076), (979, 5127), (1039, 5205), (1044, 5211),

Gene: Tachez\_8 Start: 1556, Stop: 2980, Start Num: 161

Candidate Starts for Tachez\_8:

(85, 1484), (Start: 143 @1544 has 2 MA's), (Start: 161 @1556 has 150 MA's), (Start: 219 @1667 has 15 MA's), (222, 1673), (257, 1751), (265, 1760), (277, 1808), (284, 1826), (313, 1895), (348, 1937), (354, 1943), (376, 1970), (378, 1973), (420, 2090), (422, 2099), (451, 2180), (542, 2294), (566, 2342), (572, 2354), (585, 2384), (597, 2408), (605, 2420), (670, 2498), (672, 2504), (771, 2651), (789, 2684), (823, 2738), (960, 2915), (1009, 2969),

Gene: Taheera\_2 Start: 459, Stop: 1895, Start Num: 162

Candidate Starts for Taheera\_2:

(31, 291), (Start: 72 @363 has 33 MA's), (Start: 162 @459 has 39 MA's), (Start: 168 @462 has 3 MA's), (Start: 186 @498 has 1 MA's), (Start: 205 @537 has 1 MA's), (277, 699), (313, 786), (317, 795), (326, 810), (346, 825), (420, 981), (424, 1002), (433, 1023), (451, 1071), (456, 1080), (566, 1233), (579, 1263), (595, 1293), (672, 1389), (768, 1533), (790, 1575), (810, 1608), (823, 1626), (836, 1647), (874, 1692), (888, 1710), (891, 1713), (960, 1806),

Gene: TaiwanKao\_8 Start: 1562, Stop: 2986, Start Num: 161

Candidate Starts for TaiwanKao\_8:

(85, 1490), (Start: 143 @1550 has 2 MA's), (Start: 161 @1562 has 150 MA's), (Start: 219 @1673 has 15 MA's), (222, 1679), (257, 1757), (265, 1766), (277, 1814), (284, 1832), (313, 1901), (348, 1943), (354, 1949), (376, 1976), (378, 1979), (420, 2096), (422, 2105), (451, 2186), (542, 2300), (566, 2348), (572, 2360), (585, 2390), (597, 2414), (605, 2426), (672, 2510), (771, 2657), (789, 2690), (823, 2744), (960, 2921), (1009, 2975),

Gene: Taj14\_4 Start: 778, Stop: 2268, Start Num: 95

Candidate Starts for Taj14\_4:



(Start: 95 @778 has 42 MA's), (Start: 150 @823 has 1 MA's), (Start: 209 @925 has 1 MA's), (227, 952), (263, 1003), (267, 1015), (273, 1045), (277, 1057), (282, 1072), (313, 1138), (348, 1183), (399, 1270), (408, 1294), (409, 1297), (410, 1300), (423, 1345), (429, 1369), (431, 1378), (516, 1507), (521, 1519), (555, 1579), (583, 1639), (622, 1696), (635, 1708), (670, 1750), (711, 1828), (755, 1882), (800, 1948), (806, 1957), (825, 1987), (848, 2032), (852, 2041), (868, 2068), (915, 2125), (955, 2179), (1004, 2251),

Gene: Tapioca\_2 Start: 504, Stop: 2036, Start Num: 156

Candidate Starts for Tapioca\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Taquito\_7 Start: 2076, Stop: 3521, Start Num: 161

Candidate Starts for Taquito\_7:

(Start: 161 @2076 has 150 MA's), (Start: 219 @2181 has 15 MA's), (257, 2265), (265, 2274), (273, 2310), (277, 2322), (283, 2337), (293, 2364), (313, 2415), (321, 2433), (354, 2463), (376, 2490), (407, 2568), (422, 2619), (423, 2622), (451, 2700), (456, 2709), (496, 2748), (542, 2814), (566, 2862), (585, 2904), (672, 3021), (688, 3063), (717, 3108), (770, 3177), (793, 3222), (808, 3243), (823, 3267), (960, 3444), (1009, 3510), (1014, 3516),

Gene: TaronosaurusRx\_2 Start: 522, Stop: 2171, Start Num: 80

Candidate Starts for TaronosaurusRx\_2:

(Start: 80 @522 has 9 MA's), (106, 552), (225, 723), (267, 807), (313, 933), (317, 942), (358, 1008), (382, 1056), (425, 1191), (548, 1392), (572, 1434), (584, 1467), (641, 1548), (651, 1566), (655, 1569), (734, 1713), (741, 1722), (761, 1755), (770, 1761), (800, 1815), (810, 1833), (821, 1851), (877, 1923), (904, 1959), (944, 2013), (964, 2040), (986, 2073), (1017, 2124),

Gene: Tarzan\_2 Start: 511, Stop: 2100, Start Num: 110

Candidate Starts for Tarzan\_2:

(Start: 110 @511 has 15 MA's), (206, 646), (208, 652), (265, 733), (273, 769), (289, 817), (319, 877), (346, 919), (348, 922), (365, 946), (367, 949), (392, 976), (411, 1039), (431, 1111), (440, 1141), (442, 1147), (443, 1150), (444, 1153), (574, 1417), (580, 1432), (581, 1435), (588, 1447), (630, 1507), (672, 1552), (678, 1570), (695, 1609), (771, 1702), (782, 1723), (787, 1732), (835, 1816), (858, 1852), (908, 1924), (977, 2017), (993, 2035), (1034, 2089),

Gene: TattModd\_5 Start: 3127, Stop: 4692, Start Num: 71

Candidate Starts for TattModd\_5:

(Start: 71 @3127 has 81 MA's), (Start: 221 @3337 has 3 MA's), (263, 3391), (278, 3448), (281, 3457), (402, 3697), (408, 3712), (410, 3718), (425, 3778), (443, 3838), (503, 3937), (520, 3967), (530, 3982), (574, 4063), (620, 4141), (627, 4150), (669, 4186), (684, 4225), (704, 4258), (711, 4267), (728, 4294), (771, 4348), (793, 4390), (835, 4435), (846, 4456), (868, 4480), (941, 4558), (1032, 4678),

Gene: TaylorSipt\_3 Start: 775, Stop: 2355, Start Num: 137

Candidate Starts for TaylorSipt\_3:

(Start: 79 @709 has 7 MA's), (Start: 137 @775 has 8 MA's), (167, 811), (Start: 201 @871 has 6 MA's), (206, 880), (Start: 223 @910 has 13 MA's), (264, 964), (276, 1012), (281, 1027), (289, 1051), (307, 1090), (392, 1210), (410, 1264), (411, 1273), (425, 1324), (429, 1336), (432, 1348), (443, 1384), (455, 1405), (481, 1465), (486, 1483), (493, 1495), (498, 1504), (527, 1567), (580, 1681), (581, 1684), (658, 1783), (669, 1795), (699, 1861), (711, 1876), (731, 1906), (765, 1945), (770, 1954), (918, 2194), (974,

2263), (977, 2269), (1006, 2305), (1034, 2344),

Gene: Techage\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Techage\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (275, 797), (278, 806), (281, 815), (283, 821), (284, 824), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (548, 1337), (630, 1478), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: TeddyBoy\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for TeddyBoy\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: TelAviv\_28 Start: 13071, Stop: 14585, Start Num: 72

Candidate Starts for TelAviv\_28:

(Start: 72 @13071 has 33 MA's), (Start: 74 @13074 has 14 MA's), (Start: 205 @13254 has 1 MA's), (249, 13347), (276, 13422), (287, 13455), (300, 13482), (313, 13512), (407, 13665), (409, 13671), (420, 13707), (422, 13716), (451, 13797), (456, 13806), (458, 13809), (498, 13848), (538, 13905), (553, 13941), (554, 13944), (668, 14100), (672, 14109), (711, 14178), (717, 14187), (722, 14193), (742, 14226), (771, 14262), (823, 14349), (836, 14370), (891, 14433), (893, 14436), (896, 14439), (907, 14457), (920, 14478), (960, 14520), (988, 14556), (1005, 14568),

Gene: Temper16\_2 Start: 428, Stop: 1993, Start Num: 71

Candidate Starts for Temper16\_2:

(Start: 71 @428 has 81 MA's), (Start: 200 @599 has 2 MA's), (263, 692), (266, 701), (273, 734), (278, 749), (281, 758), (289, 782), (316, 836), (381, 947), (408, 1013), (410, 1019), (425, 1079), (443, 1139), (461, 1169), (520, 1268), (620, 1442), (627, 1451), (669, 1487), (672, 1493), (685, 1529), (710, 1565), (731, 1598), (762, 1637), (768, 1643), (886, 1784), (941, 1859), (1005, 1940), (1032, 1979),

Gene: Terror\_2 Start: 459, Stop: 1895, Start Num: 162

Candidate Starts for Terror\_2:

(31, 291), (Start: 72 @363 has 33 MA's), (Start: 162 @459 has 39 MA's), (Start: 168 @462 has 3 MA's), (Start: 186 @498 has 1 MA's), (Start: 205 @537 has 1 MA's), (277, 699), (313, 786), (317, 795), (326, 810), (346, 825), (420, 981), (424, 1002), (433, 1023), (451, 1071), (456, 1080), (566, 1233), (579, 1263), (595, 1293), (672, 1389), (768, 1533), (790, 1575), (810, 1608), (823, 1626), (836, 1647), (874, 1692), (888, 1710), (891, 1713), (960, 1806),

Gene: Thespis\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for Thespis\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (252, 718), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (630, 1465), (640, 1477), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: Thimann\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for Thimann\_3:

(48, 760), (Start: 89 @820 has 52 MA's), (183, 928), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (319, 1228), (389, 1318), (391, 1321), (401, 1357), (420, 1414), (425, 1438), (466, 1522), (494, 1573), (548, 1639), (572, 1681), (607, 1750), (611, 1756), (641, 1795), (655, 1816), (672, 1846), (680, 1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (850, 2122), (888,

2173), (983, 2302), (1034, 2362),

Gene: ThulaThula\_2 Start: 401, Stop: 2080, Start Num: 42

Candidate Starts for ThulaThula\_2:

(8, 191), (11, 239), (Start: 42 @401 has 46 MA's), (165, 563), (189, 608), (194, 617), (215, 656), (248, 713), (252, 719), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (315, 881), (317, 887), (322, 899), (382, 989), (447, 1178), (541, 1304), (630, 1466), (640, 1478), (670, 1523), (682, 1553), (734, 1634), (771, 1685), (810, 1754), (821, 1772), (885, 1856), (888, 1859), (899, 1871), (1038, 2063),

Gene: Thyatira\_6 Start: 1325, Stop: 2752, Start Num: 166

Candidate Starts for Thyatira\_6:

(Start: 166 @1325 has 22 MA's), (194, 1382), (Start: 205 @1403 has 1 MA's), (Start: 219 @1427 has 15 MA's), (257, 1511), (265, 1520), (267, 1526), (277, 1568), (284, 1586), (293, 1604), (313, 1655), (320, 1670), (376, 1730), (407, 1808), (420, 1850), (422, 1859), (423, 1862), (451, 1940), (542, 2054), (566, 2102), (585, 2144), (597, 2168), (605, 2180), (626, 2207), (667, 2252), (672, 2264), (762, 2411), (787, 2450), (823, 2507), (838, 2531), (856, 2555), (878, 2579), (954, 2678), (960, 2684), (1009, 2741),

Gene: Tierra\_7 Start: 1517, Stop: 2944, Start Num: 161

Candidate Starts for Tierra\_7:

(Start: 161 @1517 has 150 MA's), (Start: 205 @1607 has 1 MA's), (Start: 219 @1631 has 15 MA's), (222, 1637), (257, 1715), (265, 1724), (277, 1772), (284, 1790), (313, 1859), (354, 1907), (376, 1934), (407, 2012), (420, 2054), (422, 2063), (451, 2144), (496, 2192), (542, 2258), (564, 2300), (566, 2306), (572, 2318), (575, 2324), (585, 2348), (601, 2378), (617, 2399), (672, 2468), (690, 2510), (762, 2603), (770, 2609), (771, 2612), (789, 2645), (808, 2675), (823, 2699), (856, 2747), (960, 2876), (1009, 2933), (1014, 2939),

Gene: TimoTea\_3 Start: 1062, Stop: 2522, Start Num: 117

Candidate Starts for TimoTea\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (546, 1857), (551, 1872), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (774, 2211), (810, 2274), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: TinaLin\_10 Start: 4153, Stop: 5841, Start Num: 49

Candidate Starts for TinaLin\_10:

(Start: 49 @4153 has 3 MA's), (102, 4231), (230, 4423), (275, 4504), (294, 4549), (300, 4567), (309, 4588), (325, 4618), (351, 4657), (392, 4726), (410, 4780), (432, 4864), (433, 4867), (434, 4870), (442, 4897), (443, 4900), (527, 5005), (580, 5122), (587, 5137), (650, 5230), (653, 5236), (667, 5260), (683, 5302), (689, 5317), (711, 5347), (721, 5359), (759, 5410), (768, 5422), (793, 5470), (800, 5479), (840, 5545), (868, 5599), (894, 5632), (979, 5749), (1000, 5767), (1006, 5779), (1039, 5827), (1044, 5833),

Gene: TiniBug\_8 Start: 1566, Stop: 2987, Start Num: 161

Candidate Starts for TiniBug\_8:

(85, 1494), (Start: 127 @1533 has 3 MA's), (Start: 143 @1554 has 2 MA's), (Start: 161 @1566 has 150 MA's), (Start: 219 @1677 has 15 MA's), (222, 1683), (257, 1761), (265, 1770), (277, 1818), (284, 1836), (313, 1905), (348, 1947), (354, 1953), (376, 1980), (378, 1983), (391, 2007), (420, 2100), (422, 2109), (451, 2190), (462, 2208), (542, 2304), (566, 2352), (572, 2364), (585, 2394), (597, 2418), (605, 2430), (670, 2508), (672, 2514), (771, 2658), (789, 2691), (823, 2745), (960, 2922), (1009, 2976),

Gene: TinoCrisci\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for TinoCrisci\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: TinyTruffula\_3 Start: 1179, Stop: 2639, Start Num: 117

Candidate Starts for TinyTruffula\_3:

(Start: 117 @1179 has 111 MA's), (122, 1185), (Start: 223 @1347 has 13 MA's), (228, 1356), (264, 1416), (283, 1485), (294, 1506), (317, 1557), (424, 1761), (504, 1896), (546, 1974), (551, 1989), (564, 2007), (572, 2025), (589, 2067), (610, 2100), (622, 2118), (706, 2238), (708, 2241), (715, 2253), (724, 2265), (731, 2277), (774, 2328), (808, 2385), (810, 2391), (817, 2400), (821, 2409), (823, 2412), (958, 2574), (965, 2583), (970, 2592), (995, 2631),

Gene: Tiri\_8 Start: 1604, Stop: 3025, Start Num: 161

Candidate Starts for Tiri\_8:

(85, 1532), (Start: 143 @1592 has 2 MA's), (Start: 161 @1604 has 150 MA's), (Start: 219 @1715 has 15 MA's), (222, 1721), (257, 1799), (265, 1808), (277, 1856), (284, 1874), (313, 1943), (348, 1985), (354, 1991), (376, 2018), (378, 2021), (420, 2138), (422, 2147), (451, 2228), (542, 2342), (566, 2390), (572, 2402), (585, 2432), (597, 2456), (605, 2468), (670, 2546), (672, 2552), (771, 2696), (789, 2729), (823, 2783), (960, 2960), (1009, 3014),

Gene: Toast\_2 Start: 378, Stop: 1928, Start Num: 129

Candidate Starts for Toast\_2:

(101, 348), (107, 354), (Start: 113 @360 has 34 MA's), (116, 363), (Start: 129 @378 has 6 MA's), (180, 441), (198, 477), (206, 492), (212, 504), (225, 519), (241, 552), (252, 573), (264, 594), (273, 633), (281, 657), (294, 693), (313, 741), (338, 783), (346, 795), (408, 900), (449, 1020), (457, 1035), (524, 1113), (542, 1146), (548, 1164), (641, 1320), (667, 1359), (703, 1431), (736, 1479), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (821, 1614), (885, 1701), (914, 1743), (952, 1794), (1038, 1911), (1042, 1917),

Gene: TomBrady\_2 Start: 459, Stop: 1892, Start Num: 168

Candidate Starts for TomBrady\_2:

(Start: 72 @360 has 33 MA's), (Start: 162 @456 has 39 MA's), (Start: 168 @459 has 3 MA's), (Start: 186 @495 has 1 MA's), (Start: 205 @534 has 1 MA's), (277, 696), (313, 783), (317, 792), (327, 810), (346, 822), (409, 942), (420, 978), (424, 999), (433, 1020), (451, 1068), (456, 1077), (566, 1230), (595, 1290), (608, 1308), (656, 1359), (672, 1386), (678, 1401), (679, 1404), (736, 1485), (768, 1530), (810, 1605), (823, 1623), (836, 1644), (874, 1689), (888, 1707), (891, 1710), (960, 1803), (1012, 1884),

Gene: TomBrady12\_3 Start: 1113, Stop: 2573, Start Num: 117

Candidate Starts for TomBrady12\_3:

(Start: 117 @1113 has 111 MA's), (122, 1119), (Start: 223 @1281 has 13 MA's), (228, 1290), (264, 1350), (283, 1419), (294, 1440), (317, 1491), (424, 1695), (504, 1830), (546, 1908), (551, 1923), (564, 1941), (572, 1959), (589, 2001), (610, 2034), (622, 2052), (706, 2172), (708, 2175), (715, 2187), (724, 2199), (731, 2211), (774, 2262), (808, 2319), (810, 2325), (817, 2334), (821, 2343), (823, 2346), (958, 2508), (965, 2517), (970, 2526), (995, 2565),

Gene: TootsiePop\_3 Start: 674, Stop: 2161, Start Num: 139

Candidate Starts for TootsiePop\_3:

(Start: 132 @662 has 1 MA's), (Start: 139 @674 has 74 MA's), (Start: 219 @800 has 15 MA's), (222, 806), (242, 848), (244, 854), (259, 887), (263, 893), (265, 899), (274, 938), (283, 962), (292, 980), (293, 983), (308, 1025), (344, 1073), (349, 1082), (355, 1091), (366, 1094), (391, 1145), (414, 1223),

(422, 1247), (424, 1259), (433, 1280), (437, 1292), (449, 1325), (452, 1331), (498, 1400), (500, 1406), (516, 1439), (537, 1475), (567, 1535), (572, 1544), (583, 1571), (640, 1649), (694, 1745), (736, 1790), (787, 1862), (810, 1901), (834, 1937), (837, 1943), (856, 1967), (882, 1997), (891, 2003), (919, 2045), (922, 2048), (925, 2051), (960, 2093), (969, 2105), (975, 2117),

Gene: Tootsieroll\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Tootsieroll\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (391, 1142), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Topper\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Topper\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Tortellini\_2 Start: 401, Stop: 2080, Start Num: 42

Candidate Starts for Tortellini\_2:

(Start: 42 @401 has 46 MA's), (108, 494), (Start: 124 @512 has 3 MA's), (136, 527), (187, 602), (189, 608), (194, 617), (215, 656), (248, 713), (262, 737), (274, 782), (278, 794), (281, 803), (283, 809), (306, 866), (315, 881), (317, 887), (382, 989), (441, 1169), (447, 1178), (524, 1274), (541, 1304), (548, 1325), (630, 1466), (640, 1478), (670, 1523), (682, 1553), (711, 1601), (734, 1634), (749, 1658), (761, 1676), (771, 1685), (786, 1712), (810, 1754), (821, 1772), (899, 1871), (1038, 2063),

Gene: Totinger\_3 Start: 672, Stop: 2159, Start Num: 139

Candidate Starts for Totinger\_3:

(Start: 132 @660 has 1 MA's), (Start: 139 @672 has 74 MA's), (Start: 219 @798 has 15 MA's), (222, 804), (242, 846), (244, 852), (259, 885), (263, 891), (265, 897), (274, 936), (283, 960), (292, 978), (293, 981), (308, 1023), (319, 1044), (344, 1071), (349, 1080), (355, 1089), (366, 1092), (391, 1143), (414, 1221), (422, 1245), (424, 1257), (433, 1278), (437, 1290), (449, 1323), (452, 1329), (498, 1398), (500, 1404), (516, 1437), (537, 1473), (567, 1533), (572, 1542), (583, 1569), (640, 1647), (694, 1743), (736, 1788), (787, 1860), (810, 1899), (834, 1935), (837, 1941), (856, 1965), (882, 1995), (891, 2001), (919, 2043), (922, 2046), (925, 2049), (960, 2091), (969, 2103), (975, 2115),

Gene: Toulouse\_3 Start: 596, Stop: 2086, Start Num: 95

Candidate Starts for Toulouse\_3:

(Start: 95 @596 has 42 MA's), (Start: 150 @641 has 1 MA's), (Start: 209 @743 has 1 MA's), (Start: 221 @761 has 3 MA's), (227, 770), (263, 821), (264, 824), (267, 833), (273, 863), (282, 890), (341, 989), (399, 1088), (408, 1112), (409, 1115), (410, 1118), (423, 1163), (509, 1313), (555, 1397), (578, 1445), (583, 1457), (610, 1496), (622, 1514), (635, 1526), (636, 1529), (649, 1550), (657, 1556), (670, 1568), (711, 1646), (755, 1700), (791, 1754), (800, 1766), (852, 1859), (915, 1943), (958, 2000), (1004, 2069),

Gene: Tourach\_4 Start: 1085, Stop: 2653, Start Num: 68

Candidate Starts for Tourach\_4:

(Start: 68 @1085 has 59 MA's), (Start: 71 @1091 has 81 MA's), (Start: 77 @1100 has 1 MA's), (185, 1247), (249, 1349), (283, 1439), (305, 1490), (334, 1544), (407, 1682), (409, 1688), (414, 1709), (450, 1808), (525, 1934), (535, 1955), (547, 1979), (549, 1985), (568, 2015), (572, 2021), (591, 2057), (654, 2114), (670, 2141), (672, 2147), (715, 2225), (736, 2261), (773, 2306), (810, 2372), (865, 2447), (885, 2474), (1021, 2621), (1034, 2645), (1036, 2648),

Gene: Trax\_12 Start: 4818, Stop: 6263, Start Num: 144

Candidate Starts for Trax\_12:

(Start: 144 @4818 has 46 MA's), (262, 5004), (294, 5097), (333, 5178), (342, 5190), (364, 5223), (375, 5229), (389, 5247), (395, 5256), (420, 5340), (422, 5349), (441, 5409), (452, 5427), (525, 5547), (539, 5574), (579, 5643), (600, 5673), (658, 5739), (713, 5844), (728, 5871), (773, 5931), (789, 5955), (814, 5994), (856, 6057), (902, 6108), (958, 6165),

Gene: TreyKay\_8 Start: 1562, Stop: 2983, Start Num: 161

Candidate Starts for TreyKay\_8:

(85, 1490), (Start: 143 @1550 has 2 MA's), (Start: 161 @1562 has 150 MA's), (Start: 219 @1673 has 15 MA's), (222, 1679), (257, 1757), (265, 1766), (277, 1814), (284, 1832), (313, 1901), (348, 1943), (354, 1949), (376, 1976), (378, 1979), (420, 2096), (422, 2105), (451, 2186), (542, 2300), (566, 2348), (572, 2360), (585, 2390), (597, 2414), (605, 2426), (670, 2504), (672, 2510), (771, 2654), (789, 2687), (823, 2741), (960, 2918), (1009, 2972),

Gene: TribelTrouble\_6 Start: 1306, Stop: 2730, Start Num: 161

Candidate Starts for TribelTrouble\_6:

(112, 1267), (Start: 143 @1294 has 2 MA's), (Start: 161 @1306 has 150 MA's), (194, 1372), (196, 1375), (Start: 205 @1393 has 1 MA's), (Start: 219 @1417 has 15 MA's), (257, 1501), (265, 1510), (277, 1558), (284, 1576), (293, 1594), (313, 1645), (348, 1687), (354, 1693), (376, 1720), (420, 1840), (422, 1849), (451, 1930), (462, 1948), (542, 2044), (566, 2092), (572, 2104), (585, 2134), (597, 2158), (605, 2170), (672, 2254), (690, 2296), (770, 2395), (771, 2398), (793, 2440), (803, 2455), (821, 2482), (823, 2485), (960, 2662),

Gene: Trine\_2 Start: 545, Stop: 2110, Start Num: 111

Candidate Starts for Trine\_2:

(Start: 111 @545 has 7 MA's), (Start: 121 @557 has 4 MA's), (190, 650), (208, 686), (267, 773), (281, 827), (314, 905), (340, 947), (350, 962), (371, 992), (392, 1013), (408, 1061), (422, 1112), (442, 1184), (444, 1190), (541, 1316), (587, 1418), (592, 1427), (598, 1439), (604, 1448), (667, 1511), (670, 1517), (682, 1550), (688, 1568), (706, 1601), (710, 1607), (724, 1628), (728, 1637), (731, 1640), (820, 1808), (821, 1811), (851, 1865), (858, 1868), (870, 1895), (918, 1946), (1035, 2102),

Gene: Trireme\_3 Start: 1179, Stop: 2639, Start Num: 117

Candidate Starts for Trireme\_3:

(Start: 117 @1179 has 111 MA's), (122, 1185), (Start: 223 @1347 has 13 MA's), (228, 1356), (264, 1416), (283, 1485), (294, 1506), (317, 1557), (424, 1761), (504, 1896), (546, 1974), (551, 1989), (564, 2007), (572, 2025), (589, 2067), (610, 2100), (622, 2118), (706, 2238), (708, 2241), (715, 2253), (724, 2265), (731, 2277), (774, 2328), (808, 2385), (810, 2391), (817, 2400), (821, 2409), (823, 2412), (958, 2574), (965, 2583), (970, 2592), (995, 2631),

Gene: Troy\_2 Start: 374, Stop: 1957, Start Num: 121

Candidate Starts for Troy\_2:

(Start: 118 @371 has 4 MA's), (Start: 121 @374 has 4 MA's), (126, 380), (232, 551), (263, 629), (266, 638), (340, 812), (404, 914), (407, 920), (410, 929), (411, 938), (428, 998), (442, 1046), (443, 1049), (505, 1112), (551, 1205), (581, 1271), (686, 1427), (696, 1445), (732, 1490), (755, 1532), (778, 1568), (786, 1583), (801, 1610), (803, 1613), (811, 1628), (826, 1661), (835, 1676), (865, 1724), (898, 1754), (909, 1772), (965, 1847), (1016, 1922), (1032, 1946),

Gene: TruffulaTree\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for TruffulaTree\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: TuertoX\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for TuertoX\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: TukTuk\_3 Start: 676, Stop: 2304, Start Num: 125

Candidate Starts for TukTuk\_3:

(Start: 125 @676 has 61 MA's), (228, 832), (281, 940), (319, 1024), (331, 1048), (392, 1123), (409, 1174), (410, 1177), (425, 1237), (430, 1255), (439, 1285), (453, 1315), (699, 1771), (711, 1786), (941, 2137), (1050, 2293),

Gene: Twinkle\_2 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for Twinkle\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (273, 618), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (401, 855), (420, 912), (422, 921), (425, 936), (457, 1008), (466, 1020), (494, 1071), (548, 1137), (572, 1179), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (767, 1500), (787, 1536), (789, 1539), (810, 1575), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (964, 1785), (1002, 1827),

Gene: Twitch\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Twitch\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: TyDawg\_14 Start: 4719, Stop: 6263, Start Num: 93

Candidate Starts for TyDawg\_14:

(Start: 93 @4719 has 19 MA's), (133, 4767), (264, 4968), (313, 5106), (418, 5298), (525, 5508), (549, 5559), (591, 5631), (670, 5694), (679, 5718), (685, 5733), (724, 5793), (731, 5805), (770, 5865), (787, 5898), (808, 5931), (824, 5958), (857, 6006), (1008, 6192), (1021, 6213),

Gene: TymAbreu\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for TymAbreu\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (829, 2015), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Typha\_9 Start: 4674, Stop: 6299, Start Num: 70

Candidate Starts for Typha\_9:

(26, 4593), (30, 4611), (54, 4650), (60, 4662), (67, 4668), (Start: 70 @4674 has 4 MA's), (73, 4680), (Start: 197 @4848 has 2 MA's), (202, 4860), (208, 4872), (281, 5016), (309, 5112), (314, 5121), (365, 5199), (370, 5205), (402, 5262), (408, 5277), (432, 5367), (442, 5400), (443, 5403), (507, 5475), (541, 5532), (558, 5580), (568, 5601), (573, 5613), (576, 5625), (588, 5649), (601, 5673), (605, 5679), (660, 5736), (672, 5754), (728, 5856), (763, 5898), (797, 5961), (803, 5970), (808, 5976), (895, 6090), (903, 6102), (914, 6120), (946, 6162), (977, 6204), (987, 6219),

Gene: Tyson\_4 Start: 1052, Stop: 2635, Start Num: 68

Candidate Starts for Tyson\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (407, 1646), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (856, 2402), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: UPIE\_4 Start: 1059, Stop: 2636, Start Num: 71

Candidate Starts for UPIE\_4:

(Start: 68 @1053 has 59 MA's), (Start: 71 @1059 has 81 MA's), (191, 1230), (249, 1317), (262, 1335), (265, 1341), (273, 1377), (336, 1515), (338, 1518), (389, 1593), (407, 1647), (408, 1650), (409, 1653), (478, 1821), (511, 1875), (515, 1884), (525, 1899), (535, 1920), (552, 1959), (568, 1980), (572, 1986), (586, 2013), (623, 2055), (654, 2079), (666, 2097), (670, 2106), (672, 2112), (685, 2145), (708, 2178), (731, 2217), (734, 2223), (736, 2226), (773, 2271), (810, 2337), (842, 2388), (856, 2403), (865, 2412), (877, 2427), (878, 2430), (976, 2532), (1005, 2559), (1034, 2610), (1036, 2613),

Gene: Ubuntu\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Ubuntu\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: UmaThurman\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for UmaThurman\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (271, 627), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (405, 891), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (670, 1365), (683, 1398), (703, 1431), (711, 1443), (736, 1479), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (877, 1689), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: UncleRicky\_3 Start: 797, Stop: 2158, Start Num: 219

Candidate Starts for UncleRicky\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115),



(391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Unicorn\_7 Start: 1549, Stop: 2976, Start Num: 161

Candidate Starts for Unicorn\_7:

(Start: 161 @1549 has 150 MA's), (Start: 205 @1639 has 1 MA's), (Start: 219 @1663 has 15 MA's), (222, 1669), (257, 1747), (265, 1756), (277, 1804), (284, 1822), (313, 1891), (346, 1930), (354, 1939), (376, 1966), (407, 2044), (420, 2086), (422, 2095), (451, 2176), (496, 2224), (542, 2290), (564, 2332), (566, 2338), (572, 2350), (575, 2356), (585, 2380), (601, 2410), (617, 2431), (672, 2500), (690, 2542), (762, 2635), (789, 2677), (808, 2707), (823, 2731), (856, 2779), (960, 2908), (1009, 2965), (1014, 2971),

Gene: Upsilon\_3 Start: 1104, Stop: 2564, Start Num: 117

Candidate Starts for Upsilon\_3:

(Start: 117 @1104 has 111 MA's), (122, 1110), (Start: 223 @1272 has 13 MA's), (228, 1281), (264, 1341), (283, 1410), (294, 1431), (310, 1467), (317, 1482), (424, 1686), (504, 1821), (546, 1899), (551, 1914), (564, 1932), (572, 1950), (589, 1992), (610, 2025), (622, 2043), (706, 2163), (708, 2166), (715, 2178), (724, 2190), (774, 2253), (808, 2310), (810, 2316), (817, 2325), (821, 2334), (823, 2337), (958, 2499), (965, 2508), (970, 2517), (995, 2556),

Gene: Upyo\_2 Start: 552, Stop: 2117, Start Num: 111

Candidate Starts for Upyo\_2:

(Start: 111 @552 has 7 MA's), (Start: 124 @567 has 3 MA's), (Start: 156 @603 has 23 MA's), (267, 780), (281, 834), (288, 858), (340, 954), (350, 969), (392, 1020), (408, 1068), (422, 1119), (424, 1131), (442, 1191), (444, 1197), (448, 1203), (552, 1356), (604, 1455), (615, 1467), (667, 1518), (670, 1524), (684, 1563), (711, 1617), (724, 1635), (786, 1749), (821, 1821), (851, 1875), (918, 1956), (1035, 2109),

Gene: Urkel\_8 Start: 1566, Stop: 2987, Start Num: 161

Candidate Starts for Urkel\_8:

(85, 1494), (Start: 127 @1533 has 3 MA's), (Start: 143 @1554 has 2 MA's), (Start: 161 @1566 has 150 MA's), (Start: 219 @1677 has 15 MA's), (222, 1683), (257, 1761), (265, 1770), (277, 1818), (284, 1836), (313, 1905), (348, 1947), (354, 1953), (376, 1980), (378, 1983), (391, 2007), (420, 2100), (422, 2109), (451, 2190), (462, 2208), (542, 2304), (566, 2352), (572, 2364), (585, 2394), (597, 2418), (605, 2430), (670, 2508), (672, 2514), (771, 2658), (789, 2691), (823, 2745), (960, 2922), (1009, 2976),

Gene: Urla\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for Urla\_2:

(Start: 71 @426 has 81 MA's), (208, 615), (Start: 221 @636 has 3 MA's), (265, 696), (273, 732), (281, 756), (283, 762), (289, 780), (346, 882), (379, 942), (408, 1011), (410, 1017), (425, 1077), (443, 1137), (466, 1173), (503, 1236), (520, 1266), (574, 1362), (627, 1449), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (782, 1668), (793, 1689), (795, 1692), (846, 1755), (868, 1779), (941, 1857), (973, 1896), (1032, 1977),

Gene: Utz\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Utz\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (338, 783), (346, 795), (367, 816), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (877, 1689), (885, 1701),

(914, 1743), (924, 1758), (942, 1779), (952, 1794), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Validus\_8 Start: 1576, Stop: 3006, Start Num: 161

Candidate Starts for Validus\_8:

(75, 1492), (Start: 161 @1576 has 150 MA's), (Start: 205 @1666 has 1 MA's), (Start: 219 @1690 has 15 MA's), (222, 1696), (240, 1735), (257, 1774), (265, 1783), (267, 1789), (277, 1831), (284, 1849), (293, 1867), (313, 1918), (376, 1993), (420, 2113), (422, 2122), (451, 2203), (496, 2251), (542, 2317), (566, 2365), (572, 2377), (585, 2407), (597, 2431), (617, 2458), (672, 2527), (690, 2569), (717, 2599), (733, 2623), (771, 2671), (789, 2704), (808, 2734), (823, 2758), (893, 2848), (960, 2938), (1009, 2995), (1014, 3001),

Gene: Vallejo\_5 Start: 3064, Stop: 4629, Start Num: 71

Candidate Starts for Vallejo\_5:

(Start: 71 @3064 has 81 MA's), (Start: 221 @3274 has 3 MA's), (Start: 223 @3277 has 13 MA's), (263, 3328), (278, 3385), (281, 3394), (289, 3418), (402, 3634), (408, 3649), (410, 3655), (425, 3715), (443, 3775), (503, 3874), (520, 3904), (574, 4000), (620, 4078), (627, 4087), (669, 4123), (684, 4162), (704, 4195), (711, 4204), (728, 4231), (771, 4285), (793, 4327), (820, 4348), (835, 4372), (846, 4393), (868, 4417), (941, 4495), (1032, 4615),

Gene: Vanisius\_3 Start: 1086, Stop: 2546, Start Num: 117

Candidate Starts for Vanisius\_3:

(Start: 117 @1086 has 111 MA's), (122, 1092), (Start: 223 @1254 has 13 MA's), (228, 1263), (264, 1323), (283, 1392), (294, 1413), (317, 1464), (424, 1668), (546, 1881), (551, 1896), (572, 1932), (589, 1974), (610, 2007), (622, 2025), (706, 2145), (708, 2148), (715, 2160), (774, 2235), (810, 2298), (821, 2316), (823, 2319), (958, 2481), (965, 2490), (970, 2499), (995, 2538),

Gene: Vasanti\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Vasanti\_2:

(48, 258), (Start: 89 @318 has 52 MA's), (225, 504), (241, 537), (273, 618), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (767, 1500), (771, 1506), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (935, 1746), (1034, 1872),

Gene: Vash\_2 Start: 591, Stop: 2153, Start Num: 124

Candidate Starts for Vash\_2:

(Start: 124 @591 has 3 MA's), (175, 660), (265, 816), (277, 864), (313, 945), (315, 948), (326, 969), (327, 972), (341, 990), (346, 999), (363, 1020), (394, 1053), (400, 1083), (408, 1098), (433, 1191), (499, 1314), (516, 1347), (533, 1380), (576, 1479), (613, 1542), (618, 1548), (671, 1617), (673, 1623), (691, 1668), (693, 1674), (726, 1722), (802, 1827), (804, 1830), (812, 1848), (924, 2004), (943, 2028), (946, 2031), (996, 2103),

Gene: Veliki\_8 Start: 1637, Stop: 3058, Start Num: 161

Candidate Starts for Veliki\_8:

(85, 1565), (Start: 143 @1625 has 2 MA's), (Start: 161 @1637 has 150 MA's), (Start: 219 @1748 has 15 MA's), (222, 1754), (257, 1832), (265, 1841), (277, 1889), (284, 1907), (313, 1976), (348, 2018), (354, 2024), (376, 2051), (378, 2054), (420, 2171), (422, 2180), (451, 2261), (542, 2375), (566, 2423), (572, 2435), (585, 2465), (597, 2489), (605, 2501), (670, 2579), (672, 2585), (771, 2729), (789, 2762), (823, 2816), (960, 2993), (1009, 3047),

Gene: Velveteen\_3 Start: 671, Stop: 2158, Start Num: 139

Candidate Starts for Velveteen\_3:

(Start: 132 @659 has 1 MA's), (Start: 139 @671 has 74 MA's), (Start: 219 @797 has 15 MA's), (222, 803), (242, 845), (244, 851), (259, 884), (263, 890), (265, 896), (274, 935), (283, 959), (292, 977), (293, 980), (308, 1022), (319, 1043), (344, 1070), (349, 1079), (355, 1088), (366, 1091), (376, 1115), (391, 1142), (409, 1199), (414, 1220), (422, 1244), (424, 1256), (433, 1277), (437, 1289), (449, 1322), (452, 1328), (498, 1397), (500, 1403), (516, 1436), (537, 1472), (567, 1532), (572, 1541), (583, 1568), (640, 1646), (694, 1742), (736, 1787), (787, 1859), (810, 1898), (834, 1934), (837, 1940), (856, 1964), (882, 1994), (891, 2000), (919, 2042), (922, 2045), (925, 2048), (960, 2090), (969, 2102), (975, 2114),

Gene: Vendetta\_7 Start: 3467, Stop: 5074, Start Num: 105

Candidate Starts for Vendetta\_7:

(Start: 49 @3389 has 3 MA's), (Start: 105 @3467 has 6 MA's), (265, 3695), (289, 3779), (300, 3800), (309, 3821), (392, 3959), (410, 4013), (433, 4100), (434, 4103), (443, 4133), (527, 4238), (574, 4340), (650, 4463), (689, 4550), (699, 4565), (711, 4580), (759, 4643), (800, 4712), (825, 4754), (840, 4778), (865, 4829), (868, 4832), (894, 4865), (941, 4931), (979, 4982), (1039, 5060), (1044, 5066),

Gene: Venti\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Venti\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Vetric\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Vetric\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Vidya\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Vidya\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: Vitas\_2 Start: 593, Stop: 2155, Start Num: 125

Candidate Starts for Vitas\_2:

(Start: 125 @593 has 61 MA's), (Start: 200 @701 has 2 MA's), (228, 749), (281, 857), (283, 863), (286, 872), (288, 878), (289, 881), (343, 977), (392, 1040), (425, 1154), (443, 1214), (453, 1232), (564, 1460), (580, 1505), (678, 1643), (908, 1970), (1039, 2144), (1043, 2147),

Gene: VitulaEligans\_3 Start: 1155, Stop: 2615, Start Num: 117

Candidate Starts for VitulaEligans\_3:

(Start: 117 @1155 has 111 MA's), (122, 1161), (Start: 223 @1323 has 13 MA's), (228, 1332), (264, 1392), (283, 1461), (294, 1482), (317, 1533), (424, 1737), (504, 1872), (546, 1950), (551, 1965), (572, 2001), (589, 2043), (610, 2076), (622, 2094), (706, 2214), (708, 2217), (715, 2229), (774, 2304), (810, 2367), (821, 2385), (823, 2388), (958, 2550), (965, 2559), (970, 2568),

Gene: Volt\_36 Start: 10775, Stop: 12181, Start Num: 176

Candidate Starts for Volt\_36:

(133, 10718), (Start: 176 @10775 has 6 MA's), (247, 10901), (272, 10961), (275, 10970), (310, 11054), (339, 11108), (408, 11234), (410, 11240), (414, 11258), (434, 11324), (463, 11378), (488, 11411), (506, 11456), (572, 11549), (631, 11627), (664, 11672), (672, 11690), (710, 11753), (715, 11759), (793, 11885), (822, 11930), (833, 11948), (970, 12122),

Gene: Vorrps\_30 Start: 13119, Stop: 14630, Start Num: 74

Candidate Starts for Vorrps\_30:

(Start: 72 @13116 has 33 MA's), (Start: 74 @13119 has 14 MA's), (Start: 205 @13299 has 1 MA's), (249, 13392), (276, 13467), (287, 13500), (300, 13527), (313, 13557), (407, 13710), (409, 13716), (420, 13752), (422, 13761), (451, 13842), (456, 13851), (458, 13854), (498, 13893), (538, 13950), (553, 13986), (554, 13989), (668, 14145), (672, 14154), (711, 14223), (717, 14232), (722, 14238), (742, 14271), (771, 14307), (823, 14394), (836, 14415), (891, 14478), (893, 14481), (896, 14484), (907, 14502), (920, 14523), (960, 14565), (988, 14601), (1005, 14613),

Gene: Vulpecula\_3 Start: 1027, Stop: 2607, Start Num: 137

Candidate Starts for Vulpecula\_3:

(24, 850), (Start: 79 @961 has 7 MA's), (Start: 137 @1027 has 8 MA's), (Start: 201 @1123 has 6 MA's), (206, 1132), (276, 1264), (281, 1279), (289, 1303), (425, 1576), (429, 1588), (443, 1636), (455, 1657), (481, 1717), (493, 1747), (498, 1756), (527, 1819), (658, 2035), (669, 2047), (699, 2113), (711, 2128), (731, 2158), (765, 2197), (770, 2206), (774, 2215), (838, 2305), (974, 2515), (1034, 2596),

Gene: Vulture\_2 Start: 429, Stop: 1994, Start Num: 71

Candidate Starts for Vulture\_2:

(Start: 71 @429 has 81 MA's), (Start: 200 @600 has 2 MA's), (263, 693), (278, 750), (281, 759), (289, 783), (316, 837), (392, 966), (425, 1080), (443, 1140), (461, 1170), (520, 1269), (530, 1284), (627, 1452), (684, 1527), (685, 1530), (704, 1560), (768, 1644), (793, 1692), (821, 1716), (903, 1806), (941, 1860), (1005, 1941), (1032, 1980),

Gene: Walrus\_2 Start: 361, Stop: 1959, Start Num: 113

Candidate Starts for Walrus\_2:

(Start: 89 @334 has 52 MA's), (107, 355), (Start: 113 @361 has 34 MA's), (198, 475), (202, 484), (225, 517), (233, 535), (241, 550), (252, 571), (264, 592), (272, 628), (281, 655), (294, 691), (306, 727), (313, 739), (338, 781), (341, 784), (425, 961), (440, 1003), (449, 1018), (457, 1033), (459, 1036), (524, 1111), (548, 1162), (641, 1318), (657, 1339), (659, 1342), (703, 1429), (711, 1441), (734, 1474), (736, 1477), (761, 1516), (770, 1522), (771, 1525), (810, 1594), (814, 1597), (854, 1657), (856, 1660), (865, 1669), (914, 1738), (924, 1753), (1049, 1942),

Gene: Wamburgxpress\_4 Start: 1052, Stop: 2635, Start Num: 68

Candidate Starts for Wamburgxpress\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (407, 1646), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (856, 2402), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: Wanda\_10 Start: 3688, Stop: 5220, Start Num: 158

Candidate Starts for Wanda\_10:

(88, 3604), (Start: 121 @3646 has 4 MA's), (128, 3655), (Start: 158 @3688 has 20 MA's), (218, 3802), (247, 3865), (266, 3898), (267, 3901), (276, 3940), (278, 3946), (308, 4021), (313, 4030), (388, 4132), (401, 4171), (412, 4204), (540, 4453), (572, 4516), (584, 4543), (684, 4702), (708, 4738), (724, 4759), (728, 4768), (734, 4777), (780, 4831), (792, 4855), (855, 4936), (976, 5089), (988, 5101),

Gene: Waterfoul\_6 Start: 1347, Stop: 2774, Start Num: 166

Candidate Starts for Waterfoul\_6:

(75, 1254), (Start: 166 @1347 has 22 MA's), (194, 1404), (Start: 205 @1425 has 1 MA's), (Start: 219 @1449 has 15 MA's), (257, 1533), (265, 1542), (267, 1548), (277, 1590), (284, 1608), (293, 1626), (313, 1677), (320, 1692), (376, 1752), (407, 1830), (420, 1872), (422, 1881), (423, 1884), (451, 1962), (542, 2076), (566, 2124), (585, 2166), (597, 2190), (605, 2202), (626, 2229), (667, 2274), (672, 2286), (762, 2433), (787, 2472), (823, 2529), (838, 2553), (856, 2577), (878, 2601), (954, 2700), (960, 2706), (1009, 2763),

Gene: Wawa\_5 Start: 3103, Stop: 4668, Start Num: 71

Candidate Starts for Wawa\_5:

(Start: 71 @3103 has 81 MA's), (Start: 221 @3313 has 3 MA's), (Start: 223 @3316 has 13 MA's), (263, 3367), (281, 3433), (289, 3457), (402, 3673), (407, 3685), (408, 3688), (410, 3694), (425, 3754), (443, 3814), (450, 3826), (503, 3913), (520, 3943), (530, 3958), (574, 4039), (620, 4117), (627, 4126), (669, 4162), (684, 4201), (704, 4234), (711, 4243), (728, 4270), (771, 4324), (793, 4366), (835, 4411), (846, 4432), (868, 4456), (941, 4534), (1032, 4654),

Gene: Wayne\_5 Start: 3150, Stop: 4718, Start Num: 71

Candidate Starts for Wayne\_5:

(Start: 71 @3150 has 81 MA's), (206, 3336), (Start: 223 @3366 has 13 MA's), (263, 3417), (267, 3429), (273, 3459), (278, 3474), (289, 3507), (346, 3609), (392, 3690), (408, 3738), (425, 3804), (439, 3852), (442, 3861), (444, 3867), (480, 3936), (503, 3963), (520, 3993), (544, 4032), (669, 4212), (704, 4284), (728, 4320), (793, 4416), (846, 4482), (889, 4512), (894, 4518), (941, 4584), (1032, 4704),

Gene: Webster2\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Webster2\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Weirdo19\_2 Start: 543, Stop: 2216, Start Num: 36

Candidate Starts for Weirdo19\_2:

(20, 483), (29, 522), (Start: 36 @543 has 19 MA's), (212, 729), (225, 747), (235, 768), (241, 780), (244, 783), (273, 861), (274, 864), (306, 945), (373, 1044), (389, 1074), (408, 1131), (420, 1170), (472, 1293), (572, 1482), (619, 1572), (633, 1590), (636, 1596), (655, 1620), (666, 1638), (703, 1713), (708, 1719), (724, 1743), (749, 1782), (770, 1806), (773, 1812), (789, 1842), (792, 1848), (793, 1851), (810, 1878), (856, 1944), (899, 1995), (904, 2004), (914, 2022), (951, 2067), (957, 2076), (964, 2085), (992, 2121), (1003, 2127), (1052, 2205),

Gene: Whack\_2 Start: 366, Stop: 1988, Start Num: 80

Candidate Starts for Whack\_2:

(Start: 66 @345 has 1 MA's), (69, 351), (Start: 80 @366 has 9 MA's), (191, 504), (225, 564), (241, 597), (277, 690), (306, 762), (327, 804), (403, 921), (420, 972), (425, 996), (479, 1113), (494, 1131), (625, 1332), (667, 1398), (674, 1416), (679, 1428), (736, 1518), (747, 1536), (786, 1593), (814, 1638), (821, 1653), (854, 1698),

Gene: WheatThin\_6 Start: 1978, Stop: 3408, Start Num: 223

Candidate Starts for WheatThin\_6:

(Start: 119 @1810 has 2 MA's), (122, 1813), (Start: 129 @1822 has 6 MA's), (Start: 223 @1978 has 13 MA's), (231, 1996), (281, 2119), (289, 2137), (304, 2176), (308, 2185), (367, 2269), (409, 2353), (413, 2368), (423, 2401), (447, 2467), (517, 2599), (621, 2788), (634, 2800), (666, 2848), (683, 2890), (715, 2941), (770, 3016), (771, 3019), (786, 3046), (821, 3106), (842, 3139), (856, 3154), (885, 3190), (914, 3232), (935, 3259), (964, 3295), (969, 3301), (1003, 3340),

Gene: Whirlwind\_6 Start: 1185, Stop: 2750, Start Num: 68

Candidate Starts for Whirlwind\_6:

(Start: 68 @1185 has 59 MA's), (Start: 71 @1191 has 81 MA's), (191, 1362), (262, 1467), (267, 1479), (327, 1635), (334, 1644), (336, 1647), (338, 1650), (389, 1725), (407, 1779), (408, 1782), (409, 1785), (515, 2016), (552, 2091), (568, 2112), (572, 2118), (623, 2187), (654, 2211), (666, 2229), (672, 2244), (685, 2277), (736, 2358), (770, 2397), (773, 2403), (810, 2469), (850, 2523), (877, 2559), (885, 2571), (933, 2610), (1008, 2697), (1034, 2742), (1036, 2745),

Gene: Whiteclaw\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Whiteclaw\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Whitney\_3 Start: 673, Stop: 2190, Start Num: 139

Candidate Starts for Whitney\_3:

(Start: 134 @664 has 3 MA's), (Start: 139 @673 has 74 MA's), (211, 790), (Start: 219 @799 has 15 MA's), (244, 853), (259, 886), (274, 937), (277, 946), (293, 982), (308, 1024), (319, 1045), (326, 1057), (344, 1072), (355, 1090), (366, 1093), (368, 1096), (376, 1117), (391, 1144), (409, 1201), (422, 1246), (423, 1249), (424, 1258), (433, 1279), (437, 1291), (445, 1318), (452, 1330), (498, 1399), (503, 1411), (542, 1483), (550, 1507), (572, 1543), (583, 1570), (626, 1636), (652, 1657), (721, 1759), (736, 1786), (841, 1945), (856, 1963), (919, 2041), (922, 2044), (925, 2047), (960, 2089), (969, 2101), (975, 2113),

Gene: Whytu\_1 Start: 77, Stop: 1762, Start Num: 89

Candidate Starts for Whytu\_1:

(57, 32), (Start: 89 @77 has 52 MA's), (169, 176), (Start: 201 @230 has 6 MA's), (208, 245), (227, 275), (228, 278), (239, 305), (276, 392), (313, 476), (316, 482), (323, 491), (364, 536), (428, 713), (449, 776), (550, 929), (560, 947), (710, 1184), (711, 1187), (794, 1301), (798, 1307), (829, 1355), (845, 1385), (891, 1457), (931, 1511), (965, 1553), (1048, 1703), (1053, 1739), (1054, 1757),

Gene: Widow\_2 Start: 482, Stop: 2065, Start Num: 111

Candidate Starts for Widow\_2:

(2, 53), (3, 59), (6, 158), (Start: 111 @482 has 7 MA's), (228, 656), (263, 698), (273, 740), (304, 824), (340, 884), (390, 947), (394, 953), (408, 998), (430, 1082), (442, 1121), (505, 1190), (541, 1253), (567, 1307), (587, 1355), (622, 1406), (658, 1442), (679, 1487), (684, 1499), (704, 1535), (711, 1544), (724, 1562), (786, 1673), (821, 1745), (823, 1748), (835, 1766), (858, 1802), (918, 1901), (1035, 2057),

Gene: Wigglewiggles\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Wigglewiggles\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Wildcat\_26 Start: 8104, Stop: 9717, Start Num: 80

Candidate Starts for Wildcat\_26:

(Start: 80 @8104 has 9 MA's), (191, 8254), (Start: 201 @8272 has 6 MA's), (220, 8305), (233, 8317), (266, 8368), (267, 8371), (279, 8419), (281, 8425), (297, 8464), (299, 8467), (313, 8500), (353, 8569), (395, 8635), (398, 8653), (407, 8677), (409, 8683), (441, 8788), (467, 8830), (476, 8848), (490, 8857), (602, 9061), (606, 9067), (635, 9100), (731, 9265), (736, 9274), (741, 9280), (742, 9283), (787, 9358), (808, 9391), (817, 9406), (877, 9487), (1005, 9640), (1018, 9661), (1019, 9664),

Gene: Wilder\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Wilder\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Wildflower\_31 Start: 13111, Stop: 14625, Start Num: 72

Candidate Starts for Wildflower\_31:

(Start: 72 @13111 has 33 MA's), (Start: 74 @13114 has 14 MA's), (Start: 205 @13294 has 1 MA's), (249, 13387), (276, 13462), (287, 13495), (300, 13522), (313, 13552), (407, 13705), (409, 13711), (420, 13747), (422, 13756), (451, 13837), (456, 13846), (458, 13849), (498, 13888), (538, 13945), (553, 13981), (554, 13984), (668, 14140), (672, 14149), (711, 14218), (717, 14227), (722, 14233), (742, 14266), (771, 14302), (823, 14389), (836, 14410), (891, 14473), (893, 14476), (896, 14479), (907, 14497), (920, 14518), (960, 14560), (985, 14593), (988, 14596), (1005, 14608),

Gene: William\_2 Start: 378, Stop: 1928, Start Num: 129

Candidate Starts for William\_2:

(Start: 89 @333 has 52 MA's), (101, 348), (107, 354), (116, 363), (Start: 129 @378 has 6 MA's), (180, 441), (198, 477), (212, 504), (225, 519), (241, 552), (252, 573), (264, 594), (273, 633), (281, 657), (283, 663), (294, 693), (313, 741), (338, 783), (346, 795), (408, 900), (449, 1020), (524, 1113), (542, 1146), (548, 1164), (641, 1320), (657, 1341), (667, 1359), (703, 1431), (736, 1479), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (821, 1614), (885, 1701), (914, 1743), (952, 1794), (1038, 1911), (1042, 1917),

Gene: Willsammy\_2 Start: 400, Stop: 2076, Start Num: 42

Candidate Starts for Willsammy\_2:

(Start: 42 @400 has 46 MA's), (194, 616), (215, 655), (248, 712), (262, 736), (274, 781), (278, 793), (281, 802), (283, 808), (306, 865), (317, 886), (322, 898), (382, 988), (447, 1177), (524, 1273), (541, 1303), (548, 1324), (630, 1465), (640, 1477), (670, 1522), (720, 1609), (761, 1675), (771, 1684), (786, 1711), (810, 1753), (821, 1771), (885, 1855), (899, 1870), (1038, 2059),

Gene: Winget\_31 Start: 13343, Stop: 14857, Start Num: 72

Candidate Starts for Winget\_31:

(Start: 72 @13343 has 33 MA's), (Start: 74 @13346 has 14 MA's), (Start: 205 @13526 has 1 MA's), (249, 13619), (276, 13694), (287, 13727), (300, 13754), (313, 13784), (407, 13937), (409, 13943), (420, 13979), (422, 13988), (451, 14069), (456, 14078), (458, 14081), (498, 14120), (538, 14177), (553, 14213), (554, 14216), (668, 14372), (672, 14381), (711, 14450), (717, 14459), (722, 14465), (742, 14498), (771, 14534), (823, 14621), (836, 14642), (891, 14705), (893, 14708), (896, 14711), (907, 14729), (920, 14750), (960, 14792), (988, 14828), (1005, 14840),

Gene: WinkNick\_3 Start: 820, Stop: 2379, Start Num: 89

Candidate Starts for WinkNick\_3:

(48, 760), (Start: 89 @820 has 52 MA's), (183, 928), (225, 1006), (241, 1039), (273, 1120), (274, 1123), (277, 1132), (294, 1168), (319, 1228), (389, 1318), (391, 1321), (420, 1414), (425, 1438), (457, 1510), (494, 1573), (548, 1639), (572, 1681), (607, 1750), (611, 1756), (641, 1795), (655, 1816), (670, 1840), (672, 1846), (680, 1867), (708, 1912), (733, 1948), (734, 1951), (767, 1993), (850, 2122), (888, 2173), (983, 2302), (1034, 2362),

Gene: Winky\_4 Start: 1069, Stop: 2637, Start Num: 68

Candidate Starts for Winky\_4:

(Start: 68 @1069 has 59 MA's), (Start: 71 @1075 has 81 MA's), (185, 1231), (334, 1528), (338, 1534), (377, 1594), (407, 1666), (409, 1672), (414, 1693), (450, 1792), (478, 1840), (511, 1894), (525, 1918), (547, 1963), (549, 1969), (568, 1999), (572, 2005), (586, 2032), (591, 2041), (654, 2098), (658, 2104), (670, 2125), (672, 2131), (713, 2206), (715, 2209), (736, 2245), (773, 2290), (810, 2356), (865, 2431), (878, 2449), (885, 2458), (1021, 2605), (1034, 2629), (1036, 2632),

Gene: Wintermute\_9 Start: 2464, Stop: 3909, Start Num: 161

Candidate Starts for Wintermute\_9:

(Start: 161 @2464 has 150 MA's), (Start: 219 @2569 has 15 MA's), (257, 2653), (265, 2662), (277, 2710), (283, 2725), (293, 2752), (313, 2803), (321, 2821), (354, 2851), (376, 2878), (407, 2956), (420, 2998), (422, 3007), (423, 3010), (451, 3088), (456, 3097), (496, 3136), (542, 3202), (566, 3250), (585, 3292), (672, 3409), (688, 3451), (717, 3496), (770, 3565), (793, 3610), (808, 3631), (823, 3655), (960, 3832), (1009, 3898), (1014, 3904),

Gene: Wishmaker\_5 Start: 1855, Stop: 3489, Start Num: 36

Candidate Starts for Wishmaker\_5:

(Start: 36 @1855 has 19 MA's), (Start: 74 @1894 has 14 MA's), (135, 1942), (241, 2113), (262, 2152), (336, 2332), (343, 2341), (348, 2350), (389, 2413), (393, 2419), (417, 2503), (418, 2506), (420, 2509), (457, 2605), (459, 2608), (466, 2617), (524, 2683), (541, 2713), (550, 2740), (570, 2773), (576, 2794), (577, 2797), (641, 2893), (657, 2914), (703, 3004), (733, 3046), (743, 3064), (747, 3070), (789, 3133), (792, 3139), (793, 3142), (821, 3187), (826, 3193), (842, 3220), (856, 3235), (899, 3286), (904, 3295), (912, 3310), (914, 3313), (942, 3352), (952, 3367), (964, 3382), (967, 3385), (1030, 3463), (1035, 3469),

Gene: Wisp\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Wisp\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (771, 1527), (773, 1530), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Witch\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Witch\_3:

(Start: 117 @1074 has 111 MA's), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Wizzo\_2 Start: 378, Stop: 1889, Start Num: 144

Candidate Starts for Wizzo\_2:

(Start: 144 @378 has 46 MA's), (174, 417), (182, 435), (195, 462), (204, 480), (220, 507), (Start: 221 @510 has 3 MA's), (260, 558), (265, 567), (267, 573), (276, 612), (278, 618), (294, 651), (300, 669), (310, 693), (313, 699), (332, 738), (338, 747), (341, 750), (359, 789), (361, 792), (395, 861), (408,



906), (409, 909), (414, 930), (420, 945), (422, 954), (446, 1026), (456, 1044), (458, 1047), (465, 1053), (508, 1134), (532, 1155), (550, 1191), (572, 1227), (619, 1293), (648, 1326), (653, 1335), (666, 1356), (683, 1398), (728, 1476), (734, 1485), (742, 1497), (758, 1530), (775, 1551), (778, 1554), (781, 1557), (787, 1569), (807, 1599), (809, 1602), (820, 1620), (823, 1626), (836, 1647), (872, 1704), (874, 1707), (882, 1719), (893, 1731), (950, 1806), (978, 1842), (1005, 1875), (1008, 1881),

Gene: Wocket\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Wocket\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (459, 1038), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911),

Gene: Wolfpack\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Wolfpack\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (431, 1677), (504, 1788), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (995, 2523),

Gene: WonderBoy\_2 Start: 426, Stop: 1991, Start Num: 71

Candidate Starts for WonderBoy\_2:

(Start: 71 @426 has 81 MA's), (172, 549), (Start: 221 @636 has 3 MA's), (Start: 223 @639 has 13 MA's), (263, 690), (273, 732), (278, 747), (281, 756), (289, 780), (379, 942), (425, 1077), (431, 1098), (443, 1137), (503, 1236), (520, 1266), (530, 1281), (551, 1314), (574, 1362), (577, 1371), (627, 1449), (669, 1485), (684, 1524), (704, 1557), (711, 1566), (728, 1593), (771, 1647), (793, 1689), (835, 1734), (846, 1755), (868, 1779), (941, 1857),

Gene: Wyatt2\_4 Start: 1052, Stop: 2635, Start Num: 68

Candidate Starts for Wyatt2\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (407, 1646), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (856, 2402), (865, 2411), (877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: Xavia\_2 Start: 404, Stop: 2080, Start Num: 42

Candidate Starts for Xavia\_2:

(10, 233), (16, 287), (18, 317), (Start: 42 @404 has 46 MA's), (Start: 124 @515 has 3 MA's), (194, 620), (215, 659), (248, 716), (252, 722), (262, 740), (271, 776), (274, 785), (278, 797), (281, 806), (283, 812), (306, 869), (317, 890), (322, 902), (382, 992), (447, 1181), (524, 1277), (548, 1328), (630, 1469), (640, 1481), (711, 1604), (761, 1679), (771, 1688), (786, 1715), (810, 1757), (821, 1775), (885, 1859), (899, 1874), (1038, 2063),

Gene: Xeno\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Xeno\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572,

1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Xerxes\_2 Start: 501, Stop: 2036, Start Num: 152

Candidate Starts for Xerxes\_2:

(Start: 152 @501 has 22 MA's), (Start: 156 @504 has 23 MA's), (Start: 164 @516 has 1 MA's), (Start: 166 @519 has 22 MA's), (190, 576), (Start: 200 @594 has 2 MA's), (206, 606), (256, 678), (266, 696), (270, 714), (275, 735), (300, 798), (317, 837), (336, 870), (367, 918), (401, 1002), (408, 1017), (423, 1068), (424, 1077), (434, 1101), (450, 1140), (452, 1143), (459, 1155), (528, 1281), (540, 1305), (572, 1368), (631, 1452), (675, 1524), (685, 1548), (713, 1590), (719, 1599), (750, 1656), (780, 1695), (814, 1752), (818, 1758), (827, 1761), (849, 1782), (883, 1830), (911, 1866), (976, 1947), (982, 1953),

Gene: Ximenita\_8 Start: 1691, Stop: 3118, Start Num: 161

Candidate Starts for Ximenita\_8:

(Start: 161 @1691 has 150 MA's), (Start: 205 @1781 has 1 MA's), (Start: 219 @1805 has 15 MA's), (222, 1811), (257, 1889), (265, 1898), (277, 1946), (284, 1964), (313, 2033), (346, 2072), (376, 2108), (378, 2111), (407, 2186), (420, 2228), (422, 2237), (451, 2318), (496, 2366), (542, 2432), (564, 2474), (566, 2480), (572, 2492), (575, 2498), (585, 2522), (597, 2546), (601, 2552), (672, 2642), (690, 2684), (762, 2777), (770, 2783), (771, 2786), (789, 2819), (808, 2849), (823, 2873), (856, 2921), (960, 3050), (1009, 3107), (1014, 3113),

Gene: Y10\_09 Start: 2570, Stop: 3910, Start Num: 219

Candidate Starts for Y10\_09:

(Start: 161 @2465 has 150 MA's), (Start: 219 @2570 has 15 MA's), (257, 2654), (265, 2663), (277, 2711), (283, 2726), (293, 2753), (313, 2804), (321, 2822), (354, 2852), (376, 2879), (407, 2957), (420, 2999), (422, 3008), (423, 3011), (451, 3089), (456, 3098), (496, 3137), (542, 3203), (566, 3251), (585, 3293), (672, 3410), (688, 3452), (717, 3497), (770, 3566), (793, 3611), (808, 3632), (823, 3656), (960, 3833), (1009, 3899), (1014, 3905),

Gene: Y2\_09 Start: 2570, Stop: 3910, Start Num: 219

Candidate Starts for Y2\_09:

(Start: 161 @2465 has 150 MA's), (Start: 219 @2570 has 15 MA's), (257, 2654), (265, 2663), (277, 2711), (283, 2726), (293, 2753), (313, 2804), (321, 2822), (354, 2852), (376, 2879), (407, 2957), (420, 2999), (422, 3008), (423, 3011), (451, 3089), (456, 3098), (496, 3137), (542, 3203), (566, 3251), (585, 3293), (672, 3410), (688, 3452), (717, 3497), (770, 3566), (793, 3611), (808, 3632), (823, 3656), (960, 3833), (1009, 3899), (1014, 3905),

Gene: Yami\_3 Start: 1068, Stop: 2522, Start Num: 122

Candidate Starts for Yami\_3:

(Start: 117 @1062 has 111 MA's), (122, 1068), (Start: 223 @1230 has 13 MA's), (228, 1239), (264, 1299), (283, 1368), (294, 1389), (317, 1440), (424, 1644), (504, 1779), (546, 1857), (551, 1872), (564, 1890), (572, 1908), (589, 1950), (610, 1983), (622, 2001), (706, 2121), (708, 2124), (715, 2136), (724, 2148), (731, 2160), (774, 2211), (808, 2268), (810, 2274), (817, 2283), (821, 2292), (823, 2295), (958, 2457), (965, 2466), (970, 2475), (995, 2514),

Gene: Yank\_4 Start: 800, Stop: 2290, Start Num: 95

Candidate Starts for Yank\_4:

(Start: 95 @800 has 42 MA's), (Start: 150 @845 has 1 MA's), (Start: 209 @947 has 1 MA's), (Start: 221 @965 has 3 MA's), (227, 974), (239, 992), (263, 1025), (264, 1028), (267, 1037), (273, 1067), (282, 1094), (341, 1193), (399, 1292), (408, 1316), (409, 1319), (410, 1322), (423, 1367), (555, 1601), (578, 1649), (583, 1661), (610, 1700), (622, 1718), (635, 1730), (636, 1733), (649, 1754), (657, 1760), (670, 1772), (711, 1850), (755, 1904), (791, 1958), (800, 1970), (852, 2063), (915, 2147), (958, 2204), (1004, 2273),

Gene: Yasuo\_3 Start: 1071, Stop: 2531, Start Num: 117

Candidate Starts for Yasuo\_3:

(Start: 117 @1071 has 111 MA's), (122, 1077), (Start: 223 @1239 has 13 MA's), (228, 1248), (264, 1308), (283, 1377), (294, 1398), (317, 1449), (424, 1653), (546, 1866), (551, 1881), (572, 1917), (589, 1959), (610, 1992), (622, 2010), (706, 2130), (708, 2133), (715, 2145), (774, 2220), (810, 2283), (821, 2301), (823, 2304), (958, 2466), (965, 2475), (970, 2484), (995, 2523),

Gene: Yavru\_1 Start: 76, Stop: 1761, Start Num: 89

Candidate Starts for Yavru\_1:

(50, 22), (Start: 89 @76 has 52 MA's), (169, 175), (Start: 201 @229 has 6 MA's), (208, 244), (227, 274), (228, 277), (239, 304), (313, 475), (316, 481), (317, 484), (323, 490), (330, 502), (428, 712), (449, 775), (503, 829), (516, 856), (546, 916), (560, 946), (711, 1186), (794, 1300), (798, 1306), (829, 1354), (845, 1384), (891, 1456), (931, 1510), (965, 1552),

Gene: Yeet412\_2 Start: 318, Stop: 1889, Start Num: 89

Candidate Starts for Yeet412\_2:

(Start: 89 @318 has 52 MA's), (206, 474), (225, 504), (241, 537), (274, 621), (277, 630), (294, 666), (319, 726), (389, 816), (391, 819), (420, 912), (425, 936), (440, 978), (470, 1032), (494, 1071), (548, 1137), (552, 1149), (572, 1179), (584, 1212), (641, 1293), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (767, 1500), (771, 1506), (787, 1536), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (931, 1740), (934, 1743), (964, 1785), (1034, 1872),

Gene: Yeezy\_2 Start: 318, Stop: 1901, Start Num: 89

Candidate Starts for Yeezy\_2:

(Start: 89 @318 has 52 MA's), (183, 426), (225, 504), (241, 537), (274, 621), (277, 630), (319, 726), (391, 819), (420, 912), (425, 936), (440, 978), (494, 1071), (548, 1137), (572, 1179), (612, 1257), (632, 1281), (641, 1293), (655, 1314), (670, 1338), (672, 1344), (680, 1365), (733, 1455), (734, 1458), (767, 1500), (771, 1506), (789, 1539), (821, 1593), (850, 1629), (888, 1680), (934, 1743), (1002, 1827), (1022, 1857),

Gene: YertPhresh\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for YertPhresh\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Yoshi\_3 Start: 663, Stop: 2183, Start Num: 139

Candidate Starts for Yoshi\_3:

(Start: 132 @651 has 1 MA's), (Start: 139 @663 has 74 MA's), (Start: 219 @789 has 15 MA's), (224, 798), (244, 843), (257, 873), (259, 876), (263, 882), (274, 927), (283, 951), (293, 972), (308, 1014), (319, 1035), (344, 1062), (355, 1080), (366, 1083), (376, 1107), (391, 1134), (409, 1191), (420, 1227), (422, 1236), (424, 1248), (426, 1254), (433, 1269), (437, 1281), (445, 1308), (449, 1314), (452, 1320), (472, 1356), (474, 1365), (500, 1395), (514, 1425), (516, 1428), (567, 1524), (572, 1533), (583, 1560), (646, 1644), (662, 1659), (731, 1770), (736, 1779), (742, 1788), (787, 1851), (834, 1926), (841, 1938), (856, 1956), (891, 1992), (919, 2034), (925, 2040), (960, 2082), (969, 2094), (975, 2106), (1017, 2172),

Gene: YoureAdopted\_7 Start: 1563, Stop: 2984, Start Num: 161

Candidate Starts for YoureAdopted\_7:

(85, 1491), (Start: 143 @1551 has 2 MA's), (Start: 161 @1563 has 150 MA's), (Start: 219 @1674 has 15 MA's), (222, 1680), (257, 1758), (265, 1767), (277, 1815), (284, 1833), (313, 1902), (348, 1944),

(354, 1950), (376, 1977), (378, 1980), (420, 2097), (422, 2106), (451, 2187), (542, 2301), (566, 2349), (572, 2361), (585, 2391), (597, 2415), (605, 2427), (617, 2442), (670, 2505), (672, 2511), (771, 2655), (789, 2688), (823, 2742), (960, 2919), (1009, 2973),

Gene: Yubaba\_3 Start: 1074, Stop: 2534, Start Num: 117

Candidate Starts for Yubaba\_3:

(Start: 117 @1074 has 111 MA's), (122, 1080), (Start: 223 @1242 has 13 MA's), (228, 1251), (264, 1311), (283, 1380), (294, 1401), (317, 1452), (424, 1656), (546, 1869), (551, 1884), (572, 1920), (589, 1962), (610, 1995), (622, 2013), (706, 2133), (708, 2136), (715, 2148), (774, 2223), (810, 2286), (821, 2304), (823, 2307), (958, 2469), (965, 2478), (970, 2487), (995, 2526),

Gene: Yuna\_8 Start: 1651, Stop: 3090, Start Num: 143

Candidate Starts for Yuna\_8:

(75, 1579), (85, 1591), (Start: 143 @1651 has 2 MA's), (Start: 161 @1663 has 150 MA's), (Start: 205 @1753 has 1 MA's), (Start: 219 @1777 has 15 MA's), (222, 1783), (257, 1861), (265, 1870), (267, 1876), (277, 1918), (281, 1927), (284, 1936), (293, 1954), (313, 2005), (346, 2044), (354, 2053), (376, 2080), (420, 2200), (422, 2209), (451, 2290), (542, 2404), (564, 2446), (566, 2452), (572, 2464), (585, 2494), (601, 2524), (617, 2545), (670, 2608), (672, 2614), (690, 2656), (762, 2749), (771, 2758), (793, 2800), (810, 2827), (823, 2845), (844, 2878), (969, 3034), (1009, 3079), (1014, 3085),

Gene: YungJamal\_33 Start: 13409, Stop: 14920, Start Num: 74

Candidate Starts for YungJamal\_33:

(Start: 72 @13406 has 33 MA's), (Start: 74 @13409 has 14 MA's), (Start: 205 @13589 has 1 MA's), (249, 13682), (276, 13757), (287, 13790), (300, 13817), (313, 13847), (407, 14000), (409, 14006), (420, 14042), (422, 14051), (451, 14132), (456, 14141), (458, 14144), (498, 14183), (538, 14240), (553, 14276), (554, 14279), (668, 14435), (672, 14444), (711, 14513), (717, 14522), (722, 14528), (742, 14561), (771, 14597), (823, 14684), (836, 14705), (891, 14768), (893, 14771), (896, 14774), (907, 14792), (920, 14813), (960, 14855), (988, 14891), (1005, 14903),

Gene: Yunkel11\_8 Start: 1587, Stop: 3011, Start Num: 161

Candidate Starts for Yunkel11\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 205 @1674 has 1 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (240, 1743), (257, 1782), (265, 1791), (267, 1797), (277, 1839), (284, 1857), (293, 1875), (313, 1926), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (458, 2223), (496, 2259), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (601, 2445), (617, 2466), (672, 2535), (717, 2607), (770, 2676), (771, 2679), (789, 2712), (823, 2766), (838, 2790), (893, 2853), (960, 2943), (1009, 3000), (1014, 3006),

Gene: ZAYM\_2 Start: 521, Stop: 2170, Start Num: 80

Candidate Starts for ZAYM\_2:

(Start: 80 @521 has 9 MA's), (106, 551), (225, 722), (267, 806), (313, 932), (317, 941), (358, 1007), (382, 1055), (425, 1190), (548, 1391), (572, 1433), (584, 1466), (641, 1547), (651, 1565), (655, 1568), (734, 1712), (741, 1721), (761, 1754), (770, 1760), (800, 1814), (810, 1832), (821, 1850), (877, 1922), (904, 1958), (944, 2012), (964, 2039), (986, 2072), (1017, 2123),

Gene: Zabiza\_8 Start: 1587, Stop: 3008, Start Num: 161

Candidate Starts for Zabiza\_8:

(85, 1515), (Start: 143 @1575 has 2 MA's), (Start: 161 @1587 has 150 MA's), (Start: 219 @1698 has 15 MA's), (222, 1704), (257, 1782), (265, 1791), (277, 1839), (284, 1857), (313, 1926), (348, 1968), (354, 1974), (376, 2001), (378, 2004), (420, 2121), (422, 2130), (451, 2211), (542, 2325), (566, 2373), (572, 2385), (585, 2415), (597, 2439), (605, 2451), (617, 2466), (670, 2529), (672, 2535), (771, 2679), (789, 2712), (823, 2766), (960, 2943), (1009, 2997),

Gene: Zaheer\_6 Start: 2162, Stop: 3868, Start Num: 110

Candidate Starts for Zaheer\_6:

(Start: 68 @2105 has 59 MA's), (92, 2141), (Start: 110 @2162 has 15 MA's), (172, 2237), (Start: 201 @2306 has 6 MA's), (208, 2321), (228, 2354), (264, 2399), (265, 2402), (275, 2444), (281, 2462), (282, 2465), (300, 2507), (346, 2588), (348, 2591), (392, 2645), (425, 2759), (455, 2840), (482, 2906), (483, 2915), (546, 3077), (574, 3143), (580, 3158), (678, 3329), (711, 3386), (738, 3428), (768, 3461), (789, 3500), (821, 3542), (908, 3641), (918, 3659), (921, 3662), (927, 3668), (974, 3731), (1050, 3857),

Gene: Zakai\_4 Start: 1057, Stop: 2625, Start Num: 68

Candidate Starts for Zakai\_4:

(Start: 68 @1057 has 59 MA's), (Start: 71 @1063 has 81 MA's), (185, 1219), (334, 1516), (338, 1522), (377, 1582), (407, 1654), (409, 1660), (414, 1681), (450, 1780), (511, 1882), (525, 1906), (547, 1951), (549, 1957), (568, 1987), (572, 1993), (586, 2020), (591, 2029), (654, 2086), (658, 2092), (670, 2113), (672, 2119), (713, 2194), (715, 2197), (736, 2233), (773, 2278), (810, 2344), (865, 2419), (878, 2437), (885, 2446), (1021, 2593), (1034, 2617), (1036, 2620),

Gene: Zakhe101\_31 Start: 13259, Stop: 14770, Start Num: 74

Candidate Starts for Zakhe101\_31:

(Start: 72 @13256 has 33 MA's), (Start: 74 @13259 has 14 MA's), (Start: 205 @13439 has 1 MA's), (249, 13532), (276, 13607), (287, 13640), (300, 13667), (313, 13697), (407, 13850), (409, 13856), (420, 13892), (422, 13901), (451, 13982), (456, 13991), (458, 13994), (538, 14090), (553, 14126), (554, 14129), (668, 14285), (672, 14294), (711, 14363), (717, 14372), (722, 14378), (742, 14411), (771, 14447), (823, 14534), (836, 14555), (891, 14618), (893, 14621), (896, 14624), (907, 14642), (920, 14663), (960, 14705), (985, 14738), (988, 14741), (1005, 14753),

Gene: Zapner\_4 Start: 1188, Stop: 2708, Start Num: 139

Candidate Starts for Zapner\_4:

(Start: 132 @1176 has 1 MA's), (Start: 139 @1188 has 74 MA's), (Start: 219 @1314 has 15 MA's), (224, 1323), (244, 1368), (257, 1398), (259, 1401), (263, 1407), (274, 1452), (283, 1476), (293, 1497), (308, 1539), (319, 1560), (344, 1587), (355, 1605), (366, 1608), (376, 1632), (391, 1659), (409, 1716), (420, 1752), (422, 1761), (424, 1773), (426, 1779), (433, 1794), (437, 1806), (449, 1839), (452, 1845), (472, 1881), (474, 1890), (500, 1920), (514, 1950), (516, 1953), (567, 2049), (572, 2058), (583, 2085), (646, 2169), (662, 2184), (731, 2295), (736, 2304), (742, 2313), (787, 2376), (834, 2451), (841, 2463), (856, 2481), (891, 2517), (919, 2559), (925, 2565), (960, 2607), (969, 2619), (975, 2631), (1017, 2697),

Gene: Zarbodnamra\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for Zarbodnamra\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (341, 786), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (803, 1584), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911), (1042, 1917),

Gene: Zaria\_4 Start: 1052, Stop: 2635, Start Num: 68

Candidate Starts for Zaria\_4:

(Start: 68 @1052 has 59 MA's), (Start: 71 @1058 has 81 MA's), (191, 1229), (249, 1316), (262, 1334), (265, 1340), (273, 1376), (336, 1514), (338, 1517), (389, 1592), (407, 1646), (408, 1649), (409, 1652), (478, 1820), (511, 1874), (515, 1883), (525, 1898), (535, 1919), (552, 1958), (568, 1979), (572, 1985), (586, 2012), (623, 2054), (654, 2078), (666, 2096), (670, 2105), (672, 2111), (685, 2144), (708, 2177), (731, 2216), (734, 2222), (736, 2225), (773, 2270), (810, 2336), (842, 2387), (856, 2402), (865, 2411),

(877, 2426), (878, 2429), (976, 2531), (1005, 2558), (1034, 2609), (1036, 2612),

Gene: Zavala\_8 Start: 1572, Stop: 2993, Start Num: 161

Candidate Starts for Zavala\_8:

(85, 1500), (Start: 143 @1560 has 2 MA's), (Start: 161 @1572 has 150 MA's), (Start: 219 @1683 has 15 MA's), (222, 1689), (257, 1767), (265, 1776), (277, 1824), (284, 1842), (313, 1911), (348, 1953), (354, 1959), (376, 1986), (378, 1989), (420, 2106), (422, 2115), (451, 2196), (542, 2310), (566, 2358), (572, 2370), (585, 2400), (597, 2424), (605, 2436), (670, 2514), (672, 2520), (771, 2664), (789, 2697), (823, 2751), (960, 2928), (1009, 2982),

Gene: ZhongYanYuan\_3 Start: 901, Stop: 2469, Start Num: 68

Candidate Starts for ZhongYanYuan\_3:

(Start: 68 @901 has 59 MA's), (Start: 71 @907 has 81 MA's), (Start: 77 @916 has 1 MA's), (185, 1063), (249, 1165), (283, 1255), (334, 1360), (407, 1498), (409, 1504), (422, 1549), (450, 1624), (478, 1672), (511, 1726), (525, 1750), (535, 1771), (547, 1795), (549, 1801), (568, 1831), (572, 1837), (591, 1873), (654, 1930), (666, 1948), (672, 1963), (713, 2038), (715, 2041), (736, 2077), (742, 2086), (773, 2122), (810, 2188), (865, 2263), (878, 2281), (885, 2290), (1021, 2437), (1034, 2461), (1036, 2464),

Gene: ZiggyZoo\_2 Start: 360, Stop: 1928, Start Num: 113

Candidate Starts for ZiggyZoo\_2:

(Start: 36 @255 has 19 MA's), (Start: 113 @360 has 34 MA's), (183, 444), (198, 477), (225, 519), (233, 537), (241, 552), (252, 573), (264, 594), (273, 633), (294, 693), (306, 729), (313, 741), (338, 783), (346, 795), (371, 822), (408, 900), (440, 1005), (449, 1020), (457, 1035), (524, 1113), (548, 1164), (641, 1320), (667, 1359), (683, 1398), (703, 1431), (711, 1443), (742, 1488), (743, 1491), (747, 1497), (761, 1518), (771, 1527), (773, 1530), (789, 1560), (814, 1599), (885, 1701), (914, 1743), (924, 1758), (942, 1779), (952, 1794), (1024, 1890), (1029, 1902), (1038, 1911),

Gene: Ziko\_37 Start: 10715, Stop: 12121, Start Num: 176

Candidate Starts for Ziko\_37:

(133, 10658), (Start: 176 @10715 has 6 MA's), (247, 10841), (272, 10901), (275, 10910), (310, 10994), (339, 11048), (408, 11174), (410, 11180), (414, 11198), (434, 11264), (463, 11318), (488, 11351), (506, 11396), (572, 11489), (631, 11567), (664, 11612), (672, 11630), (710, 11693), (715, 11699), (793, 11825), (822, 11870), (833, 11888), (970, 12062),

Gene: Zilizebeth\_2 Start: 413, Stop: 2089, Start Num: 42

Candidate Starts for Zilizebeth\_2:

(Start: 42 @413 has 46 MA's), (194, 629), (215, 668), (248, 725), (252, 731), (262, 749), (274, 794), (278, 806), (281, 815), (283, 821), (306, 878), (317, 899), (322, 911), (382, 1001), (447, 1190), (524, 1286), (541, 1316), (548, 1337), (640, 1490), (761, 1688), (771, 1697), (786, 1724), (810, 1766), (821, 1784), (885, 1868), (899, 1883), (1038, 2072),

Gene: ZoMa\_2 Start: 455, Stop: 1891, Start Num: 162

Candidate Starts for ZoMa\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: ZoeJ\_4 Start: 652, Stop: 2073, Start Num: 161

Candidate Starts for ZoeJ\_4:

(75, 574), (85, 586), (91, 595), (Start: 161 @652 has 150 MA's), (194, 712), (Start: 205 @733 has 1 MA's), (216, 754), (257, 838), (265, 847), (277, 895), (293, 931), (313, 982), (346, 1021), (354, 1030),

(376, 1057), (420, 1177), (422, 1186), (423, 1189), (451, 1267), (456, 1276), (542, 1381), (566, 1429), (572, 1441), (585, 1471), (597, 1495), (608, 1510), (672, 1588), (690, 1630), (717, 1660), (770, 1729), (779, 1744), (808, 1795), (823, 1819), (856, 1867), (954, 1990), (960, 1996), (1009, 2062), (1014, 2068),

Gene: Zombie\_2 Start: 359, Stop: 1891, Start Num: 72

Candidate Starts for Zombie\_2:

(Start: 72 @359 has 33 MA's), (Start: 162 @455 has 39 MA's), (Start: 168 @458 has 3 MA's), (Start: 186 @494 has 1 MA's), (Start: 205 @533 has 1 MA's), (277, 695), (313, 782), (317, 791), (327, 809), (346, 821), (409, 941), (420, 977), (424, 998), (433, 1019), (451, 1067), (456, 1076), (566, 1229), (595, 1289), (608, 1307), (656, 1358), (672, 1385), (678, 1400), (679, 1403), (736, 1484), (768, 1529), (810, 1604), (823, 1622), (836, 1643), (874, 1688), (888, 1706), (891, 1709), (960, 1802), (1012, 1883),

Gene: Zorro\_5 Start: 3082, Stop: 4647, Start Num: 71

Candidate Starts for Zorro\_5:

(Start: 71 @3082 has 81 MA's), (Start: 221 @3292 has 3 MA's), (263, 3346), (278, 3403), (281, 3412), (402, 3652), (408, 3667), (410, 3673), (425, 3733), (443, 3793), (503, 3892), (520, 3922), (530, 3937), (574, 4018), (620, 4096), (627, 4105), (669, 4141), (684, 4180), (704, 4213), (711, 4222), (728, 4249), (771, 4303), (793, 4345), (835, 4390), (846, 4411), (868, 4435), (941, 4513), (1032, 4633),

Gene: Zucker\_3 Start: 797, Stop: 2302, Start Num: 156

Candidate Starts for Zucker\_3:

(Start: 156 @797 has 23 MA's), (235, 941), (267, 992), (280, 1043), (357, 1181), (378, 1223), (387, 1241), (433, 1385), (437, 1397), (460, 1442), (465, 1448), (505, 1526), (524, 1547), (594, 1676), (671, 1778), (673, 1784), (682, 1805), (712, 1856), (769, 1943), (803, 2003), (833, 2051), (850, 2084), (950, 2216),

Gene: phiBT1\_33 Start: 597, Stop: 2180, Start Num: 104

Candidate Starts for phiBT1\_33:

(98, 591), (Start: 104 @597 has 1 MA's), (175, 687), (264, 840), (265, 843), (267, 849), (277, 891), (313, 972), (315, 975), (326, 996), (327, 999), (346, 1026), (363, 1047), (392, 1077), (394, 1080), (408, 1125), (430, 1209), (516, 1374), (576, 1506), (658, 1620), (671, 1647), (673, 1653), (691, 1698), (693, 1704), (726, 1752), (802, 1857), (804, 1860), (838, 1929), (851, 1956), (924, 2034), (927, 2037), (943, 2058), (946, 2061),