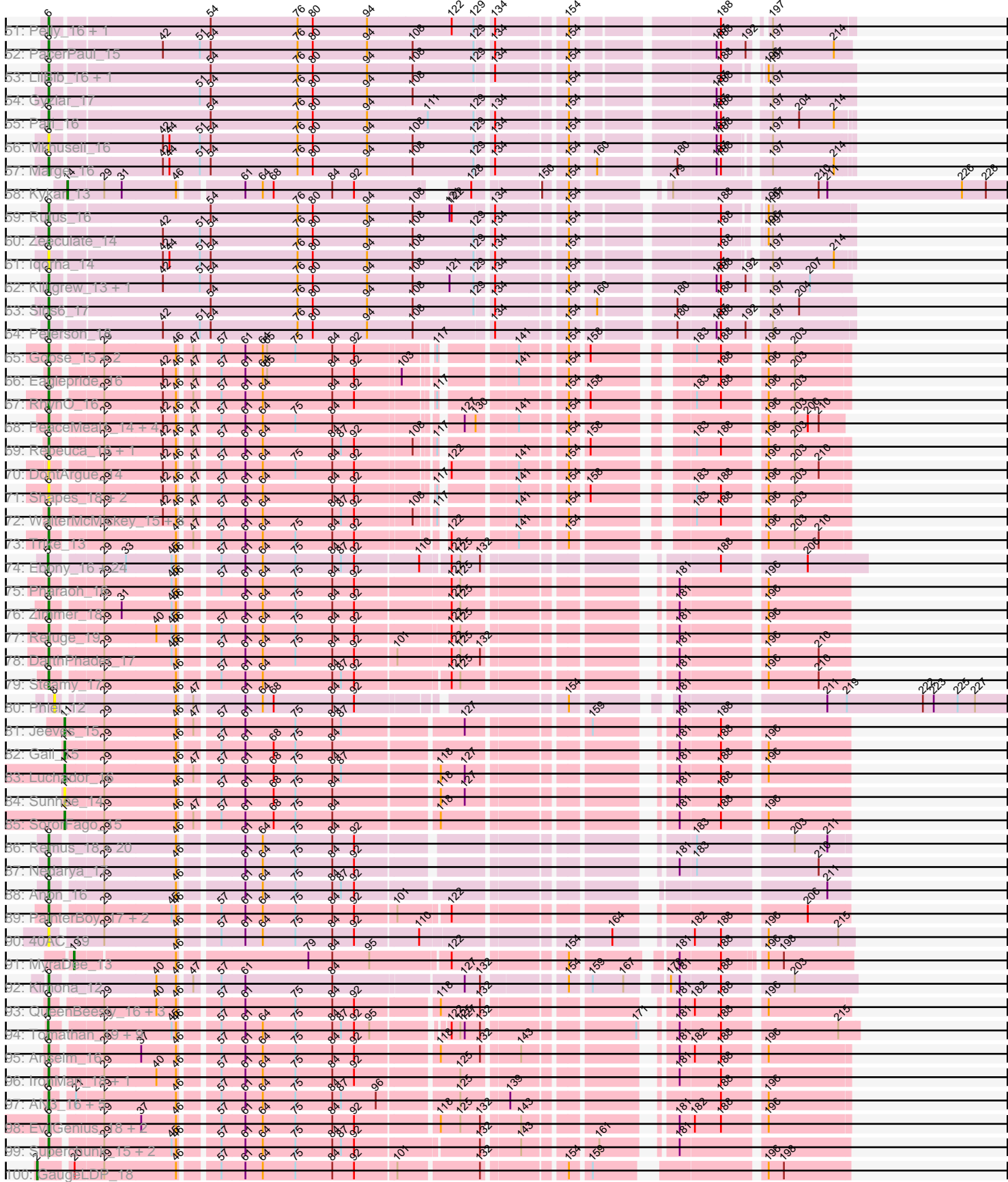




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r01: HerbertW_14	5	20	22	36	57	61	64	75	88	110	125	132	164	196	208
r02: Que12_17	5	20	22	36	57	61	64	75	88	110	125	132	143	181	216
r03: Ann18_19	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r04: Jameo_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r05: Jami_18	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r06: Samper1_8	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r07: Cooper_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r08: CRB1_16	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r09: Padman_15 + 5	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r10: Updawg_15 + 9	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r11: Banca11_18	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r12: TamiSIV_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r13: Miki_19	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r14: DoraLittle_16 + 5	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r15: FairyHouse1_18 + 1	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r16: ConsBair_17	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r17: EZMonkey_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r18: S_1_1 + 1	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r19: Landon_15 + 3	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r20: Ajmal29_19	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r21: YifeiHuaD_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r22: Colin_20	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r23: SwiftSquas_18	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r24: MassWhite_16	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r25: RedRock_19 + 1	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r26: Adolyte_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r27: WokeupInRoads_16	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r28: Journey1_14	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r29: Logania_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r30: JianYue_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r31: Pavlovnik_18	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r32: Changling_19	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r33: Ajape74_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r34: EffiJump_18	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r35: JashKayV_18	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r36: Kalpine_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r37: LusyThe1_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r38: Eias_17	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r39: Benvolio_15 + 1	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r40: Dixie_19	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r41: ArcherXIV_18	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r42: LadyBird_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r43: Nicole1er_20	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r44: BackBack_18	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r45: Rainy_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r46: J Squared_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r47: BobSwags_19	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r48: Lgkt_19	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r49: NothingSpea_15	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216
r50: FatCactus_14	5	20	22	36	57	61	64	75	84	110	125	132	143	181	216

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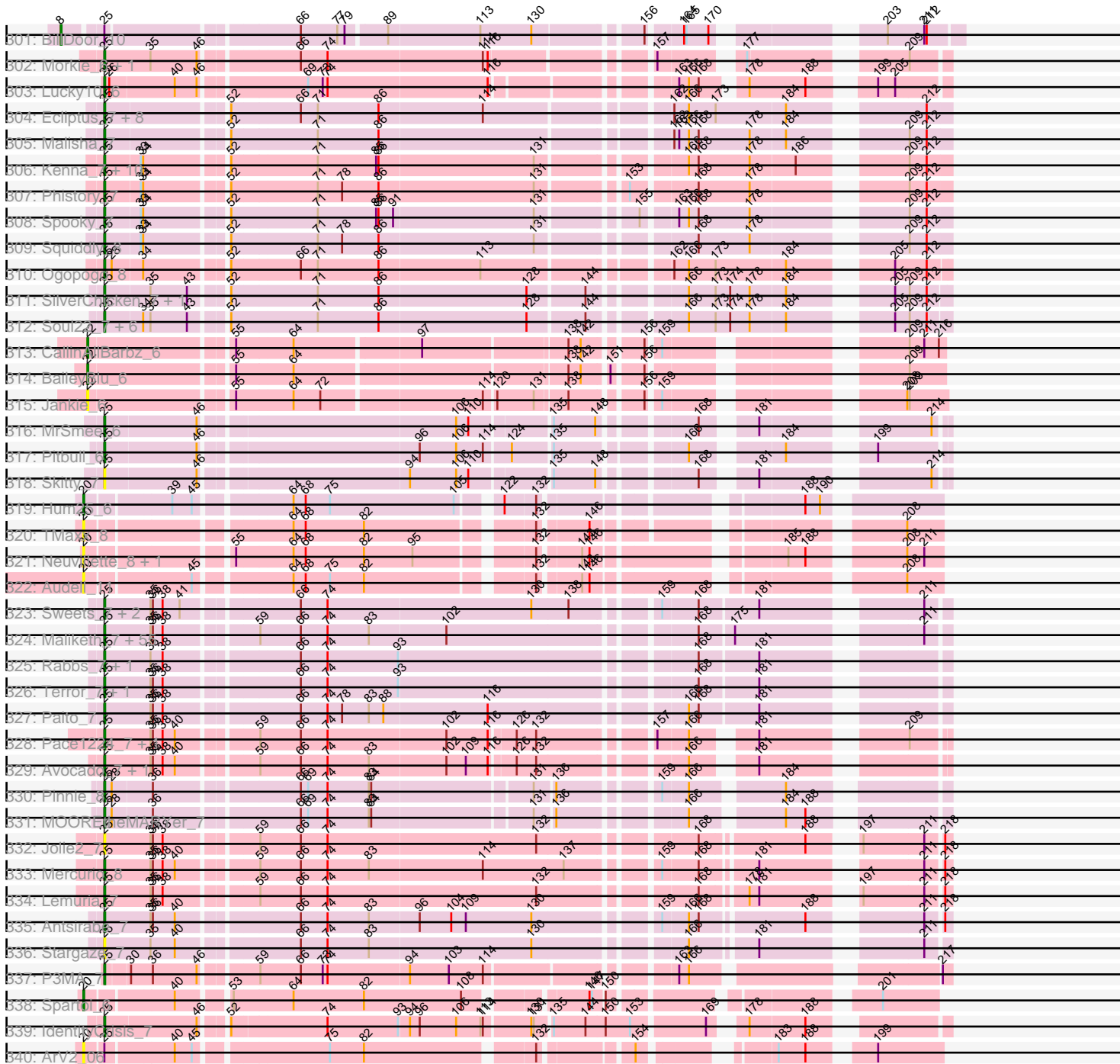
151: Anthony	6	20	22	40	46	57	61	64	75	79	81	82	108	116	132	141	161
152: Kimmap_15	6	16	16	16	16	16	16	16	16	16	16	16	108	116	130	141	154
153: Norbert_15 + 13	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	150
154: Angelo_19 + 66	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
155: Ciqui_14 + 1	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
156: Kanoky_18 + 16	6	16	16	16	16	16	16	16	16	16	16	16	108	118	132	141	154
157: Issa_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
158: Kanowdy_15 + 12	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
159: BabyRay_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
160: Fabrice_17	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
161: Spout_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
162: Zed_16	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
163: Planastic_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
164: Bill_18 + 3	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
165: Fiodor_13_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
166: Mads_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
167: Rockstar_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
168: SamorClear_14 + 86	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
169: Noelle_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
170: Backyardman_15 + 4	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
171: Klemtemusin_15 + 1	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
172: Monpher25_15 + 5	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
173: ChampagnePapi_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
174: Cindradix_14	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
175: Canan_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
176: Xena_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
177: Sasia_16	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
178: AboysRanger_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
179: AvatarAnfang_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
180: Ljundrea_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
181: Jnybot_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
182: Jaramae_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
183: Naxis_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
184: Painter154_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
185: Slink_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
186: Archexa_13 + 4	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
187: Chadwick_14 + 2	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
188: ForGail_13 + 18	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
189: Sydnat_13 + 6	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
190: Scorpa_14 + 3	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
191: Dublin_12	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
192: Pjmashe15_14	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
193: BlessJoy_19 + 38	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
194: Jaffer_19 + 3	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
195: Kiko_19 + 4	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
196: Hammer_19	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
197: FJCatcher_19 + 1	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
198: LooogsArmy_16 + 11	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
199: Elvinder_15	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154
200: Pn_25	6	16	16	16	16	16	16	16	16	16	16	16	108	108	132	141	154

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201: Smeaaley_13 + 6	19	46	57	79	84	98	127	150	154	161	171	181	198	207				
202: NearHeadless_13	19	46	57	79	84	98	127	150	154	161	171	181	198	207				
203: Pm113_13_2	19	46	57	75	88	92	121	130	154	161	171	181	198	201				
204: Cjbb11_17_22	19	46	57	75	84	92	119	122	132	164	181	181	198	201				
205: Ajissanae_15	19	46	57	75	84	92	119	122	132	164	181	181	198	201				
206: Mammaine_17 + 1	19	46	57	75	84	92	119	122	132	164	181	181	198	201				
207: Creamie_01_16 +	19	46	57	75	84	92	119	122	132	164	181	181	198	201				
208: Banaleluj_15	19	46	57	75	88	92	119	122	132	164	181	181	198	201				
209: Ilyia_17_15	19	46	57	75	88	92	119	122	132	164	181	181	198	201				
210: Kzizachas14_15	19	46	57	75	88	92	119	122	132	164	181	181	198	201				
211: LaneWolf_17	19	46	57	75	84	92	119	122	132	164	181	181	198	201				
212: Vanisoa_15	19	46	57	75	84	92	119	122	132	164	181	181	198	201				
213: Elephanton_17	19	46	57	75	88	92	119	122	132	164	181	181	198	201				
214: Danrel_16	19	46	57	75	88	92	119	122	132	164	181	181	198	201				
215: Iceey3_16	19	46	57	75	88	92	119	122	132	164	181	181	198	201				
216: Smeaeyra_16	19	46	57	75	88	92	119	122	132	164	181	181	198	201				
217: Toaka_15	19	46	59	74	76	86	118	121	132	154	181	181	198	201				
218: Raqqa_15	19	46	59	74	76	86	118	121	132	154	181	181	198	201				
219: AbbyDaisy_17	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
220: LiBanq_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
221: PTU6L_16 + 4	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
222: Enoki_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
223: PTU7A_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
224: Ourobas_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
225: BruceLanai_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
226: DTPark_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
227: Attache_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
228: PTU7A_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
229: SKKY_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
230: PAS5U_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
231: EnochAspt_15	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
232: Kubed_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
233: MEAK_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
234: Wizzo_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
235: PHL07_10U4_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
236: Rileysaurus_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
237: PTU0_1_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
238: PTU7C_16 + 1	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
239: Stormian_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
240: PT_1_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
241: Pirate_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
242: Moyas_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
243: Aquarius_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
244: PHL06_10U1_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
245: Cota_16 + 1	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
246: PHL07_10U5_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
247: P9_1_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
248: Procras_1_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
249: PTU0D_1_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213
250: PTU4A_1_16	19	46	53	72	79	90	108	131	149	153	159	163	172	181	191	201	206	213



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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 222723 Report

This analysis was run 03/28/25 on database version 593.

Pham number 222723 has 1153 members, 139 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_16
- Track 2 : Paraselene\_14, JackSparrow\_16
- Track 3 : Parliament\_14, Squee\_16, Corvo\_15, Dussy\_16, Kenmech\_18, Abbyshoes\_16, DrFeelGood\_14, ShortQueendom\_14, Marcell\_15, Licorice\_17, Wheeler\_15
- Track 4 : Nerujay\_16, Jasper\_16, Raid\_16, Makemake\_15, Espresso\_15, Ringer\_15, Homines\_15, Dreamboat\_16, Abrogate\_160, Tasp14\_16, Rubeus\_16, Sagefire\_16
- Track 5 : Anglerfish\_16, Agaliana\_15, Bigchungji\_15, Zephyr\_15, DreamCatcher\_18, U2\_15
- Track 6 : Lopton\_16, Molly\_16, Magnar\_15, Maroc7\_14, TwoPeat\_16
- Track 7 : Altman\_16
- Track 8 : Bircsak\_15, Papez\_17, Gompeii16\_15, Thor\_15, Francis47\_15, Arcanine\_16, StrongArm\_14, GMonster\_14, Monet\_17, Edtherson\_16, Treddle\_17, Rajelicia\_15, Ajay\_15, KBG\_16, RidgeCB\_15, Bexan\_14, Tripl3t\_16, STLscum\_16, Smairt\_16, SarFire\_15, Nhonho\_15
- Track 9 : A6\_13, BK1\_13
- Track 10 : Petp2012\_17, Slagathor\_16
- Track 11 : BeesKnees\_16, Snazzy\_13, Froghopper\_16, Hermia\_17, Petruccio\_15, JC27\_17, Traft412\_17
- Track 12 : Euphoria\_15, Bruns\_14, Mule\_15, HarryOW\_16, GrecoEtereo\_16
- Track 13 : Bigfoot\_14, Sorpresa\_15, Topgun\_15, Cueylyss\_15, Hami1\_17, Payneful\_15, Wilkins\_15, Levia\_14, Sandaddy\_14, Teodoridan\_13, Bones\_15, Marchy\_14, LunarLander\_15, PhineBark\_15, Violet\_14, Mryolo\_14, BarrowTuph\_14, CactusRose\_14
- Track 14 : Michley\_15
- Track 15 : Marsha\_15, TheloniousMonk\_17, Buttons\_16
- Track 16 : Acme\_17, Pippin\_17, ProMouse\_14, Ciao\_15, Ichabod\_16, KSSJEB\_15, Seabiscuit\_17
- Track 17 : PSullivan\_17, Pepe\_16, Tote\_17, JuliaChild\_17, Swole\_17, Arlo\_14, Pita2\_17
- Track 18 : StewieG\_14
- Track 19 : MetalQZJ\_15, MaryBeth\_15, Blue\_15, PherrisBueller\_16, AFIS\_15, Paphu\_14, Manatee\_16, PinkPlastic\_14
- Track 20 : Bxb1\_14, Kugel\_16, BillKnuckles\_16, Target\_17
- Track 21 : Rohr\_16, PattyP\_17, Burton\_16, BigMau\_17, BPBiebs31\_16, HermioneGrange\_15, Museum\_17, Rutherferd\_17, Jerm2\_16



- Track 22 : ILeeKay\_17, Dynamix\_16, Eyeball\_15, Adahisdi\_16, McGuire\_16, Zeuska\_16, Jorgensen\_15, Big3\_15, Applejack\_15, KyMonks1A\_17, Kanely\_16, Sunshine924\_14, Oogway\_14, Phlippers\_14
- Track 23 : Ruotula\_14, Dexes\_16, Gwendoluna\_17
- Track 24 : Switzer\_16
- Track 25 : Solon\_15, Moose\_14, Niza\_17, NEHalo\_15, Marco3\_15, Gandalf20\_16, Forsytheast\_14, DD5\_16, PhrostyMug\_15, Lockley\_15, Fajezeel\_17, Aeneas\_17, Perseus\_16, BluSpix\_15, Sanya\_14, Ashballer\_14, IgnatiusPatJac\_14, Turj99\_14, Lamina13\_15, Sumter\_14, Dulcie\_14, Greg\_17, SwissCheese\_15, Norz\_17
- Track 26 : Alvin\_16
- Track 27 : BigPaolini\_16, Chanagan\_14, MrGordo\_15
- Track 28 : Seanderson\_16
- Track 29 : Doom\_15, Briton15\_17
- Track 30 : Graduation\_17, Atkinbua\_16
- Track 31 : Magnito\_14
- Track 32 : BaconJack\_17
- Track 33 : Beatrix\_14, Fushigi\_16
- Track 34 : MPlant7149\_14, Bob3\_14
- Track 35 : Barriga\_15, Rhynn\_15, Trouble\_15
- Track 36 : Smeagol\_16
- Track 37 : SkiPole\_17, EnzoK\_15
- Track 38 : Watermelon\_17, QTRlifeCrisis\_15
- Track 39 : McSinger\_16, Naira\_16, Fenn\_16
- Track 40 : Carlyle\_17
- Track 41 : Alsfro\_19
- Track 42 : Crispicous1\_14, Inyanga\_14
- Track 43 : Lesedi\_14
- Track 44 : Pinto\_17
- Track 45 : Bethlehem\_15
- Track 46 : PascalRango\_14
- Track 47 : GageAP\_17, SpikeBT\_17
- Track 48 : Hope4ever\_15
- Track 49 : Scowl\_16
- Track 50 : HanShotFirst\_15
- Track 51 : Pelly\_16, Ohno789\_15
- Track 52 : PacerPaul\_15
- Track 53 : LilBib\_16, Fascinus\_14
- Track 54 : Gyzlar\_17
- Track 55 : Pari\_16
- Track 56 : Mkhuseji\_16
- Track 57 : Marge\_16
- Track 58 : Kykar\_13
- Track 59 : Rufus\_16
- Track 60 : Zeeculate\_14
- Track 61 : Iqorha\_14
- Track 62 : Killigrew\_13, ConceptII\_15
- Track 63 : Sibs6\_17
- Track 64 : Peterson\_18
- Track 65 : Goose\_15, Chupacabra\_15, OKCentral2016\_15
- Track 66 : Eaglepride\_16
- Track 67 : RhynO\_16
- Track 68 : PeaceMeal1\_14, Severus\_14, Drake94\_14, KittenMittens\_14, Poompha\_14

- Track 69 : Rebeuca\_16, Kristoff\_16
- Track 70 : DontArgue\_14
- Track 71 : Shapes\_18, DustyMartin\_18, Rowdy\_18
- Track 72 : WalterMcMickey\_15, Twister\_15, Topanga\_15, Edison31\_15
- Track 73 : Trike\_13
- Track 74 : Ebony\_16, Salz\_16, Lucivia\_16, Hutc2\_16, Orange\_16, MaCh\_16, Insomnia\_16, Mulciber\_16, TinyTimmy\_16, Et2Brutus\_15, Flaverint\_16, Gilberta\_16, Bowtie\_16, Timothy\_16, Sham4\_16, Joselito\_16, Bachome\_16, Petersenfast\_15, Munch\_16, Mabel\_16, Jabith\_16, Aneem\_16, Fibonacci\_16, Bud\_16, Snape\_16
- Track 75 : Pharaoh\_16
- Track 76 : Zimmer\_18
- Track 77 : Refuge\_19
- Track 78 : DarthPhader\_17
- Track 79 : Steamy\_17
- Track 80 : Phlei\_12
- Track 81 : Jeeves\_15
- Track 82 : Gail\_15
- Track 83 : Luchador\_16
- Track 84 : Sunhee\_14
- Track 85 : SororFago\_15
- Track 86 : Remus\_18, MinecraftSteve\_19, Switzerland\_18, Battleship\_19, LastResort\_18, JSwag\_18, ShayRa\_19, Warrior24\_19, Rosalind\_18, KatherineG\_18, DekHockey33\_18, Soups\_18, Oofda\_19, Nebulosus\_18, ReMo\_18, Looper\_19, Epsocamisio\_18, Waits\_18, Anaysia\_18, Strosahl\_18, Boohoo\_18
- Track 87 : Nedarya\_17
- Track 88 : Anon\_16
- Track 89 : PainterBoy\_17, Lucyedi\_17, EagleEye\_18
- Track 90 : 40AC\_19
- Track 91 : MyraDee\_13
- Track 92 : Kimona\_12
- Track 93 : QueenBeesly\_16, Georgie2\_17, Power\_16, FiringLine\_16
- Track 94 : Tomathan\_19, D29\_17, DBQu4n\_19, Duplo\_19, Kerberos\_19, D32\_19, StarStuff\_19, Naji\_19, Travvers\_19, Pomar16\_19
- Track 95 : Anselm\_16
- Track 96 : IronMan\_18, Tristan\_17
- Track 97 : AN3\_16, Deloris\_17, VA6\_16, BengiVuitton\_17, First\_0016, 20ES\_16
- Track 98 : EvilGenius\_18, KingCyrus\_18, ChipMunk\_18
- Track 99 : Superchunk\_15, Caraxes\_15, Odin\_15
- Track 100 : GaugeLDP\_18
- Track 101 : Herbertwm\_14
- Track 102 : Che12\_17
- Track 103 : ANI8\_19, AN9\_19, C3\_14, VC3\_19
- Track 104 : Fameo\_16, QueenB2\_16
- Track 105 : Jerm\_18, Dignity\_18, AbbyPaige\_18, Whabigail7\_18, Buggy\_18, Leviathan\_18, Smeagan\_18, LilTurb\_18, Turbido\_18
- Track 106 : SemperFi\_18
- Track 107 : Trooper\_16
- Track 108 : CRB1\_16
- Track 109 : Bradman\_15, Malec\_17, Quokka\_14, Serenity\_15, Larenn\_17, MajorMajor\_15
- Track 110 : Updawg\_18, NaSiaTalie\_16, Flare16\_16, Equemioh13\_18, Gratitude\_17, Sknot\_17, MiculUcigas\_16, Terrific\_20, Centaur\_18, WideWale\_18
- Track 111 : BiancaTri92\_18

- Track 112 : TarsusIV\_16
- Track 113 : Miko\_19
- Track 114 : DudeLittle\_16, SweetiePie\_16, Retro23\_16, Dalmatian\_16, SnapTap\_16, Crucio\_16
- Track 115 : HarryHoudini\_18, Drake55\_18, Baehexic\_17, Piro94\_17
- Track 116 : LionsBait\_17
- Track 117 : EZMoney23\_20
- Track 118 : L5\_17, Koduck\_16
- Track 119 : Landor\_17, Bactobuster\_17, Jaan\_19, Phaded\_19
- Track 120 : AnnaL29\_19
- Track 121 : WeiHuaDA\_22
- Track 122 : Colin\_20
- Track 123 : SwirlSquare\_18
- Track 124 : MissWhite\_16
- Track 125 : RedRock\_19, Loser\_19
- Track 126 : Acolyte\_16
- Track 127 : Iwokeuplikedis\_16
- Track 128 : Journey13\_14
- Track 129 : Leogania\_18
- Track 130 : XianYue\_16
- Track 131 : Pukovnik\_18
- Track 132 : Changeling\_19
- Track 133 : Agape74\_18
- Track 134 : Heffalump\_18
- Track 135 : JoshKayV\_18
- Track 136 : Kalpine\_19
- Track 137 : TipsytheTRex\_15
- Track 138 : Ph8s\_17, Adzzy\_17
- Track 139 : Benvolio\_16, Echild\_16
- Track 140 : Trixie\_19
- Track 141 : ArcherNM\_18
- Track 142 : LadyBird\_16
- Track 143 : NicoleTera\_20
- Track 144 : BabyBack\_18
- Track 145 : Rachaly\_19
- Track 146 : Jsquared\_15
- Track 147 : BobSwaget\_19
- Track 148 : Lokk\_19
- Track 149 : NothingSpecial\_18
- Track 150 : FatCactus\_14
- Track 151 : Anthony\_15
- Track 152 : Kinmap\_15
- Track 153 : Norbert\_15, Popcicle\_16, Noella\_16, Caviar\_16, Pocahontas\_16, Todacoro\_16, Hookmount\_16, ResDef\_16, Texage\_15, Veracruz\_15, QuinnKiro\_15, Margo\_16, Lambert1\_16, Panamaxus\_16
- Track 154 : Anubis\_19, Rummer\_17, LugYA\_19, JenCasNa\_17, LarryKay\_17, Lowa\_17, DaHudson\_17, Wooldri\_19, Daishi\_16, Malinsilva\_19, Spike509\_17, Hercules11\_17, P28Green\_17, Bigflo\_17, SoYo\_17, Stagni\_17, MadMarie\_17, Grub\_17, Cullens\_17, KADY\_18, MoneyMay\_17, Marie\_17, HashRod\_18, Sabinator\_17, Bxz2\_17, Misomonster\_19, StepMih\_17, Ollie\_17, PotatoSplit\_18, SoilDragon\_17, PGHhamlin\_19, Microwolf\_17, AgronaGT15\_17, Vix\_17, Dieselweasel\_17, MuchMore\_19, BuzzBuzz\_16, Colbster\_17, Methuselah\_17, GingkoMaracino\_17, Louie6\_17, Phoebe\_17, Grum1\_17, Taurus\_17, LBerry\_17,

TinyPebbles\_17, JHC117\_17, GtownJaz\_17, Soshari\_19, Grif\_17, Tiffany\_17,
 Beauxregard13\_17, Penny1\_17, Mainiac\_17, Pembroke\_17, Phoxy\_17, Aglet\_17,
 MarQuardt\_17, Watson\_17, AugsMagnumOpus\_19, Fernando\_17, Sabia\_17,
 Lilith\_17, BreSam8\_17, EpicPhail\_17, Snickers\_17, Jobu08\_17

- Track 155 : Chiqui\_14, BabyJohn\_14
- Track 156 : Kalnoky\_18, Heliosoles\_17, Pawn\_17, HaveUMetTed\_18, Calvinny\_18,
 OlanP\_17, Gemma\_17, Reba\_18, Manu\_18, Kalb97\_18, PhishRPhriends\_16,
 Phranny\_18, ACFishhook\_17, PurpleHaze\_17, JeppNRM\_18, Groupthink\_18,
 Marius\_18
- Track 157 : Isca\_15
- Track 158 : Kachowdy\_15, Bugatti\_15, Giroux\_15, TNguyen7\_15, Marchesa\_15,
 Puppy\_16, HelDan\_15, Idleandcovert\_15, Pistachio\_16, Heathen\_15, BlueBird\_16,
 SaturnRing\_15, DropBear\_15
- Track 159 : BabyRay\_15
- Track 160 : Farber\_17
- Track 161 : Scout\_15
- Track 162 : Zetzy\_16
- Track 163 : Phantastic\_15
- Track 164 : B1\_13, JF2\_15, MK4\_15, JF4\_15
- Track 165 : Fred313\_15
- Track 166 : MA5\_15
- Track 167 : Rockstar\_15
- Track 168 : SenorClean\_14, Scamp\_15, Baby16\_15, BubbleTrouble\_15, Huxley\_15,
 Spino\_15, Roosevelt\_15, Eurydice\_15, Taquarus\_15, KFPoly\_15, Pipcraft\_15,
 Cocoaberry\_15, Albee\_15, NorthStar\_15, Eagle\_14, Commander\_15, Avle17\_15,
 BellusTerra\_15, Mayonnaise\_15, Chaph\_15, Connomayer\_15, JetBlade\_15,
 Kampy\_15, Maverick\_15, Sabertooth\_15, Phacado\_15, Funston\_15, Wizard007\_15,
 Alberto7\_16, Annyong\_15, LeoAvram\_15, Florean\_15, MeeZee\_15, Nemo27\_15,
 Romney\_15, Polymorphads\_15, Dhanush\_15, Gadost\_15, Kingmustik0402\_15,
 Medusa\_15, HamSlice\_14, Koan\_14, Bartimeaus\_15, Blackmoor\_15, Morrow\_15,
 Bruiser\_15, Arturo\_14, Eapen\_15, Clarenza\_15, Houdini22\_15, Flux\_15,
 YoSam321\_15, Palestino\_15, Sparxx\_15, NotAPhaseMom\_15, Citius\_15, Kyee\_15,
 Melvin\_15, Koreni\_14, Ruin\_15, TygerBlood\_15, PeterPeter\_15, Wilbur\_15,
 Bombshell\_15, TiroTheta9\_15, Shygu2\_15, Burger\_14, Abdiel\_15, LappelDuVide\_15,
 Eris\_15, Caelakin\_15, Broseidon\_15, Druantia\_15, JoongJeon\_15, Maxo\_15,
 Holli\_15, Relief\_15, CentreCat\_15, Millski\_15, TinaFeyge\_15, Jaykayelowell\_15,
 Lorenzo\_15, Nebs\_15, Wander\_15, Phelipe\_15, TroyPia\_15, Skipitt\_15
- Track 169 : Noelle\_15
- Track 170 : Backyardigan\_15, Badger\_15, Datway\_15, Wile\_15, Achebe\_15
- Track 171 : Kremtemulon\_15, Rosa24\_14, Ulysses\_14, Shaka\_15, LittleGuy\_15,
 Camperdownii\_14, LittleB\_15, Pumbaa\_15, LochMonster\_15, Mazhar510\_15,
 Cintron\_15, Kratak\_15, Thanksgivukkah\_15, DirtyDunning\_15, Eros\_15
- Track 172 : Morpher26\_15, Bumblebee11\_15, Cici\_15, PetiteSangsue\_15,
 Perplexer\_15, Katalie136\_15
- Track 173 : ChampagnePapi\_15, LHTSCC\_15, Iceman\_15, Obama12\_15,
 Deano\_15, ICleared\_15, BangNhom\_14, Cerulean\_15, Lunsford\_16, Peaches\_15,
 Lemur\_15, Happiness\_15, Iracema64\_15, Phontbonne\_15, OKaNui\_15,
 SheldonCooper\_15
- Track 174 : Cindaradix\_14
- Track 175 : Ohfah\_15
- Track 176 : Xena\_15
- Track 177 : Stasia\_16
- Track 178 : AbbysRanger\_15

- Track 179 : AvatarAhPeg\_15
- Track 180 : Mundrea\_15
- Track 181 : Tinybot\_14
- Track 182 : Miramae\_15
- Track 183 : Nyxis\_15
- Track 184 : Phighter1804\_15
- Track 185 : Stink\_15
- Track 186 : Archetta\_13, Lev2\_13, UnionJack\_13, ElTiger69\_13, PickleBack\_13
- Track 187 : Chadwick\_14, PetterN\_14, Naca\_13
- Track 188 : ForGetIt\_13, HuhtaEnerson15\_13, Tiger\_13, Theia\_12, Jovo\_13, Cuco\_13, Twigg\_13, Tarynearal\_12, Midas2\_13, Milcery\_13, Swirley\_13, MarysWell\_12, Coog\_13, George\_12, Discoknowium\_13, LittleCherry\_13, Bonamassa\_13, Micasa\_13, Conspiracy\_13
- Track 189 : SydNat\_13, Phlorence\_13, Bluefalcon\_12, Aragog\_13, Ghouboy\_13, AgentM\_13, Zolita\_12
- Track 190 : Scorpia\_14, Benedict\_13, Jabiru\_13, Airmid\_13
- Track 191 : Dublin\_12
- Track 192 : Prinashe11\_14
- Track 193 : BlessJoy\_19, McFly\_19, Cookiedough\_19, Dorothea\_19, Isiphiwo\_19, Wiks\_19, JewelBug\_19, CloudWang3\_19, Pmask\_19, VohminGhazi\_19, Jordennis\_19, Polyphemus\_18, Hoot\_19, Neeharika16\_19, Newrala\_19, SmellyB\_19, Lilbunny\_19, Chartreuse\_19, DaVinci\_19, Helmet\_20, Roksolana\_19, Kipper29\_19, ToneTone\_18, Priamo\_19, WunderPhul\_19, Yokurt\_19, Temprado\_20, EricB\_19, BABullseye\_19, Kazan\_19, Indra\_19, Hexamo\_19, Zulu\_19, Zaka\_19, SuperAwesome\_19, GreedyLawyer\_19, Artemis2UCLA\_19, Candra\_19, Garak\_20
- Track 194 : Rifter\_19, Gladiator\_19, Blue7\_19, Gruunaga\_19
- Track 195 : Koko\_19, Tucker\_19, Blinn1\_19, SuperCallie99\_19, Jeffabunny\_19
- Track 196 : Hammer\_19
- Track 197 : FlyCatcher\_19, Sheen\_17, Toro\_18
- Track 198 : DroogsArmy\_16, Timshel\_16
- Track 199 : HINdeR\_15
- Track 200 : PP\_25
- Track 201 : Smeadley\_13, Danforth\_12, Roary\_13, Expelliarmus\_12, Groundhog\_12, Astro\_13, Dixon\_13
- Track 202 : NearlyHeadless\_13
- Track 203 : Phillis\_13, Saintus\_13, Stephig9\_13
- Track 204 : Qobbit\_17, Phaeder\_17, ExplosioNervosa\_17, Halex\_16, Aliter\_17, Ugenie5\_14, Scherzo\_17, Fayely\_17, Phonnegut\_17, Lilleskat\_15, Tubs\_17, Hanray\_16, EdogawaKiddo\_15, Pioneer\_17, HortumSL17\_17, Onglai\_16, Jiawan\_16, Conquerage\_17, Beemo\_17, Sachima\_15, Myxus\_17, RyeScarlet\_18, PackMan\_17
- Track 205 : Arissanae\_15
- Track 206 : Maminiaina\_17, BogosyJay\_17
- Track 207 : DreamTeam1\_16, Charm\_16
- Track 208 : Rahalelujah\_15
- Track 209 : Priya\_17, EmyBug\_17, Eidsmoe\_17, Alma\_17, Catalina\_17, Spouty\_17
- Track 210 : Keziacharles14\_15
- Track 211 : LoneWolf\_17
- Track 212 : Vanisoa\_15
- Track 213 : Elephantoon\_17
- Track 214 : Darrell\_18
- Track 215 : Yecey3\_16
- Track 216 : SheaKeira\_16

- Track 217 : Toaka\_15
- Track 218 : Raqqa\_7
- Track 219 : AbbyDaisy\_7
- Track 220 : LilBandit\_6
- Track 221 : P106L\_6, P106I\_6, P106M\_6, P106A\_6, P106C\_6
- Track 222 : Enoki\_6
- Track 223 : P101A\_6
- Track 224 : Ouroboros\_6
- Track 225 : BruceLethal\_6
- Track 226 : DrParker\_6
- Track 227 : Attacne\_6
- Track 228 : P107A\_6
- Track 229 : SKKY\_6
- Track 230 : PAS50\_6
- Track 231 : Enochoraptor\_6
- Track 232 : Kubed\_6
- Track 233 : MEAK\_6
- Track 234 : Wizzo\_6
- Track 235 : PHL010M04\_06
- Track 236 : Rileysaurus\_6
- Track 237 : P100.1\_6
- Track 238 : P107C\_6, ATCC29399BC\_6
- Track 239 : Stormborn\_6
- Track 240 : P1.1\_6
- Track 241 : Pirate\_6
- Track 242 : Moyashi\_6
- Track 243 : Aquarius\_6
- Track 244 : PHL060L00\_06
- Track 245 : Cota\_6, Keiki\_6
- Track 246 : PHL071N05\_06
- Track 247 : P9.1\_6
- Track 248 : Procrass1\_6
- Track 249 : P100D\_6
- Track 250 : P104A\_6
- Track 251 : P104B\_6
- Track 252 : Leviosa\_6
- Track 253 : PA6\_6
- Track 254 : PHL113M01\_06
- Track 255 : P14.4\_6
- Track 256 : PHL111M01\_06
- Track 257 : P105\_6
- Track 258 : MrAK\_6
- Track 259 : Supernova\_6
- Track 260 : P108C\_6
- Track 261 : Solid\_6
- Track 262 : Lauchelly\_6
- Track 263 : PHL114L00\_06
- Track 264 : PHL112N00\_06
- Track 265 : P100A\_6
- Track 266 : ATCC29399BT\_6
- Track 267 : PHL067M10\_06
- Track 268 : QueenBey\_6
- Track 269 : PAD20\_6

- Track 270 : PHL037M02\_06
- Track 271 : Dinger\_12, Rasputin\_12, AngryOrchard\_11, Harlequin\_12, BobbyDazzler\_12, Krishelle\_12, Partridge\_12, Bryce\_12, Yoncess\_12, AppleCloud\_10, Takoda\_12, PhailMary\_11, Jester\_12, Hiro\_12
- Track 272 : Lillie\_12, Belenaria\_12, RER2\_5, Shuman\_12, Bradshaw\_12, Rhodalysa\_12, Swann\_12, Erik\_12, Gollum\_12, Nancinator\_12, TWAMP\_12, Espica\_12, CosmicSans\_12, UhSalsa\_12, Alatin\_12, RexFury\_12, Naiad\_12, StCroix\_12, Natosaleda\_12, Phrankenstein\_12
- Track 273 : Bonanza\_12, Alpacados\_11, Yogi\_12
- Track 274 : RGL3\_5
- Track 275 : Fribs8\_9
- Track 276 : Lauer\_7, Feastonyeet\_7, BigChungus\_7
- Track 277 : Elinal\_9, KayGee\_8, Bavidard\_8, Yucky\_10, SummitAcademy\_7, PotPie\_8
- Track 278 : Orla\_10, Hexbug\_10
- Track 279 : Cleo\_8, Gibbous\_8, Dre3\_8
- Track 280 : Tolls\_10, SteamedHams\_10, AndPeggy\_7, CanesSauce\_8, ChocoMunchkin\_8, Yarn\_7
- Track 281 : Vine\_9
- Track 282 : Survivors\_10
- Track 283 : HippoPololi\_10
- Track 284 : Sopespian\_8, Socotra\_9, Nina\_9, Cozz\_8, PsychoKiller\_8, RedBaron\_9, Elliott\_8, Axym\_8, Starburst\_9
- Track 285 : Carsonalex\_9, MunkgeeRoachy\_8, Burnsey\_8, GoldHunter\_9, Typhonmarchy\_9
- Track 286 : Agatha\_8
- Track 287 : Buttrmlkdreams\_8, Horseradish\_9, MScarn\_10, Biskit\_9, Troje\_8, Blondies\_8, SketchMex\_7, SweatNTears\_10, Yummy\_9
- Track 288 : Nodigi\_10
- Track 289 : Amok\_7, Emalyn\_7
- Track 290 : ChickenTender\_10
- Track 291 : MaVan\_10, Azira\_10, Zareef\_12, Nibbles\_10
- Track 292 : Button\_9
- Track 293 : Quasar\_8
- Track 294 : MAnor\_8, Pons\_8, SheckWes\_7, CherryonLim\_9, Mayweather\_9
- Track 295 : AikoCarson\_7
- Track 296 : Yakult\_9
- Track 297 : RanchParmCat\_11, Margaret\_11
- Track 298 : Jamzy\_11
- Track 299 : GiKK\_11
- Track 300 : GTE2\_06
- Track 301 : BillDoor\_10
- Track 302 : Morkie\_6, PhorbesPhlower\_6
- Track 303 : Lucky10\_6
- Track 304 : Ecliptus\_7, Holliday\_7, LitninMcQueen\_7, Kamaru\_7, CheeseTouch\_7, ODay\_7, Budski\_7, ShawBrad\_7, Phabuloso\_7
- Track 305 : Malisha\_7
- Track 306 : Kenna\_7, BENtherdunthat\_7, Asapag\_7, Getalong\_7, BotCity\_7, Periwinkle\_7, Whitney\_7, Horus\_7, Leroy\_7, Lutum\_7, Frickyeah\_7
- Track 307 : Phistory\_7
- Track 308 : Spooky\_7
- Track 309 : Squiddly\_8
- Track 310 : Ogopogo\_8

- Track 311 : SilverChicken\_7, Avani\_7
- Track 312 : Soul22\_7, Yoshi\_7, Demsculpinboyz\_7, Blarby\_8, Zapner\_8, Jabbawokkie\_8, Che9d\_7
- Track 313 : CallinAllBarbz\_6
- Track 314 : BaileyBlu\_6
- Track 315 : Jankie\_6
- Track 316 : MrSmee\_6
- Track 317 : Pitbull\_6
- Track 318 : Skitty\_7
- Track 319 : Hum25\_6
- Track 320 : TMaxx\_8
- Track 321 : Neuville\_8, Annabelle\_8
- Track 322 : Audell\_11
- Track 323 : Sweets\_7, TinaBug\_7, Halo\_7
- Track 324 : Maliketh\_7, Cherrybomb426\_7, AzulaCat\_7, BruceB\_7, Hope\_7, Hotshotbaby7\_7, Coleslaw\_7, Grizzly\_7, PinkYoshi\_7, Liefie\_7, DNAll\_007, Kasen3\_7, Wendigo\_7, Chance64\_7, Gomashi\_7, Barkley26\_7, Sizemore\_7, Peeb\_7, Marmie\_7, ECartman\_7, Phish\_7, Jane\_7, DMoney\_7, CLED96\_7, Jonghyun\_7, Renaissance\_7, Remy19\_7, Cedasite\_7, Periodt\_7, Darionha\_7, Crespo\_7, Mowgli\_7, GoldenAsh\_7, Schiebel\_7, Frosty24\_7, OctaviousRex\_7, BPs\_7, Zombie\_7, Plagueis\_7, CassieYates\_7, Olga\_7, BQuat\_7, ShaboiShabazz\_7, Aroostook\_7, JorRay\_7, LouisV14\_7, Gideon\_7, Jolene\_7, Avrafan\_7, TomBrady\_7, Camri\_7, Annihilator\_7, ZoMa\_7, Kareem\_7, Angel\_7, Phreak\_7
- Track 325 : Rabbs\_7, Sneeze\_7
- Track 326 : Terror\_7, Taheera\_7
- Track 327 : Paito\_7
- Track 328 : Pace1224\_7, FlagStaff\_7
- Track 329 : Avocado\_7, Cambiare\_8
- Track 330 : Pinnie\_8
- Track 331 : MOOREtheMARYer\_7
- Track 332 : Jolie2\_7
- Track 333 : Mercurio\_8
- Track 334 : Lemuria\_7
- Track 335 : Antsirabe\_7
- Track 336 : Stargaze\_7
- Track 337 : P3MA\_7
- Track 338 : Spartoi\_6
- Track 339 : IdentityCrisis\_7
- Track 340 : ArV2\_06

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

The start number called the most often in the published annotations is 6, it was called in 512 of the 1014 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_16, 40AC\_19, A6\_13, AFIS\_15, AN3\_16, AN9\_19, ANI8\_19, AbbyPaige\_18, AbbysRanger\_15, Abbyshoes\_16, Abdiel\_15, Abrogate\_160, Achebe\_15, Acme\_17, Acolyte\_16, Adahisdi\_16, Adzzy\_17, Aeneas\_17, Agaliana\_15, Agape74\_18, Ajay\_15, Albee\_15, Alberto7\_16, Aliter\_17, Alma\_17, Alsfro\_19, Altman\_16,



Alvin\_16, Anaysia\_18, Anglerfish\_16, AnnaL29\_19, Annyong\_15, Anon\_16, Anselm\_16, Anthony\_15, Applejack\_15, Arcanine\_16, ArcherNM\_18, Arissanae\_15, Arlo\_14, Arturo\_14, Ashballer\_14, Atkinbua\_16, AvatarAhPeg\_15, Avle17\_15, BK1\_13, BPBiabs31\_16, Baby16\_15, BabyBack\_18, Backyardigan\_15, BaconJack\_17, Bactobuster\_17, Badger\_15, Baehexic\_17, BangNhom\_14, Barriga\_15, BarrowTuph\_14, Bartimeaus\_15, Battleship\_19, Beatrix\_14, Beemo\_17, BeesKnees\_16, BellusTerra\_15, BengiVuitton\_17, Benvolio\_16, Bethlehem\_15, Bexan\_14, BiancaTri92\_18, Big3\_15, BigMau\_17, BigPaolini\_16, Bigchung\_15, Bigfoot\_14, Bircsak\_15, Blackmoor\_15, BluSpix\_15, Blue\_15, Bob3\_14, BogosyJay\_17, Bombshell\_15, Bones\_15, Boohoo\_18, Bradman\_15, Briton15\_17, Broseidon\_15, Bruiser\_15, Brunns\_14, BubbleTrouble\_15, Bugsy\_18, Bumblebee11\_15, Burger\_14, Burton\_16, Buttons\_16, C3\_14, CRB1\_16, CactusRose\_14, Caelakin\_15, Camperdownii\_14, Caraxes\_15, Carlyle\_17, Catalina\_17, Centaur\_18, CentreCat\_15, Cerulean\_15, ChampagnePapi\_15, Chanagan\_14, Changeling\_19, Chaph\_15, Charm\_16, Che12\_17, ChipMunk\_18, Chupacabra\_15, Ciao\_15, Cici\_15, Cindaradix\_14, Cintron\_15, Citius\_15, Clarenza\_15, Cocoaberry\_15, Commander\_15, Conceptll\_15, Connomayer\_15, Conquerage\_17, Corvo\_15, Crispicous1\_14, Crucio\_16, Cueyllyss\_15, DD5\_16, Dalmatian\_16, Darrell\_18, DarthPhader\_17, Datway\_15, Deano\_15, DekHockey33\_18, Deloris\_17, Dexes\_16, Dhanush\_15, Dignity\_18, DirtyDunning\_15, DontArgue\_14, Doom\_15, DrFeelGood\_14, Drake55\_18, Drake94\_14, DreamCatcher\_18, DreamTeam1\_16, Dreamboat\_16, DroogsArmy\_16, Druantia\_15, DudeLittle\_16, Dulcie\_14, Dussy\_16, DustyMartin\_18, Dynamix\_16, EZMoney23\_20, EagleEye\_18, Eagle\_14, Eaglepride\_16, Eapen\_15, Echild\_16, Edison31\_15, EdogawaKiddo\_15, Edtherson\_16, Eidsmoe\_17, Elephantoon\_17, EmyBug\_17, EnzoK\_15, Epsocamisio\_18, Equemioh13\_18, Eris\_15, Eros\_15, Espresso\_15, Euphoria\_15, Eurydice\_15, EvilGenius\_18, ExplosioNervosa\_17, Eyeball\_15, Fajezeel\_17, Fameo\_16, Fascinus\_14, FatCactus\_14, Fayely\_17, Fenn\_16, FiringLine\_16, First\_0016, Flare16\_16, Florean\_15, Flux\_15, Forsytheast\_14, Francis47\_15, Froghopper\_16, Funston\_15, Fushigi\_16, GMonster\_14, Gadost\_15, GageAP\_17, Gandalf20\_16, Georgie2\_17, Gompeii16\_15, Goose\_15, Graduation\_17, Gratitude\_17, GrecoEtereo\_16, Greg\_17, Gwendoluna\_17, Gyzlar\_17, HINdeR\_15, HamSlice\_14, Hami1\_17, HanShotFirst\_15, Hanray\_16, Happiness\_15, HarryHoudini\_18, HarryOW\_16, Heffalump\_18, Hermia\_17, HermioneGrange\_15, Horex\_16, Holli\_15, Homines\_15, Hope4ever\_15, HortumSL17\_17, Houdini22\_15, Huxley\_15, ICleared\_15, ILeeKay\_17, Iceman\_15, Ichabod\_16, IgnatiusPatJac\_14, Inyanga\_14, Iqorha\_14, Iracema64\_15, IronMan\_18, Iwokeuplikedis\_16, JC27\_17, JSwag\_18, Jaan\_19, JackSparrow\_16, Jasper\_16, Jaykayelowell\_15, Jerm2\_16, Jerm\_18, JetBlade\_15, Jiawan\_16, JoongJeon\_15, Jorgensen\_15, JoshKayV\_18, Journey13\_14, Jsquared\_15, JuliaChild\_17, KBG\_16, KFPoly\_15, KSSJEB\_15, Kalpine\_19, Kampy\_15, Kanely\_16, Katalie136\_15, KatherineG\_18, Kenmech\_18, Keziacharles14\_15, Killigrew\_13, Kimona\_12, KingCyrus\_18, Kingmustik0402\_15, KittenMittens\_14, Koan\_14, Koreni\_14, Kratark\_15, Kremtemulon\_15, Kristoff\_16, KyMonks1A\_17, Kyee\_15, LHTSCC\_15, LadyBird\_16, Lamina13\_15, Landor\_17, LappelDuVide\_15, Larenn\_17, LastResort\_18, Lemur\_15, LeoAvram\_15, Leogania\_18, Lesedi\_14, Levia\_14, Leviathan\_18, Licorice\_17, LilBib\_16, LilTurb\_18, Lilleskat\_15, LionsBait\_17, LittleB\_15, LittleGuy\_15, LochMonster\_15, Lockley\_15, LoneWolf\_17, Looper\_19, Lopton\_16, Lorenzo\_15, Loser\_19, Lucyedi\_17, LunarLander\_15, Lunsford\_16, MPlant7149\_14, Magnar\_15, Magnito\_14, MajorMajor\_15, Makemake\_15, Malec\_17, Maminiaina\_17, Manatee\_16, Marcell\_15, Marchy\_14, Marco3\_15, Marge\_16, Maroc7\_14, Marsha\_15, MaryBeth\_15, Maverick\_15, Maxo\_15, Mayonnaise\_15, Mazhar510\_15, McGuire\_16, McSinger\_16,

Medusa\_15, MeeZee\_15, Melvin\_15, MetalQZJ\_15, Michley\_15, MiculUcigas\_16, Millski\_15, MinecraftSteve\_19, Miramae\_15, MissWhite\_16, Mkhuseli\_16, Molly\_16, Monet\_17, Moose\_14, Morpher26\_15, Morrow\_15, MrGordo\_15, Mryolo\_14, Mule\_15, Mundrea\_15, Museum\_17, Myxus\_17, NEHalo\_15, NaSiaTalie\_16, Naira\_16, Nebs\_15, Nebulosus\_18, Nedarya\_17, Nemo27\_15, Nerujay\_16, Nhonho\_15, NicoleTera\_20, Niza\_17, Noelle\_15, NorthStar\_15, Norz\_17, NotAPhaseMom\_15, NothingSpecial\_18, Nyxis\_15, OKCentral2016\_15, OKaNui\_15, Obama12\_15, Odin\_15, Ohfah\_15, Ohno789\_15, Onglai\_16, Oofda\_19, Oogway\_14, PSullivan\_17, PacerPaul\_15, PackMan\_17, PainterBoy\_17, Palestino\_15, Papez\_17, Paphu\_14, Paraselene\_14, Pari\_16, Parliament\_14, PascalRango\_14, PattyP\_17, Payneful\_15, PeaceMeal1\_14, Peaches\_15, Pelly\_16, Pepe\_16, Perplexer\_15, Perseus\_16, PeterPeter\_15, Peterson\_18, PetiteSangsue\_15, Petp2012\_17, Petruccio\_15, Ph8s\_17, Phacado\_15, Phaded\_19, Phaeder\_17, Pharaoh\_16, Felipe\_15, PherrisBueller\_16, Phighter1804\_15, PhineBark\_15, Phippers\_14, Phonnegut\_17, Phontbonne\_15, PhrostyMug\_15, PinkPlastic\_14, Pinto\_17, Pioneer\_17, Pipcraft\_15, Pippin\_17, Piro94\_17, Pita2\_17, Polymorphads\_15, Poompha\_14, Power\_16, Priya\_17, ProMouse\_14, Pukovnik\_18, Pumbaa\_15, QTRLifeCrisis\_15, Qobbit\_17, QueenB2\_16, QueenBeesly\_16, Quokka\_14, Rahalelujah\_15, Raid\_16, Rajelicia\_15, ReMo\_18, Rebeuca\_16, RedRock\_19, Refuge\_19, Relief\_15, Remus\_18, Retro23\_16, RhynO\_16, Rhynn\_15, RidgeCB\_15, Ringer\_15, Rohr\_16, Romney\_15, Roosevelt\_15, Rosa24\_14, Rosalind\_18, Rowdy\_18, Rubeus\_16, Rufus\_16, Ruin\_15, Ruotula\_14, Rutherferd\_17, RyeScarlet\_18, STLScum\_16, Sabertooth\_15, Sachima\_15, Sagefire\_16, Sandaddy\_14, Sanya\_14, SarFire\_15, Scamp\_15, Scherzo\_17, Scowl\_16, Seabiscuit\_17, Seanderson\_16, SemperFi\_18, SenorClean\_14, Serenity\_15, Severus\_14, Shaka\_15, Shapes\_18, ShayRa\_19, SheaKeira\_16, SheldonCooper\_15, ShortQueendom\_14, Shygu2\_15, Sibs6\_17, SkiPole\_17, Skipitt\_15, Sknot\_17, Slagathor\_16, Smairt\_16, Smeagan\_18, Smeagol\_16, SnapTap\_16, Snazzy\_13, Solon\_15, Sorpresa\_15, Soups\_18, Sparxx\_15, SpikeBT\_17, Spino\_15, Spouty\_17, Squee\_16, Stasia\_16, Steamy\_17, StewieG\_14, Stink\_15, StrongArm\_14, Strosahl\_18, Sumter\_14, Sunshine924\_14, Superchunk\_15, SweetiePie\_16, SwirlSquare\_18, SwissCheese\_15, Switzer\_16, Switzerland\_18, Swole\_17, Taquarus\_15, TarsusIV\_16, Tasp14\_16, Teodoridan\_13, Terrific\_20, Thanksgivukkah\_15, TheloniousMonk\_17, Thor\_15, Timshel\_16, TinaFeyge\_15, Tinybot\_14, TopsytheTRex\_15, TiroTheta9\_15, Toaka\_15, Topanga\_15, Topgun\_15, Tote\_17, Traft412\_17, Treddle\_17, Trike\_13, Tripl3t\_16, Tristan\_17, Trixie\_19, Trooper\_16, Trouble\_15, TroyPia\_15, Tubs\_17, Turbido\_18, Turj99\_14, Twister\_15, TwoPeat\_16, TygerBlood\_15, U2\_15, Ugenie5\_14, Ulysses\_14, Updawg\_18, VA6\_16, VC3\_19, Vanisoa\_15, Violet\_14, Waits\_18, WalterMcMickey\_15, Wander\_15, Warrior24\_19, Watermelon\_17, WeiHuaDA\_22, Whabigail7\_18, Wheeler\_15, WideWale\_18, Wilbur\_15, Wile\_15, Wilkins\_15, Wizard007\_15, Xena\_15, Yecey3\_16, YoSam321\_15, Zeeculate\_14, Zephyr\_15, Zeuska\_16, Zimmer\_18,

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

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

- ACFishhook\_17, ATCC29399BC\_6, ATCC29399BT\_6, AbbyDaisy\_7, Agatha\_8, AgentM\_13, Aglet\_17, AgronaGT15\_17, AikoCarson\_7, Airmid\_13, Alatin\_12, Alpacados\_11, Amok\_7, AndPeggy\_7, Aneem\_16, Angel\_7, AngryOrchard\_11, AnnabelLee\_8, Annihilator\_7, Antsirabe\_7, Anubis\_19, AppleCloud\_10, Aquarius\_6, ArV2\_06, Aragog\_13, Archetta\_13, Aroostook\_7, Artemis2UCLA\_19, Asapag\_7,

Astro\_13, Attacne\_6, Audell\_11, AugsMagnumOpus\_19, Avani\_7, Avocado\_7, Avrafan\_7, Axym\_8, Azira\_10, AzulaCat\_7, B1\_13, BABullseye\_19, BENtherdunthat\_7, BPs\_7, BQuat\_7, BabyJohn\_14, BabyRay\_15, Bachome\_16, BaileyBlu\_6, Barkley26\_7, Bavilard\_8, Beauxregard13\_17, Belenaria\_12, Benedict\_13, BigChungus\_7, Bigflo\_17, BillDoor\_10, BillKnuckles\_16, Biskit\_9, Blarby\_8, BlessJoy\_19, Blinn1\_19, Blondies\_8, Blue7\_19, BlueBird\_16, Bluefalcon\_12, BobSwaget\_19, BobbyDazzler\_12, Bonamassa\_13, Bonanza\_12, BotCity\_7, Bowtie\_16, Bradshaw\_12, BreSam8\_17, BruceB\_7, BruceLethal\_6, Bryce\_12, Bud\_16, Budski\_7, Bugatti\_15, Burnsey\_8, Button\_9, Buttrmlkdreams\_8, BuzzBuzz\_16, Bxb1\_14, Bxz2\_17, CLED96\_7, CallinAllBarbz\_6, Calvinny\_18, Cambiare\_8, Camri\_7, Candra\_19, CanesSauce\_8, Carsonalex\_9, CassieYates\_7, Caviar\_16, Cedasite\_7, Chadwick\_14, Chance64\_7, Chargerpower\_16, Chartreuse\_19, Che9d\_7, CheeseTouch\_7, Cherrybomb426\_7, CherryonLim\_9, ChickenTender\_10, Chiqui\_14, ChocoMunchkin\_8, Cleo\_8, CloudWang3\_19, Colbster\_17, Coleslaw\_7, Colin\_20, Conspiracy\_13, Coog\_13, Cookiedough\_19, CosmicSans\_12, Cota\_6, Cozz\_8, Crespo\_7, Cuco\_13, Cullens\_17, D29\_17, D32\_19, DBQu4n\_19, DMoney\_7, DNAllI\_007, DaHudson\_17, DaVinci\_19, Daishi\_16, Danforth\_12, Darionha\_7, Demsculpinboyz\_7, Dieselweasel\_17, Dinger\_12, Discoknowium\_13, Dixon\_13, Dorothea\_19, DrParker\_6, Dre3\_8, DropBear\_15, Dublin\_12, Duplo\_19, ECartman\_7, Ebony\_16, Ecliptus\_7, EITiger69\_13, Elinal\_9, Elliott\_8, Emalyn\_7, Enochoraptor\_6, Enoki\_6, EpicPhail\_17, EricB\_19, Erik\_12, Espica\_12, Et2Brutus\_15, Expelliarmus\_12, Farber\_17, Feastonyeet\_7, Fernando\_17, Fibonacci\_16, FlagStaff\_7, Flaverint\_16, FlyCatcher\_19, ForGetIt\_13, Fred313\_15, Fribs8\_9, Frickyeah\_7, Frosty24\_7, GTE2\_06, Gail\_15, Garak\_20, GaugeLDP\_18, Gemma\_17, George\_12, Getalong\_7, Ghoulboy\_13, GiKK\_11, Gibbous\_8, Gideon\_7, Gilberta\_16, GingkoMaracino\_17, Giroux\_15, Gladiator\_19, GoldHunter\_9, GoldenAsh\_7, Gollum\_12, Gomashi\_7, GreedyLawyer\_19, Grif\_17, Grizzly\_7, Groundhog\_12, Groupthink\_18, Grub\_17, Grum1\_17, Gruunaga\_19, GtownJaz\_17, Halo\_7, Hammer\_19, Harlequin\_12, HashRod\_18, HaveUMetTed\_18, Heathen\_15, HelDan\_15, Heliosoles\_17, Helmet\_20, Herbertwm\_14, Hercules11\_17, Hexamo\_19, Hexbug\_10, HippoPololi\_10, Hiro\_12, Holliday\_7, Hookmount\_16, Hoot\_19, Hope\_7, Horseradish\_9, Horus\_7, Hotshotbaby7\_7, HuhtaEnerson15\_13, Hum25\_6, Hutc2\_16, IdentityCrisis\_7, Idleandcovert\_15, Indra\_19, Insomnia\_16, Isca\_15, Isiphiwo\_19, JF2\_15, JF4\_15, JHC117\_17, Jabbawokkie\_8, Jabiru\_13, Jabith\_16, Jamzy\_11, Jane\_7, Jankie\_6, Jeeves\_15, Jeffabunny\_19, JenCasNa\_17, JeppNRM\_18, Jester\_12, JewelBug\_19, Jobu08\_17, Jolene\_7, Jolie2\_7, Jonghyun\_7, JorRay\_7, Jordennis\_19, Joselito\_16, Jovo\_13, KADY\_18, Kachowdy\_15, Kalb97\_18, Kalnoky\_18, Kamaru\_7, Kareem\_7, Kasen3\_7, KayGee\_8, Kazan\_19, Keiki\_6, Kenna\_7, Kerberos\_19, Kinmap\_15, Kipper29\_19, Koduck\_16, Koko\_19, Krishelle\_12, Kubed\_6, Kugel\_16, Kykar\_13, L5\_17, LBerry\_17, Lambert1\_16, LarryKay\_17, Lauchelly\_6, Lauer\_7, Lemuria\_7, Leroy\_7, Lev2\_13, Leviosa\_6, Liefie\_7, LilBandit\_6, Lilbunny\_19, Lilith\_17, Lillie\_12, LitninMcQueen\_7, LittleCherry\_13, Lokk\_19, Louie6\_17, LouisV14\_7, Lova\_17, Luchador\_16, Lucivia\_16, Lucky10\_6, LugYA\_19, Lutum\_7, MA5\_15, MAnor\_8, MEAK\_6, MK4\_15, MOOREtheMARYer\_7, MScarn\_10, MaCh\_16, MaVan\_10, Mabel\_16, MadMarie\_17, Mainiac\_17, Maliketh\_7, Malinsilva\_19, Malisha\_7, Manu\_18, MarQuardt\_17, Marchesa\_15, Margaret\_11, Margo\_16, Marie\_17, Marius\_18, Marmie\_7, MarysWell\_12, Mayweather\_9, McFly\_19, Mercurio\_8, Methuselah\_17, Micasa\_13, Microwolf\_17, Midas2\_13, Miko\_19, Milcery\_13, Misomonster\_19, MoneyMay\_17, Morkie\_6, Mowgli\_7, Moyashi\_6, MrAK\_6, MrSmee\_6, MuchMore\_19, Mulciber\_16, Munch\_16, MunkgeeRoachy\_8, MyraDee\_13, Naca\_13, Naiad\_12, Naji\_19, Nancinator\_12, Natosaleda\_12,

NearlyHeadless\_13, Neeharika16\_19, Neuville\_8, Newrala\_19, Nibbles\_10, Nina\_9, Nodigi\_10, Noella\_16, Norbert\_15, ODay\_7, OctaviousRex\_7, Ogopogo\_8, OlanP\_17, Olga\_7, Ollie\_17, Orange\_16, Orla\_10, Ouroboros\_6, P1.1\_6, P100.1\_6, P100A\_6, P100D\_6, P101A\_6, P104A\_6, P104B\_6, P105\_6, P106A\_6, P106C\_6, P106I\_6, P106L\_6, P106M\_6, P107A\_6, P107C\_6, P108C\_6, P14.4\_6, P28Green\_17, P3MA\_7, P9.1\_6, PA6\_6, PAD20\_6, PAS50\_6, PGHhamlin\_19, PHL010M04\_06, PHL037M02\_06, PHL060L00\_06, PHL067M10\_06, PHL071N05\_06, PHL111M01\_06, PHL112N00\_06, PHL113M01\_06, PHL114L00\_06, PP\_25, Pace1224\_7, Paito\_7, Panamaxus\_16, Partridge\_12, Pawn\_17, Peeb\_7, Pembroke\_17, Penny1\_17, Periodt\_7, Periwinkle\_7, Petersenfast\_15, PetterN\_14, Phabuloso\_7, PhailMary\_11, Phantastic\_15, Phillis\_13, PhishRPhriends\_16, Phish\_7, Phistory\_7, Phlei\_12, Phlorence\_13, Phoebe\_17, PhorbesPhlower\_6, Phoxy\_17, Phrankenstein\_12, Phranny\_18, Phreak\_7, PickleBack\_13, PinkYoshi\_7, Pinnie\_8, Pirate\_6, Pistachio\_16, Pitbull\_6, Plagueis\_7, Pmask\_19, Pocahontas\_16, Polyphemus\_18, Pomar16\_19, Pons\_8, Popcicle\_16, PotPie\_8, PotatoSplit\_18, Priamo\_19, Prinash11\_14, Procrass1\_6, PsychoKiller\_8, Puppy\_16, PurpleHaze\_17, Quasar\_8, QueenBey\_6, QuinnKiro\_15, RER2\_5, RGL3\_5, Rabbs\_7, Rachaly\_19, RanchParmCat\_11, Raqqa\_7, Rasputin\_12, Reba\_18, RedBaron\_9, Remy19\_7, Renaissance\_7, ResDef\_16, RexFury\_12, Rhodalysa\_12, Rifter\_19, Rileysaurus\_6, Roary\_13, Rockstar\_15, Roksolana\_19, Rummer\_17, SKKY\_6, Sabia\_17, Sabinator\_17, Saintus\_13, Salz\_16, SaturnRing\_15, Schiebel\_7, Scorpio\_14, Scout\_15, ShaboiShabazz\_7, Sham4\_16, ShawBrad\_7, SheckWes\_7, Sheen\_17, Shuman\_12, SilverChicken\_7, Sizemore\_7, SketchMex\_7, Skitty\_7, Smeadley\_13, SmellyB\_19, Snape\_16, Sneeze\_7, Snickers\_17, SoYo\_17, Socotra\_9, SoilDragon\_17, Solid\_6, Sopespian\_8, SororFago\_15, Soshari\_19, Soul22\_7, Spartoi\_6, Spike509\_17, Spooky\_7, Squiddly\_8, StCroix\_12, Stagni\_17, StarStuff\_19, Starburst\_9, Stargaze\_7, SteamedHams\_10, StepMih\_17, Stephig9\_13, Stormborn\_6, SummitAcademy\_7, Sunhee\_14, SuperAwesome\_19, SuperCallie99\_19, Supernova\_6, Survivors\_10, Swann\_12, SweatNTears\_10, Sweets\_7, Swirley\_13, SydNat\_13, TMaxx\_8, TNguyen7\_15, TWAMP\_12, Taheera\_7, Takoda\_12, Target\_17, Tarynearal\_12, Taurus\_17, Temprado\_20, Terror\_7, Texage\_15, Theia\_12, Tiffany\_17, Tiger\_13, Timothy\_16, TinaBug\_7, TinyPebbles\_17, TinyTimmy\_16, Todacoro\_16, Tolls\_10, TomBrady\_7, Tomathan\_19, ToneTone\_18, Toro\_18, Travvers\_19, Troje\_8, Tucker\_19, Twigg\_13, Typhonmacy\_9, UhSalsa\_12, UnionJack\_13, Veracruz\_15, Vine\_9, Vix\_17, VohminGhazi\_19, Watson\_17, Wendigo\_7, Whitney\_7, Wiks\_19, Wizzo\_6, Wooldri\_19, WunderPhul\_19, XianYue\_16, Yakult\_9, Yarn\_7, Yogi\_12, Yokurt\_19, Yoncess\_12, Yoshi\_7, Yucky\_10, Yummy\_9, Zaka\_19, Zapner\_8, Zareef\_12, Zetzy\_16, ZoMa\_7, Zolita\_12, Zombie\_7, Zulu\_19,

### Summary by start number:

#### Start 2:

- Found in 4 of 1153 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Colin\_20 (A2), GaugeLDP\_18 (A2), Koduck\_16 (A2), L5\_17 (A2),

#### Start 3:

- Found in 1 of 1153 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1014
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Hammer\_19 (A6),

#### Start 4:

- Found in 1 of 1153 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: XianYue\_16 (A2),

#### Start 5:

- Found in 84 of 1153 ( 7.3% ) of genes in pham
- Manual Annotations of this start: 75 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aneem\_16 (A11), Artemis2UCLA\_19 (A6), BABullseye\_19 (A6), Bachome\_16 (A11), BlessJoy\_19 (A6), Blinn1\_19 (A6), Blue7\_19 (A6), Bowtie\_16 (A11), Bud\_16 (A11), Candra\_19 (A6), Chartreuse\_19 (A6), CloudWang3\_19 (A6), Cookiedough\_19 (A6), D29\_17 (A2), D32\_19 (A2), DBQu4n\_19 (A2), DaVinci\_19 (A6), Dorothea\_19 (A6), Duplo\_19 (A2), Ebony\_16 (A11), EricB\_19 (A6), Et2Brutus\_15 (A11), Fibonacci\_16 (A11), Flaverint\_16 (A11), Garak\_20 (A6), Gilberta\_16 (A11), Gladiator\_19 (A6), GreedyLawyer\_19 (A6), Gruunaga\_19 (A6), Helmet\_20 (A6), Herbertwm\_14 (A2), Hexamo\_19 (A6), Hoot\_19 (A6), Hutc2\_16 (A11), Indra\_19 (A6), Insomnia\_16 (A11), Isiphiwo\_19 (A6), Jabith\_16 (A11), Jeffabunny\_19 (A6), JewelBug\_19 (A6), Jordennis\_19 (A6), Joselito\_16 (A11), Kazan\_19 (A6), Kerberos\_19 (A2), Kipper29\_19 (A6), Koko\_19 (A6), Lilbunny\_19 (A6), Lucivia\_16 (A11), MaCh\_16 (A11), Mabel\_16 (A11), McFly\_19 (A6), Mulciber\_16 (A11), Munch\_16 (A11), Naji\_19 (A2), Neeharika16\_19 (A6), Newrala\_19 (A6), Orange\_16 (A11), Petersenfast\_15 (A11), Pmask\_19 (A6), Polyphemos\_18 (A6), Pomar16\_19 (A2), Priamo\_19 (A6), Rifter\_19 (A6), Roksolana\_19 (A6), Salz\_16 (A11), Sham4\_16 (A11), SmellyB\_19 (A6), Snape\_16 (A11), StarStuff\_19 (A2), SuperAwesome\_19 (A6), SuperCallie99\_19 (A6), Temprado\_20 (A6), Timothy\_16 (A11), TinyTimmy\_16 (A11), Tomathan\_19 (A2), ToneTone\_18 (A6), Travvers\_19 (A2), Tucker\_19 (A6), VohminGhazi\_19 (A6), Wiks\_19 (A6), WunderPhul\_19 (A6), Yokurt\_19 (A6), Zaka\_19 (A6), Zulu\_19 (A6),

#### Start 6:

- Found in 569 of 1153 ( 49.3% ) of genes in pham
- Manual Annotations of this start: 512 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 20ES\_16 (A2), 40AC\_19 (A17), A6\_13 (A1), AFIS\_15 (A1), AN3\_16 (A2), AN9\_19 (A2), ANI8\_19 (A2), AbbyPaige\_18 (A2), AbbysRanger\_15 (A4), Abbyshoes\_16 (A1), Abdiel\_15 (A4), Abrogate\_160 (A1), Achebe\_15 (A4), Acme\_17 (A1), Acolyte\_16 (A2), Adahisdi\_16 (A1), Adzzy\_17 (A2), Aeneas\_17 (A1), Agaliana\_15 (A1), Agape74\_18 (A2), Ajay\_15 (A1), Albee\_15 (A4), Alberto7\_16 (A4), Aliter\_17 (A9), Alma\_17 (A9), Alsfro\_19 (A1), Altman\_16 (A1), Alvin\_16 (A1), Anaysia\_18 (A15), Anglerfish\_16 (A1), AnnaL29\_19 (A2), Annyong\_15 (A4), Anon\_16 (A15), Anselm\_16 (A2), Anthony\_15 (A20), Applejack\_15 (A1), Arcanine\_16 (A1), ArcherNM\_18 (A2), Arissanae\_15 (A9), Arlo\_14 (A1), Arturo\_14 (A4), Ashballer\_14 (A1), Atkinbua\_16 (A1), AvatarAhPeg\_15 (A4), Avle17\_15 (A4), BK1\_13 (A1), BPBiobs31\_16 (A1), Baby16\_15 (A4), BabyBack\_18 (A2), Backyardigan\_15 (A4), BaconJack\_17 (A1), Bactobuster\_17 (A2), Badger\_15 (A4), Baehexic\_17 (A2), BangNhom\_14 (A4), Barriga\_15 (A1), BarrowTuph\_14 (A1), Bartimeaus\_15 (A4), Battleship\_19 (A15), Beatrix\_14 (A1), Beemo\_17 (A9), BeesKnees\_16 (A1), BellusTerra\_15 (A4), BengiVuitton\_17 (A2), Benvolio\_16 (A2), Bethlehem\_15 (A1), Bexan\_14 (A1), BiancaTri92\_18 (A2), Big3\_15 (A1), BigMau\_17

(A1), BigPaolini\_16 (A1), Bigchung\_15 (A1), Bigfoot\_14 (A1), Bircsak\_15 (A1), Blackmoor\_15 (A4), BluSpix\_15 (A1), Blue\_15 (A1), Bob3\_14 (A1), BogosyJay\_17 (A9), Bombshell\_15 (A4), Bones\_15 (A1), Boohoo\_18 (A15), Bradman\_15 (A2), Briton15\_17 (A1), Broseidon\_15 (A4), Bruiser\_15 (A4), Bruns\_14 (A1), BubbleTrouble\_15 (A4), Buggy\_18 (A2), Bumblebee11\_15 (A4), Burger\_14 (A4), Burton\_16 (A1), Buttons\_16 (A1), C3\_14 (A2), CRB1\_16 (A2), CactusRose\_14 (A1), Caelakin\_15 (A4), Camperdownii\_14 (A4), Caraxes\_15 (A2), Carlyle\_17 (A1), Catalina\_17 (A9), Centaur\_18 (A2), CentreCat\_15 (A4), Cerulean\_15 (A4), ChampagnePapi\_15 (A4), Chanagan\_14 (A1), Changeling\_19 (A2), Chaph\_15 (A4), Charm\_16 (A9), Che12\_17 (A2), ChipMunk\_18 (A2), Chupacabra\_15 (A10), Ciao\_15 (A1), Cici\_15 (A4), Cindaradix\_14 (A4), Cintron\_15 (A4), Citius\_15 (A4), Clarenza\_15 (A4), Cocoaberry\_15 (A4), Commander\_15 (A4), Concept11\_15 (A1), Connomayer\_15 (A4), Conquerage\_17 (A9), Corvo\_15 (A1), Crispicous1\_14 (A1), Crucio\_16 (A2), Cueyliss\_15 (A1), DD5\_16 (A1), Dalmatian\_16 (A2), Darrell\_18 (A9), DarthPhader\_17 (A12), Datway\_15 (A4), Deano\_15 (A4), DekHockey33\_18 (A15), Deloris\_17 (A2), Dexes\_16 (A1), Dhanush\_15 (A4), Dignity\_18 (A2), DirtyDunning\_15 (A4), DontArgue\_14 (A10), Doom\_15 (A1), DrFeelGood\_14 (A1), Drake55\_18 (A2), Drake94\_14 (A10), DreamCatcher\_18 (A1), DreamTeam1\_16 (A9), Dreamboat\_16 (A1), DroogsArmy\_16 (A7), Druantia\_15 (A4), DudeLittle\_16 (A2), Dulcie\_14 (A1), Dussy\_16 (A1), DustyMartin\_18 (A10), Dynamix\_16 (A1), EZMoney23\_20 (A2), EagleEye\_18 (A16), Eagle\_14 (A4), Eaglepride\_16 (A10), Eapen\_15 (A4), Echild\_16 (A2), Edison31\_15 (A10), EdogawaKiddo\_15 (A9), Edtherson\_16 (A1), Eidsmoe\_17 (A9), Elephantoon\_17 (A9), EmyBug\_17 (A9), EnzoK\_15 (A1), Epsocamisio\_18 (A15), Equemioh13\_18 (A2), Eris\_15 (A4), Eros\_15 (A4), Espresso\_15 (A1), Euphoria\_15 (A1), Eurydice\_15 (A4), EvilGenius\_18 (A2), ExplosioNervosa\_17 (A9), Eyeball\_15 (A1), Fajezeel\_17 (A1), Fameo\_16 (A2), Fascinus\_14 (A1), FatCactus\_14 (A20), Fayely\_17 (A9), Fenn\_16 (A1), FiringLine\_16 (A2), First\_0016 (A2), Flare16\_16 (A2), Florean\_15 (A4), Flux\_15 (A4), Forsytheast\_14 (A1), Francis47\_15 (A1), Froghopper\_16 (A1), Funston\_15 (A4), Fushigi\_16 (A1), GMonster\_14 (A1), Gadost\_15 (A4), GageAP\_17 (A1), Gandalf20\_16 (A1), Georgie2\_17 (A2), Gompeii16\_15 (A1), Goose\_15 (A10), Graduation\_17 (A1), Gratitude\_17 (A2), GrecoEtereo\_16 (A1), Greg\_17 (A1), Gwendoluna\_17 (A1), Gyzlar\_17 (A1), HINdeR\_15 (A7), HamSlice\_14 (A4), Hami1\_17 (A1), HanShotFirst\_15 (A1), Hanray\_16 (A9), Happiness\_15 (A4), HarryHoudini\_18 (A2), HarryOW\_16 (A1), Heffalump\_18 (A2), Hermia\_17 (A1), HermioneGrange\_15 (A1), Horex\_16 (A9), Holli\_15 (A4), Homines\_15 (A1), Hope4ever\_15 (A1), HortumSL17\_17 (A9), Houdini22\_15 (A4), Huxley\_15 (A4), ICleared\_15 (A4), ILeeKay\_17 (A1), Iceman\_15 (A4), Ichabod\_16 (A1), IgnatiusPatJac\_14 (A1), Inyanga\_14 (A1), Iqorha\_14 (A1), Iracema64\_15 (A4), IronMan\_18 (A2), Iwokeuplikiedis\_16 (A2), JC27\_17 (A1), JSwag\_18 (A15), Jaan\_19 (A2), JackSparrow\_16 (A1), Jasper\_16 (A1), Jaykayelowell\_15 (A4), Jerm2\_16 (A1), Jerm\_18 (A2), JetBlade\_15 (A4), Jiawan\_16 (A9), JoongJeon\_15 (A4), Jorgensen\_15 (A1), JoshKayV\_18 (A2), Journey13\_14 (A2), Jsquared\_15 (A2), JuliaChild\_17 (A1), KBG\_16 (A1), KFPoly\_15 (A4), KSSJEB\_15 (A1), Kalpine\_19 (A2), Kamy\_15 (A4), Kanely\_16 (A1), Katalie136\_15 (A4), KatherineG\_18 (A15), Kenmech\_18 (A1), Keziacharles14\_15 (A9), Killigrew\_13 (A1), Kimona\_12 (A19), KingCyrus\_18 (A2), Kingmustik0402\_15 (A4), KittenMittens\_14 (A10), Koan\_14 (A4), Koreni\_14 (A4), Kratark\_15 (A4), Kremtemulon\_15 (A4), Kristoff\_16 (A10), KyMonks1A\_17 (A1), Kyee\_15 (A4), LHTSCC\_15 (A4), LadyBird\_16 (A2), Lamina13\_15 (A1), Landor\_17 (A2), LappelDuVide\_15 (A4), Larenn\_17 (A2), LastResort\_18 (A15), Lemur\_15 (A4), LeoAvram\_15 (A4), Leogania\_18 (A2), Lesedi\_14 (A1), Levia\_14 (A1), Leviathan\_18 (A2), Licorice\_17 (A1), LilBib\_16 (A1), LilTurb\_18 (A2), Lilleskat\_15 (A9), LionsBait\_17 (A2), LittleB\_15 (A4), LittleGuy\_15 (A4), LochMonster\_15 (A4),

Lockley\_15 (A1), LoneWolf\_17 (A9), Looper\_19 (A15), Lopton\_16 (A1), Lorenzo\_15 (A4), Loser\_19 (A2), Lucyedi\_17 (A16), LunarLander\_15 (A1), Lunsford\_16 (A4), MPlant7149\_14 (A1), Magnar\_15 (A1), Magnito\_14 (A1), MajorMajor\_15 (A2), Makemake\_15 (A1), Malec\_17 (A2), Maminiaina\_17 (A9), Manatee\_16 (A1), Marcell\_15 (A1), Marchy\_14 (A1), Marco3\_15 (A1), Marge\_16 (A1), Maroc7\_14 (A1), Marsha\_15 (A1), MaryBeth\_15 (A1), Maverick\_15 (A4), Maxo\_15 (A4), Mayonnaise\_15 (A4), Mazhar510\_15 (A4), McGuire\_16 (A1), McSinger\_16 (A1), Medusa\_15 (A4), MeeZee\_15 (A4), Melvin\_15 (A4), MetalQZJ\_15 (A1), Michley\_15 (A1), MiculUcigas\_16 (A2), Millski\_15 (A4), MinecraftSteve\_19 (A15), Miramae\_15 (A4), MissWhite\_16 (A2), Mkhusele\_16 (A1), Molly\_16 (A1), Monet\_17 (A1), Moose\_14 (A1), Morpher26\_15 (A4), Morrow\_15 (A4), MrGordo\_15 (A1), Mryolo\_14 (A1), Mule\_15 (A1), Mundrea\_15 (A4), Museum\_17 (A1), Myxus\_17 (A9), NEHalo\_15 (A1), NaSiaTalie\_16 (A2), Naira\_16 (A1), Nebs\_15 (A4), Nebulosus\_18 (A15), Nedarya\_17 (A15), Nemo27\_15 (A4), Nerujay\_16 (A1), Nhonho\_15 (A1), NicoleTera\_20 (A2), Niza\_17 (A1), Noelle\_15 (A4), NorthStar\_15 (A4), Norz\_17 (A1), NotAPhaseMom\_15 (A4), NothingSpecial\_18 (A2), Nyxis\_15 (A4), OKCentral2016\_15 (A10), OKaNui\_15 (A4), Obama12\_15 (A4), Odin\_15 (A2), Ohfah\_15 (A4), Ohno789\_15 (A1), Onglai\_16 (A9), Oofda\_19 (A15), Oogway\_14 (A1), PSullivan\_17 (A1), PacerPaul\_15 (A1), PackMan\_17 (A9), PainterBoy\_17 (A16), Palestino\_15 (A4), Papez\_17 (A1), Paphu\_14 (A1), Paraselene\_14 (A1), Pari\_16 (A1), Parliament\_14 (A1), PascalRango\_14 (A1), PattyP\_17 (A1), Payneful\_15 (A1), PeaceMeal1\_14 (A10), Peaches\_15 (A4), Pelly\_16 (A1), Pepe\_16 (A1), Perplexer\_15 (A4), Perseus\_16 (A1), PeterPeter\_15 (A4), Peterson\_18 (A1), PetiteSangsue\_15 (A4), Petp2012\_17 (A1), Petruchio\_15 (A1), Ph8s\_17 (A2), Phacado\_15 (A4), Phaded\_19 (A2), Phaeder\_17 (A9), Pharaoh\_16 (A12), Phelipe\_15 (A4), PherrisBueller\_16 (A1), Phighter1804\_15 (A4), PhineBark\_15 (A1), Phippers\_14 (A1), Phonnegut\_17 (A9), Phontbonne\_15 (A4), PhrostyMug\_15 (A1), PinkPlastic\_14 (A1), Pinto\_17 (A1), Pioneer\_17 (A9), Pipcraft\_15 (A4), Pippin\_17 (A1), Piro94\_17 (A2), Pita2\_17 (A1), Polymorphads\_15 (A4), Poompha\_14 (A10), Power\_16 (A2), Priya\_17 (A9), ProMouse\_14 (A1), Pukovnik\_18 (A2), Pumbaa\_15 (A4), QTRLifeCrisis\_15 (A1), Qobbit\_17 (A9), QueenB2\_16 (A2), QueenBeesly\_16 (A2), Quokka\_14 (A2), Rahalelujah\_15 (A9), Raid\_16 (A1), Rajelicia\_15 (A1), ReMo\_18 (A15), Rebeuca\_16 (A10), RedRock\_19 (A2), Refuge\_19 (A12), Relief\_15 (A4), Remus\_18 (A15), Retro23\_16 (A2), RhynO\_16 (A10), Rhynn\_15 (A1), RidgeCB\_15 (A1), Ringer\_15 (A1), Rohr\_16 (A1), Romney\_15 (A4), Roosevelt\_15 (A4), Rosa24\_14 (A4), Rosalind\_18 (A15), Rowdy\_18 (A10), Rubeus\_16 (A1), Rufus\_16 (A1), Ruin\_15 (A4), Ruotula\_14 (A1), Rutherford\_17 (A1), RyeScarlet\_18 (A9), STLscum\_16 (A1), Sabertooth\_15 (A4), Sachima\_15 (A9), Sagefire\_16 (A1), Sandaddy\_14 (A1), Sanya\_14 (A1), SarFire\_15 (A1), Scamp\_15 (A4), Scherzo\_17 (A9), Scowl\_16 (A1), Seabiscuit\_17 (A1), Seanderson\_16 (A1), SemperFi\_18 (A2), SenorClean\_14 (A4), Serenity\_15 (A2), Severus\_14 (A10), Shaka\_15 (A4), Shapes\_18 (A10), ShayRa\_19 (A15), SheaKeira\_16 (A9), SheldonCooper\_15 (A4), ShortQueendom\_14 (A1), Shygu2\_15 (A4), Sibs6\_17 (A1), SkiPole\_17 (A1), Skipitt\_15 (A4), Sknot\_17 (A2), Slagathor\_16 (A1), Smairt\_16 (A1), Smeagan\_18 (A2), Smeagol\_16 (A1), SnapTap\_16 (A2), Snazzy\_13 (A1), Solon\_15 (A1), Sorpresa\_15 (A1), Soups\_18 (A15), Sparxx\_15 (A4), SpikeBT\_17 (A1), Spino\_15 (A4), Spouty\_17 (A9), Squee\_16 (A1), Stasia\_16 (A4), Steamy\_17 (A12), StewieG\_14 (A1), Stink\_15 (A4), StrongArm\_14 (A1), Strosahl\_18 (A15), Sumter\_14 (A1), Sunshine924\_14 (A1), Superchunk\_15 (A2), SweetiePie\_16 (A2), SwirlSquare\_18 (A2), SwissCheese\_15 (A1), Switzer\_16 (A1), Switzerland\_18 (A15), Swole\_17 (A1), Taquarus\_15 (A4), TarsusIV\_16 (A2), Tasp14\_16 (A1), Teodoridan\_13 (A1), Terrific\_20 (A2), Thanksgivukkah\_15 (A4), TheloniousMonk\_17 (A1), Thor\_15 (A1), Timshel\_16 (A7), TinaFeyge\_15 (A4), Tinybot\_14 (A4),

TipsytheTRex\_15 (A2), TiroTheta9\_15 (A4), Toaka\_15 (A9), Topanga\_15 (A10), Topgun\_15 (A1), Tote\_17 (A1), Traft412\_17 (A1), Treddle\_17 (A1), Trike\_13 (A10), Tripi3t\_16 (A1), Tristan\_17 (A2), Trixie\_19 (A2), Trooper\_16 (A2), Trouble\_15 (A1), TroyPia\_15 (A4), Tubs\_17 (A9), Turbido\_18 (A2), Turj99\_14 (A1), Twister\_15 (A10), TwoPeat\_16 (A1), TygerBlood\_15 (A4), U2\_15 (A1), Ugenie5\_14 (A9), Ulysses\_14 (A4), Updawg\_18 (A2), VA6\_16 (A2), VC3\_19 (A2), Vanisoa\_15 (A9), Violet\_14 (A1), Waits\_18 (A15), WalterMcMickey\_15 (A10), Wander\_15 (A4), Warrior24\_19 (A15), Watermelon\_17 (A1), WeiHuaDA\_22 (A2), Whabigail7\_18 (A2), Wheeler\_15 (A1), WideWale\_18 (A2), Wilbur\_15 (A4), Wile\_15 (A4), Wilkins\_15 (A1), Wizard007\_15 (A4), Xena\_15 (A4), Yecey3\_16 (A9), YoSam321\_15 (A4), Zeeculate\_14 (A1), Zephyr\_15 (A1), Zeuska\_16 (A1), Zimmer\_18 (A12),

#### Start 7:

- Found in 3 of 1153 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: FlyCatcher\_19 (A7), Sheen\_17 (A7), Toro\_18 (A7),

#### Start 8:

- Found in 180 of 1153 ( 15.6% ) of genes in pham
- Manual Annotations of this start: 150 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ACFishhook\_17 (A3), Agatha\_8 (CT), Aglet\_17 (A3), AgronaGT15\_17 (A3), AikoCarson\_7 (CT), Amok\_7 (CT), AndPeggy\_7 (CT), Anubis\_19 (A3), AugsMagnumOpus\_19 (A3), Axym\_8 (CT), B1\_13 (A3), BabyJohn\_14 (A3), BabyRay\_15 (A3), Bavidard\_8 (CT), Beauxregard13\_17 (A3), BigChungus\_7 (CT), Bigflo\_17 (A3), BillDoor\_10 (CT), Biskit\_9 (CT), Blondies\_8 (CT), BlueBird\_16 (A3), BreSam8\_17 (A3), Bugatti\_15 (A3), Burnsey\_8 (CT), Buttrmlkdreams\_8 (CT), BuzzBuzz\_16 (A3), Bxz2\_17 (A3), Calvinny\_18 (A3), CanesSauce\_8 (CT), Carsonalex\_9 (CT), Caviar\_16 (A3), CherryonLim\_9 (CT), ChickenTender\_10 (CT), Chiqui\_14 (A3), ChocoMunchkin\_8 (CT), Colbster\_17 (A3), Cozz\_8 (CT), Cullens\_17 (A3), DaHudson\_17 (A3), Daishi\_16 (A3), Dieselweasel\_17 (A3), DropBear\_15 (A3), Elinal\_9 (CT), Elliott\_8 (CT), Emalyn\_7 (CT), EpicPhail\_17 (A3), Farber\_17 (A3), Feastonyeet\_7 (CT), Fernando\_17 (A3), Fred313\_15 (A3), GTE2\_06 (CT), Gemma\_17 (A3), GingkoMaracino\_17 (A3), Giroux\_15 (A3), GoldHunter\_9 (CT), Grif\_17 (A3), Groupthink\_18 (A3), Grub\_17 (A3), Grum1\_17 (A3), GtownJaz\_17 (A3), HashRod\_18 (A3), HaveUMetTed\_18 (A3), Heathen\_15 (A3), HelDan\_15 (A3), Heliosoles\_17 (A3), Hercules11\_17 (A3), Hookmount\_16 (A3), Horseradish\_9 (CT), Idleandcovert\_15 (A3), Isca\_15 (A3), JF2\_15 (A3), JF4\_15 (A3), JHC117\_17 (A3), JenCasNa\_17 (A3), JeppNRM\_18 (A3), Jobu08\_17 (A3), KADY\_18 (A3), Kachowdy\_15 (A3), Kalb97\_18 (A3), Kalnoky\_18 (A3), KayGee\_8 (CT), LBerry\_17 (A3), Lambert1\_16 (A3), LarryKay\_17 (A3), Lauer\_7 (CT), Lilith\_17 (A3), Louie6\_17 (A3), Iowa\_17 (A3), LugYA\_19 (A3), MA5\_15 (A3), MAnor\_8 (CT), MK4\_15 (A3), MScarn\_10 (CT), MadMarie\_17 (A3), Mainiac\_17 (A3), Malinsilva\_19 (A3), Manu\_18 (A3), MarQuardt\_17 (A3), Marchesa\_15 (A3), Margo\_16 (A3), Marie\_17 (A3), Marius\_18 (A3), Mayweather\_9 (CT), Methuselah\_17 (A3), Microwolf\_17 (A3), Misomonster\_19 (A3), MoneyMay\_17 (A3), MuchMore\_19 (A3), MunkgeeRoachy\_8 (CT), Nina\_9 (CT), Noella\_16 (A3), Norbert\_15 (A3), OlanP\_17 (A3), Ollie\_17 (A3), P28Green\_17 (A3), PGHhamlin\_19 (A3), PP\_25 (A7), Panamaxus\_16 (A3), Pawn\_17 (A3), Pembroke\_17 (A3), Penny1\_17 (A3), Phantastic\_15 (A3), PhishRPhriends\_16 (A3), Phlei\_12 (A13), Phoebe\_17 (A3), Phoxy\_17 (A3), Phranny\_18 (A3), Pistachio\_16 (A3),



Pocahontas\_16 (A3), Pons\_8 (CT), Popcicle\_16 (A3), PotPie\_8 (CT), PotatoSplit\_18 (A3), PsychoKiller\_8 (CT), Puppy\_16 (A3), PurpleHaze\_17 (A3), Quasar\_8 (CT), QuinnKiro\_15 (A3), Reba\_18 (A3), RedBaron\_9 (CT), ResDef\_16 (A3), Rockstar\_15 (A3), Rummer\_17 (A3), Sabia\_17 (A3), Sabinator\_17 (A3), SaturnRing\_15 (A3), Scout\_15 (A3), SheckWes\_7 (CT), SketchMex\_7 (CT), Snickers\_17 (A3), SoYo\_17 (A3), Socotra\_9 (CT), SoilDragon\_17 (A3), Sopespian\_8 (CT), Soshari\_19 (A3), Spike509\_17 (A3), Stagni\_17 (A3), Starburst\_9 (CT), SteamedHams\_10 (CT), StepMih\_17 (A3), SummitAcademy\_7 (CT), SweatNTears\_10 (CT), TNguyen7\_15 (A3), Taurus\_17 (A3), Texage\_15 (A3), Tiffany\_17 (A3), TinyPebbles\_17 (A3), Todacoro\_16 (A3), Tolls\_10 (CT), Troje\_8 (CT), Typhonomachy\_9 (CT), Veracruz\_15 (A3), Vine\_9 (CT), Vix\_17 (A3), Watson\_17 (A3), Wooldri\_19 (A3), Yarn\_7 (CT), Yucky\_10 (CT), Yummy\_9 (CT), Zetzy\_16 (A3),

#### Start 11:

- Found in 11 of 1153 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 9 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BobSwaget\_19 (A2), Chargerpower\_16 (A), Gail\_15 (A14), Jeeves\_15 (A14), Kinmap\_15 (A21), Lokk\_19 (A2), Luchador\_16 (A14), Miko\_19 (A2), Rachaly\_19 (A2), SororFago\_15 (A14), Sunhee\_14 (A14),

#### Start 13:

- Found in 2 of 1153 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hexbug\_10 (CT), Orla\_10 (CT),

#### Start 14:

- Found in 5 of 1153 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 5 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BillKnuckles\_16 (A1), Bxb1\_14 (A1), Kugel\_16 (A1), Kykar\_13 (A1), Target\_17 (A1),

#### Start 16:

- Found in 7 of 1153 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 7 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Button\_9 (CT), GiKK\_11 (CT), Jamzy\_11 (CT), Margaret\_11 (CT), Nodigi\_10 (CT), RanchParmCat\_11 (CT), Yakult\_9 (CT),

#### Start 18:

- Found in 20 of 1153 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 9 of 1014
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Azira\_10 (CT), Cleo\_8 (CT), Dre3\_8 (CT), Fribs8\_9 (CT), Gibbous\_8 (CT), HippoPololi\_10 (CT), MaVan\_10 (CT), Nibbles\_10 (CT), Survivors\_10 (CT), Zareef\_12 (CT),

#### Start 19:

- Found in 52 of 1153 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 50 of 1014

- Called 100.0% of time when present
- Phage (with cluster) where this start called: AgentM\_13 (A5), Airmid\_13 (A5), Aragog\_13 (A5), Archetta\_13 (A5), Astro\_13 (A8), Benedict\_13 (A5), Bluefalcon\_12 (A5), Bonamassa\_13 (A5), Chadwick\_14 (A5), Conspiracy\_13 (A5), Coog\_13 (A5), Cuco\_13 (A5), Danforth\_12 (A8), Discoknowium\_13 (A5), Dixon\_13 (A8), Dublin\_12 (A5), EITiger69\_13 (A5), Expelliarmus\_12 (A8), ForGetIt\_13 (A5), George\_12 (A5), Ghouboy\_13 (A5), Groundhog\_12 (A8), HuhtaEnerson15\_13 (A5), Jabiru\_13 (A5), Jovo\_13 (A5), Lev2\_13 (A5), LittleCherry\_13 (A5), MarysWell\_12 (A5), Micasa\_13 (A5), Midas2\_13 (A5), Milcery\_13 (A5), MyraDee\_13 (A18), Naca\_13 (A5), NearlyHeadless\_13 (A8), PetterN\_14 (A5), Phillis\_13 (A8), Phlorence\_13 (A5), PickleBack\_13 (A5), Prinash11\_14 (A5), Roary\_13 (A8), Saintus\_13 (A8), Scorpia\_14 (A5), Smeadley\_13 (A8), Stephig9\_13 (A8), Swirley\_13 (A5), SydNat\_13 (A5), Tarynearal\_12 (A5), Theia\_12 (A5), Tiger\_13 (A5), Twigg\_13 (A5), UnionJack\_13 (A5), Zolita\_12 (A5),

#### Start 20:

- Found in 10 of 1153 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 1014
- Called 70.0% of time when present
- Phage (with cluster) where this start called: AnnabelLee\_8 (FR), ArV2\_06 (singleton), Audell\_11 (FR), Hum25\_6 (FQ), Neuville\_8 (FR), Spartoi\_6 (singleton), TMaxx\_8 (FR),

#### Start 21:

- Found in 48 of 1153 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 36 of 1014
- Called 79.2% of time when present
- Phage (with cluster) where this start called: Alatin\_12 (CA), Alpacados\_11 (CA), AngryOrchard\_11 (CA), AppleCloud\_10 (CA), Belenaria\_12 (CA), BobbyDazzler\_12 (CA), Bonanza\_12 (CA), Bradshaw\_12 (CA), Bryce\_12 (CA), CosmicSans\_12 (CA), Dinger\_12 (CA), Erik\_12 (CA), Espica\_12 (CA), Gollum\_12 (CA), Harlequin\_12 (CA), Hiro\_12 (CA), Jester\_12 (CA), Krishelle\_12 (CA), Lillie\_12 (CA), Naiad\_12 (CA), Nancinator\_12 (CA), Natosaleda\_12 (CA), Partridge\_12 (CA), PhailMary\_11 (CA), Phrankenstien\_12 (CA), RER2\_5 (CA), RGL3\_5 (CA), Rasputin\_12 (CA), RexFury\_12 (CA), Rhodalysa\_12 (CA), Shuman\_12 (CA), StCroix\_12 (CA), Swann\_12 (CA), TWAMP\_12 (CA), Takoda\_12 (CA), UhSalsa\_12 (CA), Yogi\_12 (CA), Yoncess\_12 (CA),

#### Start 22:

- Found in 3 of 1153 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 2 of 1014
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu\_6 (FP), CallinAllBarbz\_6 (FP), Jankie\_6 (FP),

#### Start 23:

- Found in 36 of 1153 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 3 of 1014
- Called 25.0% of time when present
- Phage (with cluster) where this start called: LilBandit\_6 (BU), P104B\_6 (BU), P9.1\_6 (BU), PHL037M02\_06 (BU), PHL067M10\_06 (BU), PHL111M01\_06 (BU), PHL112N00\_06 (BU), PHL113M01\_06 (BU), PHL114L00\_06 (BU),

#### Start 24:

- Found in 57 of 1153 ( 4.9% ) of genes in pham
- Manual Annotations of this start: 42 of 1014
- Called 84.2% of time when present
- Phage (with cluster) where this start called: ATCC29399BC\_6 (BU), ATCC29399BT\_6 (BU), Aquarius\_6 (BU), Attacne\_6 (BU), BruceLethal\_6 (BU), Cota\_6 (BU), DrParker\_6 (BU), Enochoraptor\_6 (BU), Enoki\_6 (BU), Keiki\_6 (BU), Kubed\_6 (BU), Lauchelly\_6 (BU), Leviosa\_6 (BU), MEAK\_6 (BU), Moyashi\_6 (BU), MrAK\_6 (BU), Ouroboros\_6 (BU), P1.1\_6 (BU), P100.1\_6 (BU), P100A\_6 (BU), P100D\_6 (BU), P101A\_6 (BU), P104A\_6 (BU), P105\_6 (BU), P106A\_6 (BU), P106C\_6 (BU), P106I\_6 (BU), P106L\_6 (BU), P106M\_6 (BU), P107A\_6 (BU), P107C\_6 (BU), P108C\_6 (BU), P14.4\_6 (BU), PA6\_6 (BU), PAD20\_6 (BU), PAS50\_6 (BU), PHL010M04\_06 (BU), PHL060L00\_06 (BU), PHL071N05\_06 (BU), Pirate\_6 (BU), Procrass1\_6 (BU), QueenBey\_6 (BU), Rileysaurus\_6 (BU), SKKY\_6 (BU), Solid\_6 (BU), Stormborn\_6 (BU), Supernova\_6 (BU), Wizzo\_6 (BU),

#### Start 25:

- Found in 172 of 1153 ( 14.9% ) of genes in pham
- Manual Annotations of this start: 105 of 1014
- Called 69.2% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_7 (AY), Angel\_7 (G1), Annihilator\_7 (G1), Antsirabe\_7 (G5), Aroostook\_7 (G1), Asapag\_7 (DN1), Avani\_7 (F2), Avocado\_7 (G2), Avrafan\_7 (G1), AzulaCat\_7 (G1), BENtherdunthat\_7 (DN1), BPs\_7 (G1), BQuat\_7 (G1), Barkley26\_7 (G1), Blarby\_8 (F), BotCity\_7 (DN), BruceB\_7 (G1), Budski\_7 (DN), CLED96\_7 (G1), Cambiare\_8 (G2), Camri\_7 (G1), CassieYates\_7 (G1), Cedasite\_7 (G1), Chance64\_7 (G1), Che9d\_7 (F2), CheeseTouch\_7 (DN1), Cherrybomb426\_7 (G1), Coleslaw\_7 (G1), Crespo\_7 (G1), DMoney\_7 (G1), DNAll\_007 (G1), Darionha\_7 (G1), Demsculpinboyz\_7 (F2), ECartman\_7 (G1), Ecliptus\_7 (DN), FlagStaff\_7 (G2), Frickyeah\_7 (DN1), Frosty24\_7 (G1), Getalong\_7 (DN1), Gideon\_7 (G1), GoldenAsh\_7 (G1), Gomashi\_7 (G1), Grizzly\_7 (G1), Halo\_7 (G1), Holliday\_7 (DN1), Hope\_7 (G1), Horus\_7 (DN1), Hotshotbaby7\_7 (G1), IdentityCrisis\_7 (singleton), Jabbawokkie\_8 (F2), Jane\_7 (G1), Jolene\_7 (G1), Jolie2\_7 (G4), Jonghyun\_7 (G1), JorRay\_7 (G1), Kamaru\_7 (DN1), Kareem\_7 (G1), Kasen3\_7 (G1), Kenna\_7 (DN1), Lemuria\_7 (G4), Leroy\_7 (DN1), Liefie\_7 (G1), LitninMcQueen\_7 (DN1), LouisV14\_7 (G1), Lucky10\_6 (DH), Lutum\_7 (DN1), MOOREtheMARYer\_7 (G3), Maliketh\_7 (G1), Malisha\_7 (DN), Marmie\_7 (G1), Mercurio\_8 (G4), Morkie\_6 (DH), Mowgli\_7 (G1), MrSmee\_6 (FQ), ODay\_7 (DN), OctaviousRex\_7 (G1), Ogopogo\_8 (F1), Olga\_7 (G1), P3MA\_7 (singleton), Pace1224\_7 (G2), Paito\_7 (G1), Peeb\_7 (G1), Periodt\_7 (G1), Periwinkle\_7 (DN1), Phabuloso\_7 (DN1), Phish\_7 (G1), Phistory\_7 (DN1), PhorbesPhlower\_6 (DH), Phreak\_7 (G1), PinkYoshi\_7 (G1), Pinnie\_8 (G3), Pitbull\_6 (FQ), Plagueis\_7 (G1), Rabbs\_7 (G1), Raqqa\_7 (AY), Remy19\_7 (G1), Renaissance\_7 (G1), Schiebel\_7 (G1), ShaboiShabazz\_7 (G1), ShawBrad\_7 (DN1), SilverChicken\_7 (F2), Sizemore\_7 (G1), Skitty\_7 (FQ), Sneeze\_7 (G1), Soul22\_7 (F2), Spooky\_7 (DN2), Squiddly\_8 (DN2), Stargaze\_7 (G5), Sweets\_7 (G1), Taheera\_7 (G1), Terror\_7 (G1), TinaBug\_7 (G1), TomBrady\_7 (G1), Wendigo\_7 (G1), Whitney\_7 (DN1), Yoshi\_7 (F2), Zapner\_8 (F2), ZoMa\_7 (G1), Zombie\_7 (G1),

#### Summary by clusters:

There are 42 clusters represented in this pham: DN, FQ, FR, DH, singleton, A21, BU, A15, A14, G5, G4, G3, A10, A13, A12, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A8, A, F, CA, DN2, A17, FP, A16, DN1, AY, A11, G2, CT, A20, F1, F2, G1,

Info for manual annotations of cluster A:

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

Info for manual annotations of cluster A1:

- Start number 6 was manually annotated 204 times for cluster A1.
- Start number 14 was manually annotated 5 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 6 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 5 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 6 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 11 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 6 was manually annotated 21 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 6 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 19 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 6 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 2 was manually annotated 2 times for cluster A2.
- Start number 4 was manually annotated 1 time for cluster A2.
- Start number 5 was manually annotated 10 times for cluster A2.
- Start number 6 was manually annotated 85 times for cluster A2.
- Start number 11 was manually annotated 4 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 6 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 8 was manually annotated 113 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 6 was manually annotated 137 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 19 was manually annotated 38 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 3 was manually annotated 1 time for cluster A6.
- Start number 5 was manually annotated 41 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 6 was manually annotated 3 times for cluster A7.
- Start number 7 was manually annotated 1 time for cluster A7.
- Start number 8 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 19 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 6 was manually annotated 35 times for cluster A9.

Info for manual annotations of cluster AY:

- Start number 25 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster BU:

- Start number 23 was manually annotated 3 times for cluster BU.
- Start number 24 was manually annotated 42 times for cluster BU.

Info for manual annotations of cluster CA:

- Start number 21 was manually annotated 36 times for cluster CA.

Info for manual annotations of cluster CT:

- Start number 8 was manually annotated 36 times for cluster CT.
- Start number 13 was manually annotated 2 times for cluster CT.
- Start number 16 was manually annotated 7 times for cluster CT.
- Start number 18 was manually annotated 9 times for cluster CT.

Info for manual annotations of cluster DH:

- Start number 25 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 25 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 25 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 25 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster F1:

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

Info for manual annotations of cluster F2:

- Start number 25 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster FP:

- Start number 22 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster FQ:

- Start number 20 was manually annotated 1 time for cluster FQ.
- Start number 25 was manually annotated 2 times for cluster FQ.

Info for manual annotations of cluster G1:

- Start number 25 was manually annotated 60 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 25 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 25 was manually annotated 2 times for cluster G3.

Info for manual annotations of cluster G4:

- Start number 25 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 25 was manually annotated 1 time for cluster G5.

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

Gene: 20ES\_16 Start: 12180, Stop: 13136, Start Num: 6

Candidate Starts for 20ES\_16:

(Start: 6 @12180 has 512 MA's), (Start: 21 @12204 has 36 MA's), (29, 12240), (46, 12336), (57, 12378), (61, 12408), (64, 12432), (75, 12477), (84, 12528), (87, 12540), (96, 12588), (125, 12690), (139, 12747), (188, 12975), (196, 13026),

Gene: 40AC\_19 Start: 14194, Stop: 15159, Start Num: 6

Candidate Starts for 40AC\_19:

(Start: 6 @14194 has 512 MA's), (29, 14254), (46, 14350), (57, 14392), (61, 14422), (64, 14446), (75, 14491), (84, 14542), (92, 14572), (110, 14656), (164, 14881), (182, 14956), (188, 14992), (196, 15043), (215, 15139),

Gene: A6\_13 Start: 11166, Stop: 12167, Start Num: 6

Candidate Starts for A6\_13:

(Start: 6 @11166 has 512 MA's), (42, 11310), (51, 11361), (54, 11376), (76, 11496), (80, 11517), (94, 11592), (108, 11652), (121, 11703), (134, 11754), (154, 11838), (188, 12015), (196, 12054), (197, 12060), (214, 12144),

Gene: ACFishhook\_17 Start: 11691, Stop: 12689, Start Num: 8

Candidate Starts for ACFishhook\_17:

(Start: 8 @11691 has 150 MA's), (46, 11832), (70, 11952), (79, 11991), (84, 12024), (132, 12222), (150, 12291), (154, 12318), (170, 12399), (188, 12492), (194, 12537), (195, 12543), (198, 12576), (207, 12612), (211, 12636),

Gene: AFIS\_15 Start: 11504, Stop: 12505, Start Num: 6

Candidate Starts for AFIS\_15:

(Start: 6 @11504 has 512 MA's), (42, 11648), (51, 11699), (54, 11714), (76, 11834), (80, 11855), (94, 11930), (108, 11990), (134, 12092), (154, 12176), (180, 12296), (188, 12353), (196, 12392), (197,

12398), (207, 12449),

Gene: AN3\_16 Start: 12170, Stop: 13126, Start Num: 6

Candidate Starts for AN3\_16:

(Start: 6 @12170 has 512 MA's), (Start: 21 @12194 has 36 MA's), (29, 12230), (46, 12326), (57, 12368), (61, 12398), (64, 12422), (75, 12467), (84, 12518), (87, 12530), (96, 12578), (125, 12680), (139, 12737), (188, 12965), (196, 13016),

Gene: AN9\_19 Start: 12128, Stop: 13129, Start Num: 6

Candidate Starts for AN9\_19:

(Start: 6 @12128 has 512 MA's), (29, 12188), (45, 12278), (46, 12284), (57, 12326), (61, 12356), (64, 12380), (75, 12425), (84, 12476), (87, 12488), (92, 12506), (128, 12656), (188, 12956), (196, 13007), (210, 13076), (211, 13088),

Gene: ANI8\_19 Start: 12128, Stop: 13129, Start Num: 6

Candidate Starts for ANI8\_19:

(Start: 6 @12128 has 512 MA's), (29, 12188), (45, 12278), (46, 12284), (57, 12326), (61, 12356), (64, 12380), (75, 12425), (84, 12476), (87, 12488), (92, 12506), (128, 12656), (188, 12956), (196, 13007), (210, 13076), (211, 13088),

Gene: ATCC29399BC\_6 Start: 4644, Stop: 5591, Start Num: 24

Candidate Starts for ATCC29399BC\_6:

(Start: 24 @4644 has 42 MA's), (33, 4692), (40, 4734), (48, 4776), (53, 4788), (71, 4887), (72, 4890), (79, 4920), (83, 4950), (133, 5157), (138, 5181), (149, 5217), (153, 5253), (158, 5280), (163, 5298), (172, 5340), (200, 5484), (206, 5511), (213, 5544),

Gene: ATCC29399BT\_6 Start: 4640, Stop: 5587, Start Num: 24

Candidate Starts for ATCC29399BT\_6:

(Start: 23 @4637 has 3 MA's), (Start: 24 @4640 has 42 MA's), (33, 4688), (48, 4772), (72, 4886), (79, 4916), (83, 4946), (94, 4997), (106, 5054), (108, 5060), (133, 5153), (138, 5177), (149, 5213), (153, 5249), (172, 5336), (200, 5480), (206, 5507), (213, 5540),

Gene: AbbyDaisy\_7 Start: 5038, Stop: 5925, Start Num: 25

Candidate Starts for AbbyDaisy\_7:

(Start: 25 @5038 has 105 MA's), (40, 5125), (46, 5152), (59, 5209), (66, 5257), (74, 5290), (78, 5308), (132, 5530), (155, 5632),

Gene: AbbyPaige\_18 Start: 12625, Stop: 13581, Start Num: 6

Candidate Starts for AbbyPaige\_18:

(Start: 6 @12625 has 512 MA's), (29, 12685), (37, 12733), (40, 12754), (46, 12781), (57, 12823), (61, 12853), (64, 12877), (84, 12973), (87, 12985), (118, 13108), (125, 13135), (132, 13162), (143, 13207), (181, 13366), (182, 13384), (188, 13420), (196, 13471),

Gene: AbbysRanger\_15 Start: 11509, Stop: 12441, Start Num: 6

Candidate Starts for AbbysRanger\_15:

(Start: 6 @11509 has 512 MA's), (29, 11569), (46, 11665), (47, 11680), (61, 11737), (64, 11761), (84, 11857), (108, 11962), (146, 12085), (154, 12127), (188, 12289), (196, 12340), (203, 12376), (210, 12409),

Gene: Abbysshoes\_16 Start: 11593, Stop: 12609, Start Num: 6

Candidate Starts for Abbysshoes\_16:

(Start: 6 @11593 has 512 MA's), (51, 11788), (54, 11803), (57, 11818), (68, 11890), (76, 11923), (80, 11944), (94, 12019), (108, 12079), (154, 12265), (187, 12436), (188, 12442), (197, 12499), (204,

12535),

Gene: Abdiel\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Abdiel\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Abrogate\_160 Start: 12249, Stop: 13256, Start Num: 6

Candidate Starts for Abrogate\_160:

(Start: 6 @12249 has 512 MA's), (42, 12393), (51, 12444), (54, 12459), (76, 12579), (80, 12600), (94, 12675), (108, 12735), (121, 12786), (129, 12819), (134, 12837), (154, 12921), (187, 13092), (188, 13098), (197, 13152),

Gene: Achebe\_15 Start: 11488, Stop: 12420, Start Num: 6

Candidate Starts for Achebe\_15:

(Start: 6 @11488 has 512 MA's), (29, 11548), (46, 11644), (47, 11659), (59, 11701), (61, 11716), (64, 11740), (84, 11836), (92, 11866), (101, 11920), (146, 12064), (154, 12106), (188, 12268), (196, 12319), (203, 12355), (210, 12388),

Gene: Acme\_17 Start: 11940, Stop: 12950, Start Num: 6

Candidate Starts for Acme\_17:

(Start: 6 @11940 has 512 MA's), (42, 12084), (51, 12135), (54, 12150), (76, 12270), (80, 12291), (94, 12366), (108, 12426), (129, 12510), (134, 12528), (154, 12612), (187, 12783), (188, 12789), (197, 12843),

Gene: Acolyte\_16 Start: 12319, Stop: 13275, Start Num: 6

Candidate Starts for Acolyte\_16:

(Start: 6 @12319 has 512 MA's), (29, 12379), (40, 12448), (45, 12469), (46, 12475), (57, 12517), (61, 12547), (64, 12571), (75, 12616), (84, 12667), (92, 12697), (116, 12802), (132, 12856), (182, 13078),

Gene: Adahisdi\_16 Start: 11831, Stop: 12832, Start Num: 6

Candidate Starts for Adahisdi\_16:

(Start: 6 @11831 has 512 MA's), (42, 11975), (51, 12026), (54, 12041), (76, 12161), (80, 12182), (94, 12257), (108, 12317), (129, 12401), (134, 12419), (154, 12503), (180, 12623), (188, 12680), (196, 12719), (197, 12725),

Gene: Adzzy\_17 Start: 10935, Stop: 11891, Start Num: 6

Candidate Starts for Adzzy\_17:

(Start: 6 @10935 has 512 MA's), (29, 10995), (45, 11085), (46, 11091), (57, 11133), (61, 11163), (64, 11187), (75, 11232), (84, 11283), (87, 11295), (92, 11313), (116, 11418), (132, 11472), (143, 11517), (159, 11592), (161, 11601), (181, 11676),

Gene: Aeneas\_17 Start: 11926, Stop: 12924, Start Num: 6

Candidate Starts for Aeneas\_17:

(Start: 6 @11926 has 512 MA's), (42, 12070), (51, 12121), (54, 12136), (76, 12256), (80, 12277), (94, 12352), (108, 12412), (134, 12514), (154, 12598), (180, 12718), (188, 12775), (196, 12814), (197, 12820),

Gene: Agaliana\_15 Start: 11642, Stop: 12658, Start Num: 6

Candidate Starts for Agaliana\_15:

(Start: 6 @11642 has 512 MA's), (51, 11837), (54, 11852), (57, 11867), (68, 11939), (76, 11972), (80, 11993), (94, 12068), (108, 12128), (154, 12314), (187, 12485), (188, 12491), (197, 12548), (204,



12584), (207, 12599),

Gene: Agape74\_18 Start: 12625, Stop: 13581, Start Num: 6

Candidate Starts for Agape74\_18:

(Start: 6 @12625 has 512 MA's), (29, 12685), (37, 12733), (46, 12781), (57, 12823), (61, 12853), (64, 12877), (84, 12973), (87, 12985), (118, 13108), (125, 13135), (132, 13162), (143, 13207), (181, 13366), (182, 13384), (188, 13420), (196, 13471),

Gene: Agatha\_8 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for Agatha\_8:

(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (60, 5608), (89, 5746), (96, 5782), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: AgentM\_13 Start: 10877, Stop: 11809, Start Num: 19

Candidate Starts for AgentM\_13:

(Start: 19 @10877 has 50 MA's), (46, 11006), (57, 11048), (61, 11078), (79, 11165), (84, 11198), (125, 11339), (154, 11462), (159, 11486), (171, 11546), (181, 11585), (183, 11606), (189, 11654), (198, 11711), (207, 11747), (211, 11771),

Gene: Aglet\_17 Start: 11540, Stop: 12532, Start Num: 8

Candidate Starts for Aglet\_17:

(Start: 8 @11540 has 150 MA's), (46, 11681), (70, 11801), (79, 11840), (84, 11873), (108, 11984), (132, 12071), (154, 12167), (170, 12248), (178, 12275), (181, 12287), (188, 12341), (194, 12386), (195, 12392), (198, 12425), (207, 12461), (211, 12485),

Gene: AgronaGT15\_17 Start: 11447, Stop: 12439, Start Num: 8

Candidate Starts for AgronaGT15\_17:

(Start: 8 @11447 has 150 MA's), (46, 11588), (70, 11708), (79, 11747), (84, 11780), (108, 11891), (132, 11978), (154, 12074), (170, 12155), (178, 12182), (181, 12194), (188, 12248), (194, 12293), (195, 12299), (198, 12332), (207, 12368), (211, 12392),

Gene: AikoCarson\_7 Start: 5103, Stop: 6074, Start Num: 8

Candidate Starts for AikoCarson\_7:

(Start: 8 @5103 has 150 MA's), (Start: 25 @5154 has 105 MA's), (77, 5412), (79, 5421), (89, 5466), (113, 5577), (121, 5604), (144, 5703), (156, 5757), (164, 5793), (165, 5796), (168, 5811), (170, 5823), (203, 5979), (211, 6024), (212, 6027),

Gene: Airmid\_13 Start: 10628, Stop: 11569, Start Num: 19

Candidate Starts for Airmid\_13:

(Start: 19 @10628 has 50 MA's), (46, 10757), (61, 10829), (79, 10916), (84, 10949), (92, 10979), (125, 11090), (154, 11213), (159, 11237), (171, 11297), (181, 11336), (183, 11357), (189, 11405), (198, 11462), (207, 11498), (211, 11522),

Gene: Ajay\_15 Start: 11638, Stop: 12648, Start Num: 6

Candidate Starts for Ajay\_15:

(Start: 6 @11638 has 512 MA's), (51, 11833), (54, 11848), (76, 11968), (80, 11989), (94, 12064), (108, 12124), (154, 12310), (187, 12481), (188, 12487), (197, 12544), (204, 12580),

Gene: Alatin\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Alatin\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Albee\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Albee\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Alberto7\_16 Start: 11784, Stop: 12716, Start Num: 6

Candidate Starts for Alberto7\_16:

(Start: 6 @11784 has 512 MA's), (29, 11844), (46, 11940), (61, 12012), (64, 12036), (84, 12132), (101, 12216), (146, 12360), (154, 12402), (188, 12564), (191, 12597), (196, 12615), (203, 12651), (210, 12684),

Gene: Aliter\_17 Start: 12776, Stop: 13735, Start Num: 6

Candidate Starts for Aliter\_17:

(Start: 6 @12776 has 512 MA's), (29, 12836), (45, 12926), (46, 12932), (57, 12974), (61, 13004), (64, 13028), (75, 13073), (84, 13124), (87, 13136), (92, 13154), (122, 13277), (125, 13289), (181, 13520), (196, 13625),

Gene: Alma\_17 Start: 12855, Stop: 13814, Start Num: 6

Candidate Starts for Alma\_17:

(Start: 6 @12855 has 512 MA's), (29, 12915), (45, 13005), (46, 13011), (57, 13053), (61, 13083), (64, 13107), (75, 13152), (84, 13203), (87, 13215), (92, 13233), (122, 13356), (125, 13368), (181, 13599), (196, 13704),

Gene: Alpacados\_11 Start: 7663, Stop: 8565, Start Num: 21

Candidate Starts for Alpacados\_11:

(Start: 21 @7663 has 36 MA's), (46, 7792), (65, 7894), (76, 7936), (79, 7951), (84, 7984), (112, 8107), (150, 8239), (161, 8299), (167, 8332),

Gene: Alsfro\_19 Start: 12380, Stop: 13387, Start Num: 6

Candidate Starts for Alsfro\_19:

(Start: 6 @12380 has 512 MA's), (42, 12524), (51, 12575), (54, 12590), (76, 12710), (80, 12731), (94, 12806), (108, 12866), (134, 12968), (154, 13052), (160, 13082), (187, 13223), (188, 13229), (197, 13277),

Gene: Altman\_16 Start: 12175, Stop: 13182, Start Num: 6

Candidate Starts for Altman\_16:

(Start: 6 @12175 has 512 MA's), (42, 12319), (51, 12370), (54, 12385), (76, 12505), (80, 12526), (94, 12601), (108, 12661), (129, 12745), (134, 12763), (154, 12847), (187, 13018), (188, 13024), (192, 13057), (197, 13078), (207, 13129),

Gene: Alvin\_16 Start: 11849, Stop: 12859, Start Num: 6

Candidate Starts for Alvin\_16:

(Start: 6 @11849 has 512 MA's), (42, 11993), (51, 12044), (54, 12059), (76, 12179), (80, 12200), (94, 12275), (100, 12308), (108, 12335), (129, 12419), (134, 12437), (154, 12521), (180, 12641), (188, 12698), (197, 12746),

Gene: Amok\_7 Start: 5104, Stop: 6075, Start Num: 8

Candidate Starts for Amok\_7:

(Start: 8 @5104 has 150 MA's), (Start: 25 @5155 has 105 MA's), (66, 5368), (77, 5413), (79, 5422), (89, 5467), (113, 5578), (121, 5605), (156, 5758), (164, 5794), (165, 5797), (170, 5824), (203, 5980), (211, 6025), (212, 6028),

Gene: Anaysia\_18 Start: 11295, Stop: 12245, Start Num: 6

Candidate Starts for Anaysia\_18:

(Start: 6 @11295 has 512 MA's), (29, 11355), (46, 11451), (61, 11523), (64, 11547), (75, 11592), (84, 11643), (92, 11673), (183, 12051), (203, 12171), (211, 12216),

Gene: AndPeggy\_7 Start: 5411, Stop: 6367, Start Num: 8

Candidate Starts for AndPeggy\_7:

(Start: 8 @5411 has 150 MA's), (Start: 25 @5453 has 105 MA's), (66, 5666), (77, 5711), (79, 5720), (89, 5765), (113, 5876), (144, 6002), (156, 6056), (164, 6092), (165, 6095), (170, 6122), (203, 6278), (211, 6323), (212, 6326),

Gene: Aneem\_16 Start: 12699, Stop: 13688, Start Num: 5

Candidate Starts for Aneem\_16:

(Start: 5 @12699 has 75 MA's), (29, 12759), (33, 12789), (45, 12849), (46, 12855), (57, 12897), (61, 12927), (64, 12951), (75, 12996), (84, 13047), (87, 13059), (92, 13077), (110, 13161), (122, 13197), (125, 13209), (132, 13236), (188, 13494), (206, 13599),

Gene: Angel\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Angel\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Anglerfish\_16 Start: 12562, Stop: 13578, Start Num: 6

Candidate Starts for Anglerfish\_16:

(Start: 6 @12562 has 512 MA's), (51, 12757), (54, 12772), (57, 12787), (68, 12859), (76, 12892), (80, 12913), (94, 12988), (108, 13048), (154, 13234), (187, 13405), (188, 13411), (197, 13468), (204, 13504), (207, 13519),

Gene: AngryOrchard\_11 Start: 7646, Stop: 8548, Start Num: 21

Candidate Starts for AngryOrchard\_11:

(Start: 21 @7646 has 36 MA's), (46, 7775), (65, 7877), (76, 7919), (79, 7934), (84, 7967), (150, 8222), (161, 8282), (167, 8315),

Gene: AnnaL29\_19 Start: 14013, Stop: 14969, Start Num: 6

Candidate Starts for AnnaL29\_19:

(Start: 6 @14013 has 512 MA's), (29, 14073), (40, 14142), (46, 14169), (57, 14211), (61, 14241), (64, 14265), (75, 14310), (84, 14361), (92, 14391), (96, 14421), (110, 14475), (118, 14496), (132, 14550), (143, 14595), (164, 14697), (182, 14772), (188, 14808), (196, 14859),

Gene: AnnabelLee\_8 Start: 5499, Stop: 6410, Start Num: 20

Candidate Starts for AnnabelLee\_8:

(Start: 20 @5499 has 2 MA's), (55, 5655), (64, 5721), (68, 5736), (82, 5808), (95, 5868), (132, 5994), (143, 6039), (146, 6048), (185, 6246), (188, 6267), (208, 6366), (211, 6387),

Gene: Annihilator\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Annihilator\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Annyong\_15 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for Annyong\_15:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (61, 11708), (64, 11732), (84, 11828), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210,

12380),

Gene: Anon\_16 Start: 11653, Stop: 12609, Start Num: 6

Candidate Starts for Anon\_16:

(Start: 6 @11653 has 512 MA's), (29, 11713), (46, 11809), (61, 11881), (64, 11905), (75, 11950), (84, 12001), (87, 12013), (92, 12031), (211, 12580),

Gene: Anselm\_16 Start: 12272, Stop: 13228, Start Num: 6

Candidate Starts for Anselm\_16:

(Start: 6 @12272 has 512 MA's), (29, 12332), (37, 12380), (46, 12428), (57, 12470), (61, 12500), (64, 12524), (75, 12569), (84, 12620), (92, 12650), (118, 12755), (132, 12809), (143, 12854), (181, 13013), (182, 13031), (188, 13067), (196, 13118),

Gene: Anthony\_15 Start: 10391, Stop: 11347, Start Num: 6

Candidate Starts for Anthony\_15:

(Start: 6 @10391 has 512 MA's), (29, 10451), (32, 10478), (40, 10520), (45, 10541), (46, 10547), (57, 10589), (61, 10619), (64, 10643), (75, 10688), (79, 10706), (84, 10739), (87, 10751), (92, 10769), (116, 10874), (132, 10928), (141, 10970), (161, 11057), (196, 11237), (206, 11291),

Gene: Antsirabe\_7 Start: 7265, Stop: 8191, Start Num: 25

Candidate Starts for Antsirabe\_7:

(Start: 25 @7265 has 105 MA's), (35, 7322), (36, 7325), (40, 7352), (66, 7484), (74, 7517), (83, 7568), (96, 7628), (104, 7667), (109, 7685), (130, 7766), (159, 7898), (166, 7928), (168, 7940), (188, 8057), (211, 8165), (218, 8183),

Gene: Anubis\_19 Start: 11425, Stop: 12417, Start Num: 8

Candidate Starts for Anubis\_19:

(Start: 8 @11425 has 150 MA's), (46, 11566), (70, 11686), (79, 11725), (84, 11758), (108, 11869), (132, 11956), (154, 12052), (170, 12133), (178, 12160), (181, 12172), (188, 12226), (194, 12271), (195, 12277), (198, 12310), (207, 12346), (211, 12370),

Gene: AppleCloud\_10 Start: 7410, Stop: 8312, Start Num: 21

Candidate Starts for AppleCloud\_10:

(Start: 21 @7410 has 36 MA's), (46, 7539), (65, 7641), (76, 7683), (79, 7698), (84, 7731), (150, 7986), (161, 8046), (167, 8079),

Gene: Applejack\_15 Start: 11575, Stop: 12573, Start Num: 6

Candidate Starts for Applejack\_15:

(Start: 6 @11575 has 512 MA's), (42, 11719), (51, 11770), (54, 11785), (76, 11905), (80, 11926), (94, 12001), (108, 12061), (129, 12145), (134, 12163), (154, 12247), (180, 12367), (188, 12424), (196, 12463), (197, 12469),

Gene: Aquarius\_6 Start: 4637, Stop: 5581, Start Num: 24

Candidate Starts for Aquarius\_6:

(Start: 24 @4637 has 42 MA's), (33, 4685), (40, 4727), (48, 4769), (53, 4781), (72, 4883), (76, 4898), (79, 4913), (84, 4946), (94, 4994), (108, 5057), (133, 5150), (138, 5174), (145, 5198), (149, 5210), (153, 5246), (158, 5273), (168, 5315), (172, 5333), (178, 5351), (197, 5456), (200, 5477), (205, 5495), (206, 5504), (212, 5534), (213, 5537),

Gene: ArV2\_06 Start: 4761, Stop: 5657, Start Num: 20

Candidate Starts for ArV2\_06:

(Start: 20 @4761 has 2 MA's), (Start: 25 @4782 has 105 MA's), (40, 4860), (45, 4881), (75, 5028), (82, 5070), (132, 5262), (154, 5358), (183, 5481), (188, 5514), (199, 5577),

Gene: Aragog\_13 Start: 10907, Stop: 11839, Start Num: 19

Candidate Starts for Aragog\_13:

(Start: 19 @10907 has 50 MA's), (46, 11036), (57, 11078), (61, 11108), (79, 11195), (84, 11228), (125, 11369), (154, 11492), (159, 11516), (171, 11576), (181, 11615), (183, 11636), (189, 11684), (198, 11741), (207, 11777), (211, 11801),

Gene: Arcanine\_16 Start: 11512, Stop: 12528, Start Num: 6

Candidate Starts for Arcanine\_16:

(Start: 6 @11512 has 512 MA's), (51, 11707), (54, 11722), (76, 11842), (80, 11863), (94, 11938), (108, 11998), (154, 12184), (187, 12355), (188, 12361), (197, 12418), (204, 12454),

Gene: ArcherNM\_18 Start: 13960, Stop: 14916, Start Num: 6

Candidate Starts for ArcherNM\_18:

(Start: 6 @13960 has 512 MA's), (29, 14020), (46, 14116), (57, 14158), (61, 14188), (64, 14212), (75, 14257), (84, 14308), (87, 14320), (96, 14368), (118, 14443), (125, 14470), (132, 14497), (143, 14542), (181, 14701), (182, 14719), (188, 14755), (196, 14806),

Gene: Archetta\_13 Start: 10620, Stop: 11552, Start Num: 19

Candidate Starts for Archetta\_13:

(Start: 19 @10620 has 50 MA's), (46, 10749), (61, 10821), (79, 10908), (84, 10941), (125, 11082), (154, 11205), (159, 11229), (171, 11289), (181, 11328), (183, 11349), (189, 11397), (198, 11454), (207, 11490), (211, 11514),

Gene: Arissanae\_15 Start: 10971, Stop: 11939, Start Num: 6

Candidate Starts for Arissanae\_15:

(Start: 6 @10971 has 512 MA's), (29, 11031), (46, 11127), (61, 11199), (64, 11223), (75, 11268), (84, 11319), (92, 11349), (118, 11454), (132, 11508), (201, 11859),

Gene: Arlo\_14 Start: 11200, Stop: 12207, Start Num: 6

Candidate Starts for Arlo\_14:

(Start: 6 @11200 has 512 MA's), (54, 11410), (76, 11530), (80, 11551), (94, 11626), (111, 11707), (129, 11770), (134, 11788), (154, 11872), (188, 12049), (197, 12097),

Gene: Aroostook\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Aroostook\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Artemis2UCLA\_19 Start: 12118, Stop: 13089, Start Num: 5

Candidate Starts for Artemis2UCLA\_19:

(Start: 5 @12118 has 75 MA's), (29, 12178), (46, 12274), (57, 12316), (61, 12346), (64, 12370), (75, 12415), (84, 12466), (87, 12478), (92, 12496), (122, 12601), (164, 12787), (211, 13060),

Gene: Arturo\_14 Start: 11593, Stop: 12525, Start Num: 6

Candidate Starts for Arturo\_14:

(Start: 6 @11593 has 512 MA's), (29, 11653), (46, 11749), (61, 11821), (64, 11845), (84, 11941), (101, 12025), (146, 12169), (154, 12211), (188, 12373), (191, 12406), (196, 12424), (203, 12460), (210, 12493),

Gene: Asapag\_7 Start: 4897, Stop: 5835, Start Num: 25

Candidate Starts for Asapag\_7:

(Start: 25 @4897 has 105 MA's), (33, 4939), (34, 4942), (52, 5032), (71, 5134), (85, 5206), (86, 5209), (131, 5398), (166, 5551), (168, 5563), (178, 5626), (186, 5680), (209, 5785), (212, 5806),

Gene: Ashballer\_14 Start: 11579, Stop: 12577, Start Num: 6

Candidate Starts for Ashballer\_14:

(Start: 6 @11579 has 512 MA's), (42, 11723), (51, 11774), (54, 11789), (76, 11909), (80, 11930), (94, 12005), (108, 12065), (134, 12167), (154, 12251), (180, 12371), (188, 12428), (196, 12467), (197, 12473),

Gene: Astro\_13 Start: 10381, Stop: 11331, Start Num: 19

Candidate Starts for Astro\_13:

(Start: 19 @10381 has 50 MA's), (46, 10510), (57, 10552), (79, 10669), (84, 10702), (98, 10777), (127, 10861), (150, 10951), (154, 10978), (161, 11011), (171, 11062), (181, 11101), (198, 11227), (207, 11263),

Gene: Atkinbua\_16 Start: 11554, Stop: 12555, Start Num: 6

Candidate Starts for Atkinbua\_16:

(Start: 6 @11554 has 512 MA's), (42, 11698), (54, 11764), (76, 11884), (80, 11905), (94, 11980), (108, 12040), (134, 12142), (154, 12226), (180, 12346), (188, 12403), (196, 12442), (197, 12448),

Gene: Attacne\_6 Start: 4645, Stop: 5592, Start Num: 24

Candidate Starts for Attacne\_6:

(Start: 24 @4645 has 42 MA's), (33, 4693), (40, 4735), (48, 4777), (53, 4789), (72, 4891), (79, 4921), (83, 4951), (94, 5002), (106, 5059), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (172, 5341), (181, 5371), (200, 5485), (205, 5503), (206, 5512), (213, 5545),

Gene: Audell\_11 Start: 8919, Stop: 9830, Start Num: 20

Candidate Starts for Audell\_11:

(Start: 20 @8919 has 2 MA's), (45, 9039), (64, 9141), (68, 9156), (75, 9186), (82, 9228), (132, 9414), (143, 9459), (146, 9468), (208, 9786),

Gene: AugsMagnumOpus\_19 Start: 11531, Stop: 12523, Start Num: 8

Candidate Starts for AugsMagnumOpus\_19:

(Start: 8 @11531 has 150 MA's), (46, 11672), (70, 11792), (79, 11831), (84, 11864), (108, 11975), (132, 12062), (154, 12158), (170, 12239), (178, 12266), (181, 12278), (188, 12332), (194, 12377), (195, 12383), (198, 12416), (207, 12452), (211, 12476),

Gene: Avani\_7 Start: 4878, Stop: 5813, Start Num: 25

Candidate Starts for Avani\_7:

(Start: 25 @4878 has 105 MA's), (35, 4932), (43, 4977), (52, 5013), (71, 5115), (86, 5190), (128, 5370), (144, 5436), (166, 5532), (173, 5565), (174, 5583), (178, 5607), (184, 5649), (205, 5748), (209, 5766), (212, 5787),

Gene: AvatarAhPeg\_15 Start: 11447, Stop: 12379, Start Num: 6

Candidate Starts for AvatarAhPeg\_15:

(Start: 6 @11447 has 512 MA's), (29, 11507), (46, 11603), (47, 11618), (61, 11675), (64, 11699), (84, 11795), (92, 11825), (101, 11879), (146, 12023), (154, 12065), (188, 12227), (191, 12260), (196, 12278), (210, 12347),

Gene: Avle17\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Avle17\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210,

12379),

Gene: Avocado\_7 Start: 7255, Stop: 8157, Start Num: 25

Candidate Starts for Avocado\_7:

(Start: 25 @7255 has 105 MA's), (35, 7312), (36, 7315), (38, 7327), (40, 7342), (59, 7426), (66, 7474), (74, 7507), (83, 7558), (102, 7651), (109, 7675), (116, 7702), (126, 7729), (132, 7753), (166, 7909), (181, 7969),

Gene: Avrafan\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Avrafan\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Axym\_8 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for Axym\_8:

(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (89, 5746), (96, 5782), (114, 5860), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: Azira\_10 Start: 6293, Stop: 7219, Start Num: 18

Candidate Starts for Azira\_10:

(Start: 18 @6293 has 9 MA's), (46, 6428), (68, 6539), (77, 6578), (83, 6608), (89, 6632), (96, 6668), (107, 6716), (113, 6743), (130, 6806), (131, 6809), (132, 6812), (156, 6923), (164, 6959), (168, 6977), (170, 6989), (185, 7058), (187, 7073), (202, 7142), (209, 7172),

Gene: AzulaCat\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for AzulaCat\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: B1\_13 Start: 10746, Stop: 11738, Start Num: 8

Candidate Starts for B1\_13:

(Start: 8 @10746 has 150 MA's), (Start: 18 @10755 has 9 MA's), (46, 10887), (70, 11007), (79, 11046), (84, 11079), (108, 11190), (110, 11199), (141, 11316), (154, 11370), (171, 11454), (188, 11544), (195, 11595), (198, 11628), (207, 11664),

Gene: BABullseye\_19 Start: 12230, Stop: 13201, Start Num: 5

Candidate Starts for BABullseye\_19:

(Start: 5 @12230 has 75 MA's), (29, 12290), (46, 12386), (57, 12428), (61, 12458), (64, 12482), (75, 12527), (84, 12578), (87, 12590), (92, 12608), (122, 12713), (164, 12899), (211, 13172),

Gene: BENtherdunthat\_7 Start: 4897, Stop: 5835, Start Num: 25

Candidate Starts for BENtherdunthat\_7:

(Start: 25 @4897 has 105 MA's), (33, 4939), (34, 4942), (52, 5032), (71, 5134), (85, 5206), (86, 5209), (131, 5398), (166, 5551), (168, 5563), (178, 5626), (186, 5680), (209, 5785), (212, 5806),

Gene: BK1\_13 Start: 11166, Stop: 12167, Start Num: 6

Candidate Starts for BK1\_13:

(Start: 6 @11166 has 512 MA's), (42, 11310), (51, 11361), (54, 11376), (76, 11496), (80, 11517), (94, 11592), (108, 11652), (121, 11703), (134, 11754), (154, 11838), (188, 12015), (196, 12054), (197, 12060), (214, 12144),

Gene: BPBiibs31\_16 Start: 11839, Stop: 12840, Start Num: 6

Candidate Starts for BPBiibs31\_16:

(Start: 6 @11839 has 512 MA's), (54, 12049), (76, 12169), (80, 12190), (94, 12265), (108, 12325), (134, 12427), (154, 12511), (180, 12631), (188, 12688), (196, 12730), (197, 12736),

Gene: BPs\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for BPs\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: BQuat\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for BQuat\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Baby16\_15 Start: 11488, Stop: 12420, Start Num: 6

Candidate Starts for Baby16\_15:

(Start: 6 @11488 has 512 MA's), (29, 11548), (46, 11644), (61, 11716), (64, 11740), (84, 11836), (101, 11920), (146, 12064), (154, 12106), (188, 12268), (191, 12301), (196, 12319), (203, 12355), (210, 12388),

Gene: BabyBack\_18 Start: 13819, Stop: 14778, Start Num: 6

Candidate Starts for BabyBack\_18:

(Start: 6 @13819 has 512 MA's), (29, 13879), (46, 13975), (57, 14017), (61, 14047), (64, 14071), (75, 14116), (84, 14167), (92, 14197), (132, 14356), (141, 14398), (154, 14452), (159, 14476),

Gene: BabyJohn\_14 Start: 11327, Stop: 12322, Start Num: 8

Candidate Starts for BabyJohn\_14:

(Start: 8 @11327 has 150 MA's), (Start: 18 @11336 has 9 MA's), (46, 11468), (70, 11588), (79, 11627), (84, 11660), (108, 11771), (141, 11897), (154, 11951), (171, 12035), (179, 12062), (181, 12071), (188, 12125), (195, 12176), (198, 12209), (207, 12245), (216, 12287),

Gene: BabyRay\_15 Start: 11329, Stop: 12303, Start Num: 8

Candidate Starts for BabyRay\_15:

(Start: 8 @11329 has 150 MA's), (46, 11470), (70, 11590), (79, 11629), (84, 11662), (108, 11773), (150, 11926), (154, 11953), (171, 12037), (179, 12064), (180, 12070), (188, 12127), (194, 12172), (195, 12178), (198, 12211), (207, 12247),

Gene: Bachome\_16 Start: 12696, Stop: 13685, Start Num: 5

Candidate Starts for Bachome\_16:

(Start: 5 @12696 has 75 MA's), (29, 12756), (33, 12786), (45, 12846), (46, 12852), (57, 12894), (61, 12924), (64, 12948), (75, 12993), (84, 13044), (87, 13056), (92, 13074), (110, 13158), (122, 13194), (125, 13206), (132, 13233), (188, 13491), (206, 13596),

Gene: Backyardigan\_15 Start: 11500, Stop: 12432, Start Num: 6

Candidate Starts for Backyardigan\_15:

(Start: 6 @11500 has 512 MA's), (29, 11560), (46, 11656), (47, 11671), (59, 11713), (61, 11728), (64, 11752), (84, 11848), (92, 11878), (101, 11932), (146, 12076), (154, 12118), (188, 12280), (196, 12331), (203, 12367), (210, 12400),

Gene: BaconJack\_17 Start: 11618, Stop: 12628, Start Num: 6

Candidate Starts for BaconJack\_17:

(Start: 6 @11618 has 512 MA's), (54, 11828), (76, 11948), (80, 11969), (94, 12044), (108, 12104), (129, 12188), (134, 12206), (154, 12290), (180, 12410), (188, 12467), (197, 12515),



Gene: Bactobuster\_17 Start: 13897, Stop: 14853, Start Num: 6

Candidate Starts for Bactobuster\_17:

(Start: 6 @13897 has 512 MA's), (29, 13957), (40, 14026), (46, 14053), (57, 14095), (61, 14125), (64, 14149), (75, 14194), (84, 14245), (92, 14275), (125, 14407), (139, 14464), (181, 14638), (188, 14692),

Gene: Badger\_15 Start: 11489, Stop: 12421, Start Num: 6

Candidate Starts for Badger\_15:

(Start: 6 @11489 has 512 MA's), (29, 11549), (46, 11645), (47, 11660), (59, 11702), (61, 11717), (64, 11741), (84, 11837), (92, 11867), (101, 11921), (146, 12065), (154, 12107), (188, 12269), (196, 12320), (203, 12356), (210, 12389),

Gene: Baehexic\_17 Start: 12674, Stop: 13630, Start Num: 6

Candidate Starts for Baehexic\_17:

(Start: 6 @12674 has 512 MA's), (15, 12689), (29, 12734), (46, 12830), (57, 12872), (61, 12902), (64, 12926), (75, 12971), (84, 13022), (92, 13052), (118, 13157), (125, 13184), (132, 13211), (143, 13256), (181, 13415), (182, 13433), (188, 13469), (196, 13520),

Gene: BaileyBlu\_6 Start: 4654, Stop: 5565, Start Num: 22

Candidate Starts for BaileyBlu\_6:

(Start: 22 @4654 has 2 MA's), (55, 4816), (64, 4882), (138, 5197), (142, 5212), (151, 5239), (156, 5272), (209, 5521),

Gene: BangNhom\_14 Start: 11457, Stop: 12389, Start Num: 6

Candidate Starts for BangNhom\_14:

(Start: 6 @11457 has 512 MA's), (29, 11517), (46, 11613), (47, 11628), (61, 11685), (64, 11709), (84, 11805), (92, 11835), (101, 11889), (146, 12033), (154, 12075), (188, 12237), (191, 12270), (196, 12288), (203, 12324), (210, 12357),

Gene: Barkley26\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Barkley26\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Barriga\_15 Start: 11443, Stop: 12450, Start Num: 6

Candidate Starts for Barriga\_15:

(Start: 6 @11443 has 512 MA's), (42, 11587), (44, 11596), (51, 11638), (54, 11653), (76, 11773), (80, 11794), (108, 11929), (134, 12031), (154, 12115), (160, 12145), (187, 12286), (188, 12292), (197, 12340),

Gene: BarrowTuph\_14 Start: 11491, Stop: 12495, Start Num: 6

Candidate Starts for BarrowTuph\_14:

(Start: 6 @11491 has 512 MA's), (42, 11635), (44, 11644), (51, 11686), (54, 11701), (76, 11821), (80, 11842), (94, 11917), (108, 11977), (134, 12079), (154, 12163), (160, 12193), (180, 12283), (187, 12334), (188, 12340), (197, 12388),

Gene: Bartimeaus\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Bartimeaus\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Battleship\_19 Start: 11410, Stop: 12360, Start Num: 6

Candidate Starts for Battleship\_19:

(Start: 6 @11410 has 512 MA's), (29, 11470), (46, 11566), (61, 11638), (64, 11662), (75, 11707), (84, 11758), (92, 11788), (183, 12166), (203, 12286), (211, 12331),

Gene: Bavilard\_8 Start: 5871, Stop: 6830, Start Num: 8

Candidate Starts for Bavilard\_8:

(Start: 8 @5871 has 150 MA's), (Start: 25 @5922 has 105 MA's), (50, 6051), (67, 6138), (77, 6180), (79, 6189), (89, 6234), (107, 6318), (132, 6414), (144, 6471), (156, 6525), (164, 6561), (209, 6774), (211, 6792), (221, 6822),

Gene: Beatrix\_14 Start: 12282, Stop: 13292, Start Num: 6

Candidate Starts for Beatrix\_14:

(Start: 6 @12282 has 512 MA's), (42, 12426), (51, 12477), (54, 12492), (76, 12612), (80, 12633), (94, 12708), (108, 12768), (121, 12819), (129, 12852), (134, 12870), (154, 12954), (187, 13125), (188, 13131), (197, 13188), (207, 13239),

Gene: Beauxregard13\_17 Start: 11539, Stop: 12531, Start Num: 8

Candidate Starts for Beauxregard13\_17:

(Start: 8 @11539 has 150 MA's), (46, 11680), (70, 11800), (79, 11839), (84, 11872), (108, 11983), (132, 12070), (154, 12166), (170, 12247), (178, 12274), (181, 12286), (188, 12340), (194, 12385), (195, 12391), (198, 12424), (207, 12460), (211, 12484),

Gene: Beemo\_17 Start: 12882, Stop: 13841, Start Num: 6

Candidate Starts for Beemo\_17:

(Start: 6 @12882 has 512 MA's), (29, 12942), (45, 13032), (46, 13038), (57, 13080), (61, 13110), (64, 13134), (75, 13179), (84, 13230), (87, 13242), (92, 13260), (122, 13383), (125, 13395), (181, 13626), (196, 13731),

Gene: BeesKnees\_16 Start: 11641, Stop: 12642, Start Num: 6

Candidate Starts for BeesKnees\_16:

(Start: 6 @11641 has 512 MA's), (42, 11785), (51, 11836), (54, 11851), (76, 11971), (80, 11992), (94, 12067), (108, 12127), (129, 12211), (134, 12229), (154, 12313), (188, 12490), (196, 12532), (197, 12538),

Gene: Belenaria\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Belenaria\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: BellusTerra\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for BellusTerra\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Benedict\_13 Start: 10630, Stop: 11571, Start Num: 19

Candidate Starts for Benedict\_13:

(Start: 19 @10630 has 50 MA's), (46, 10759), (61, 10831), (79, 10918), (84, 10951), (92, 10981), (125, 11092), (154, 11215), (159, 11239), (171, 11299), (181, 11338), (183, 11359), (189, 11407), (198, 11464), (207, 11500), (211, 11524),

Gene: BengiVuitton\_17 Start: 12587, Stop: 13543, Start Num: 6

Candidate Starts for BengiVuitton\_17:

(Start: 6 @12587 has 512 MA's), (Start: 21 @12611 has 36 MA's), (29, 12647), (46, 12743), (57, 12785), (61, 12815), (64, 12839), (75, 12884), (84, 12935), (87, 12947), (96, 12995), (125, 13097), (139, 13154), (188, 13382), (196, 13433),

Gene: Benvolio\_16 Start: 12262, Stop: 13218, Start Num: 6

Candidate Starts for Benvolio\_16:

(Start: 6 @12262 has 512 MA's), (29, 12322), (37, 12370), (40, 12391), (46, 12418), (57, 12460), (61, 12490), (75, 12559), (84, 12610), (118, 12745), (143, 12844), (182, 13021), (188, 13057), (196, 13108),

Gene: Bethlehem\_15 Start: 12869, Stop: 13870, Start Num: 6

Candidate Starts for Bethlehem\_15:

(Start: 6 @12869 has 512 MA's), (42, 13013), (51, 13064), (54, 13079), (76, 13199), (80, 13220), (94, 13295), (108, 13355), (134, 13457), (154, 13541), (188, 13718), (196, 13760), (197, 13766),

Gene: Bexan\_14 Start: 12284, Stop: 13303, Start Num: 6

Candidate Starts for Bexan\_14:

(Start: 6 @12284 has 512 MA's), (51, 12479), (54, 12494), (76, 12614), (80, 12635), (94, 12710), (108, 12770), (154, 12956), (187, 13127), (188, 13133), (197, 13190), (204, 13226),

Gene: BiancaTri92\_18 Start: 13946, Stop: 14902, Start Num: 6

Candidate Starts for BiancaTri92\_18:

(Start: 6 @13946 has 512 MA's), (29, 14006), (40, 14075), (46, 14102), (57, 14144), (61, 14174), (64, 14198), (75, 14243), (84, 14294), (92, 14324), (118, 14429), (125, 14456), (143, 14528), (181, 14687), (188, 14741), (196, 14792),

Gene: Big3\_15 Start: 12226, Stop: 13224, Start Num: 6

Candidate Starts for Big3\_15:

(Start: 6 @12226 has 512 MA's), (42, 12370), (51, 12421), (54, 12436), (76, 12556), (80, 12577), (94, 12652), (108, 12712), (129, 12796), (134, 12814), (154, 12898), (180, 13018), (188, 13075), (196, 13114), (197, 13120),

Gene: BigChungus\_7 Start: 5120, Stop: 6079, Start Num: 8

Candidate Starts for BigChungus\_7:

(Start: 8 @5120 has 150 MA's), (Start: 25 @5171 has 105 MA's), (50, 5300), (67, 5387), (77, 5429), (79, 5438), (89, 5483), (107, 5567), (132, 5663), (144, 5720), (156, 5774), (164, 5810), (209, 6023), (211, 6041),

Gene: BigMau\_17 Start: 11807, Stop: 12808, Start Num: 6

Candidate Starts for BigMau\_17:

(Start: 6 @11807 has 512 MA's), (54, 12017), (76, 12137), (80, 12158), (94, 12233), (108, 12293), (134, 12395), (154, 12479), (180, 12599), (188, 12656), (196, 12695), (197, 12701),

Gene: BigPaolini\_16 Start: 12233, Stop: 13234, Start Num: 6

Candidate Starts for BigPaolini\_16:

(Start: 6 @12233 has 512 MA's), (42, 12377), (51, 12428), (54, 12443), (76, 12563), (80, 12584), (94, 12659), (108, 12719), (134, 12821), (154, 12905), (180, 13025), (188, 13082), (196, 13121), (197, 13127), (214, 13211),

Gene: Bigchungi\_15 Start: 11310, Stop: 12326, Start Num: 6

Candidate Starts for Bigchungi\_15:

(Start: 6 @11310 has 512 MA's), (51, 11505), (54, 11520), (57, 11535), (68, 11607), (76, 11640), (80, 11661), (94, 11736), (108, 11796), (154, 11982), (187, 12153), (188, 12159), (197, 12216), (204,

12252), (207, 12267),

Gene: Bigflo\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for Bigflo\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: Bigfoot\_14 Start: 11332, Stop: 12336, Start Num: 6

Candidate Starts for Bigfoot\_14:

(Start: 6 @11332 has 512 MA's), (42, 11476), (44, 11485), (51, 11527), (54, 11542), (76, 11662), (80, 11683), (94, 11758), (108, 11818), (134, 11920), (154, 12004), (160, 12034), (180, 12124), (187, 12175), (188, 12181), (197, 12229),

Gene: BillDoor\_10 Start: 5376, Stop: 6332, Start Num: 8

Candidate Starts for BillDoor\_10:

(Start: 8 @5376 has 150 MA's), (Start: 25 @5418 has 105 MA's), (66, 5631), (77, 5676), (79, 5685), (89, 5730), (113, 5841), (130, 5904), (156, 6021), (164, 6057), (165, 6060), (170, 6087), (203, 6243), (211, 6288), (212, 6291),

Gene: BillKnuckles\_16 Start: 12288, Stop: 13481, Start Num: 14

Candidate Starts for BillKnuckles\_16:

(Start: 14 @12288 has 5 MA's), (29, 12336), (31, 12360), (46, 12432), (61, 12504), (64, 12528), (68, 12543), (84, 12624), (92, 12654), (128, 12780), (150, 12861), (154, 12888), (179, 12987), (210, 13170), (211, 13182), (222, 13314), (224, 13347), (226, 13368), (228, 13401),

Gene: Bircsak\_15 Start: 11793, Stop: 12812, Start Num: 6

Candidate Starts for Bircsak\_15:

(Start: 6 @11793 has 512 MA's), (51, 11988), (54, 12003), (76, 12123), (80, 12144), (94, 12219), (108, 12279), (154, 12465), (187, 12636), (188, 12642), (197, 12699), (204, 12735),

Gene: Biskit\_9 Start: 5369, Stop: 6331, Start Num: 8

Candidate Starts for Biskit\_9:

(Start: 8 @5369 has 150 MA's), (12, 5384), (Start: 25 @5411 has 105 MA's), (49, 5537), (53, 5546), (66, 5624), (77, 5669), (79, 5678), (89, 5723), (96, 5759), (113, 5834), (156, 6014), (164, 6050), (165, 6053), (170, 6080), (203, 6236), (209, 6263), (211, 6281),

Gene: Blackmoor\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Blackmoor\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Blarby\_8 Start: 5402, Stop: 6337, Start Num: 25

Candidate Starts for Blarby\_8:

(Start: 25 @5402 has 105 MA's), (34, 5447), (35, 5456), (43, 5501), (52, 5537), (71, 5639), (86, 5714), (128, 5894), (144, 5960), (166, 6056), (173, 6089), (174, 6107), (178, 6131), (184, 6173), (205, 6272), (209, 6290), (212, 6311),

Gene: BlessJoy\_19 Start: 12216, Stop: 13187, Start Num: 5

Candidate Starts for BlessJoy\_19:

(Start: 5 @12216 has 75 MA's), (29, 12276), (46, 12372), (57, 12414), (61, 12444), (64, 12468), (75, 12513), (84, 12564), (87, 12576), (92, 12594), (122, 12699), (164, 12885), (211, 13158),

Gene: Blinn1\_19 Start: 12273, Stop: 13244, Start Num: 5

Candidate Starts for Blinn1\_19:

(Start: 5 @12273 has 75 MA's), (29, 12333), (46, 12429), (57, 12471), (61, 12501), (64, 12525), (75, 12570), (84, 12621), (87, 12633), (92, 12651), (122, 12756), (164, 12942),

Gene: Blondies\_8 Start: 5370, Stop: 6326, Start Num: 8

Candidate Starts for Blondies\_8:

(Start: 8 @5370 has 150 MA's), (12, 5385), (Start: 25 @5412 has 105 MA's), (49, 5538), (53, 5547), (66, 5625), (77, 5670), (79, 5679), (89, 5724), (96, 5760), (113, 5835), (156, 6015), (164, 6051), (165, 6054), (170, 6081), (203, 6237), (209, 6264), (211, 6282),

Gene: BluSpix\_15 Start: 11591, Stop: 12589, Start Num: 6

Candidate Starts for BluSpix\_15:

(Start: 6 @11591 has 512 MA's), (42, 11735), (51, 11786), (54, 11801), (76, 11921), (80, 11942), (94, 12017), (108, 12077), (134, 12179), (154, 12263), (180, 12383), (188, 12440), (196, 12479), (197, 12485),

Gene: Blue\_15 Start: 11698, Stop: 12699, Start Num: 6

Candidate Starts for Blue\_15:

(Start: 6 @11698 has 512 MA's), (42, 11842), (51, 11893), (54, 11908), (76, 12028), (80, 12049), (94, 12124), (108, 12184), (134, 12286), (154, 12370), (180, 12490), (188, 12547), (196, 12586), (197, 12592), (207, 12643),

Gene: Blue7\_19 Start: 12209, Stop: 13180, Start Num: 5

Candidate Starts for Blue7\_19:

(Start: 5 @12209 has 75 MA's), (29, 12269), (46, 12365), (57, 12407), (61, 12437), (64, 12461), (75, 12506), (84, 12557), (87, 12569), (92, 12587), (122, 12692),

Gene: BlueBird\_16 Start: 11103, Stop: 12077, Start Num: 8

Candidate Starts for BlueBird\_16:

(Start: 8 @11103 has 150 MA's), (46, 11244), (70, 11364), (79, 11403), (84, 11436), (141, 11673), (150, 11700), (154, 11727), (171, 11811), (188, 11901), (194, 11946), (195, 11952), (198, 11985), (207, 12021),

Gene: Bluefalcon\_12 Start: 10877, Stop: 11809, Start Num: 19

Candidate Starts for Bluefalcon\_12:

(Start: 19 @10877 has 50 MA's), (46, 11006), (57, 11048), (61, 11078), (79, 11165), (84, 11198), (125, 11339), (154, 11462), (159, 11486), (171, 11546), (181, 11585), (183, 11606), (189, 11654), (198, 11711), (207, 11747), (211, 11771),

Gene: Bob3\_14 Start: 11147, Stop: 12148, Start Num: 6

Candidate Starts for Bob3\_14:

(Start: 6 @11147 has 512 MA's), (54, 11357), (76, 11477), (80, 11498), (94, 11573), (108, 11633), (121, 11684), (122, 11687), (129, 11717), (134, 11735), (154, 11819), (188, 11996), (196, 12035), (197, 12041),

Gene: BobSwaget\_19 Start: 13830, Stop: 14777, Start Num: 11

Candidate Starts for BobSwaget\_19:

(10, 13824), (Start: 11 @13830 has 9 MA's), (29, 13881), (40, 13950), (46, 13977), (47, 13992), (57, 14019), (61, 14049), (68, 14088), (84, 14169), (107, 14271), (139, 14388), (159, 14478), (181, 14562), (188, 14616), (196, 14667),

Gene: BobbyDazzler\_12 Start: 7772, Stop: 8674, Start Num: 21

Candidate Starts for BobbyDazzler\_12:

(Start: 21 @7772 has 36 MA's), (46, 7901), (65, 8003), (76, 8045), (79, 8060), (84, 8093), (150, 8348), (161, 8408), (167, 8441),

Gene: BogosyJay\_17 Start: 12633, Stop: 13592, Start Num: 6

Candidate Starts for BogosyJay\_17:

(Start: 6 @12633 has 512 MA's), (29, 12693), (45, 12783), (46, 12789), (57, 12831), (61, 12861), (64, 12885), (75, 12930), (84, 12981), (92, 13011), (110, 13095), (122, 13134), (125, 13146), (164, 13320), (181, 13377), (196, 13482),

Gene: Bombshell\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Bombshell\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Bonamassa\_13 Start: 10799, Stop: 11731, Start Num: 19

Candidate Starts for Bonamassa\_13:

(Start: 19 @10799 has 50 MA's), (46, 10928), (57, 10970), (61, 11000), (79, 11087), (84, 11120), (154, 11384), (159, 11408), (171, 11468), (181, 11507), (183, 11528), (189, 11576), (198, 11633), (207, 11669), (211, 11693),

Gene: Bonanza\_12 Start: 7701, Stop: 8603, Start Num: 21

Candidate Starts for Bonanza\_12:

(Start: 21 @7701 has 36 MA's), (46, 7830), (65, 7932), (76, 7974), (79, 7989), (84, 8022), (112, 8145), (150, 8277), (161, 8337), (167, 8370),

Gene: Bones\_15 Start: 11342, Stop: 12346, Start Num: 6

Candidate Starts for Bones\_15:

(Start: 6 @11342 has 512 MA's), (42, 11486), (44, 11495), (51, 11537), (54, 11552), (76, 11672), (80, 11693), (94, 11768), (108, 11828), (134, 11930), (154, 12014), (160, 12044), (180, 12134), (187, 12185), (188, 12191), (197, 12239),

Gene: Boohoo\_18 Start: 11295, Stop: 12245, Start Num: 6

Candidate Starts for Boohoo\_18:

(Start: 6 @11295 has 512 MA's), (29, 11355), (46, 11451), (61, 11523), (64, 11547), (75, 11592), (84, 11643), (92, 11673), (183, 12051), (203, 12171), (211, 12216),

Gene: BotCity\_7 Start: 4895, Stop: 5833, Start Num: 25

Candidate Starts for BotCity\_7:

(Start: 25 @4895 has 105 MA's), (33, 4937), (34, 4940), (52, 5030), (71, 5132), (85, 5204), (86, 5207), (131, 5396), (166, 5549), (168, 5561), (178, 5624), (186, 5678), (209, 5783), (212, 5804),

Gene: Bowtie\_16 Start: 12699, Stop: 13688, Start Num: 5

Candidate Starts for Bowtie\_16:

(Start: 5 @12699 has 75 MA's), (29, 12759), (33, 12789), (45, 12849), (46, 12855), (57, 12897), (61, 12927), (64, 12951), (75, 12996), (84, 13047), (87, 13059), (92, 13077), (110, 13161), (122, 13197), (125, 13209), (132, 13236), (188, 13494), (206, 13599),

Gene: Bradman\_15 Start: 11078, Stop: 12034, Start Num: 6

Candidate Starts for Bradman\_15:

(Start: 6 @11078 has 512 MA's), (29, 11138), (40, 11207), (46, 11234), (57, 11276), (61, 11306), (64, 11330), (75, 11375), (84, 11426), (118, 11561), (125, 11588), (132, 11615), (143, 11660), (181, 11819), (182, 11837), (188, 11873), (196, 11924),

Gene: Bradshaw\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Bradshaw\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: BreSam8\_17 Start: 11532, Stop: 12524, Start Num: 8

Candidate Starts for BreSam8\_17:

(Start: 8 @11532 has 150 MA's), (46, 11673), (70, 11793), (79, 11832), (84, 11865), (108, 11976), (132, 12063), (154, 12159), (170, 12240), (178, 12267), (181, 12279), (188, 12333), (194, 12378), (195, 12384), (198, 12417), (207, 12453), (211, 12477),

Gene: Briton15\_17 Start: 11653, Stop: 12672, Start Num: 6

Candidate Starts for Briton15\_17:

(Start: 6 @11653 has 512 MA's), (51, 11848), (54, 11863), (57, 11878), (68, 11950), (76, 11983), (80, 12004), (94, 12079), (108, 12139), (154, 12325), (187, 12496), (188, 12502), (197, 12559), (204, 12595),

Gene: Broseidon\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Broseidon\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: BruceB\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for BruceB\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: BruceLethal\_6 Start: 4634, Stop: 5581, Start Num: 24

Candidate Starts for BruceLethal\_6:

(Start: 23 @4631 has 3 MA's), (Start: 24 @4634 has 42 MA's), (33, 4682), (39, 4721), (48, 4766), (53, 4778), (63, 4841), (72, 4880), (79, 4910), (83, 4940), (94, 4991), (108, 5054), (133, 5147), (149, 5207), (153, 5243), (163, 5288), (172, 5330), (197, 5453), (200, 5474), (205, 5492), (206, 5501), (213, 5534),

Gene: Bruiser\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Bruiser\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Bruns\_14 Start: 11511, Stop: 12518, Start Num: 6

Candidate Starts for Bruns\_14:

(Start: 6 @11511 has 512 MA's), (42, 11655), (44, 11664), (51, 11706), (54, 11721), (76, 11841), (80, 11862), (94, 11937), (108, 11997), (134, 12099), (154, 12183), (160, 12213), (187, 12354), (188, 12360), (197, 12408),

Gene: Bryce\_12 Start: 7701, Stop: 8603, Start Num: 21

Candidate Starts for Bryce\_12:

(Start: 21 @7701 has 36 MA's), (46, 7830), (65, 7932), (76, 7974), (79, 7989), (84, 8022), (150, 8277), (161, 8337), (167, 8370),

Gene: BubbleTrouble\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for BubbleTrouble\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Bud\_16 Start: 12705, Stop: 13694, Start Num: 5

Candidate Starts for Bud\_16:

(Start: 5 @12705 has 75 MA's), (29, 12765), (33, 12795), (45, 12855), (46, 12861), (57, 12903), (61, 12933), (64, 12957), (75, 13002), (84, 13053), (87, 13065), (92, 13083), (110, 13167), (122, 13203), (125, 13215), (132, 13242), (188, 13500), (206, 13605),

Gene: Budski\_7 Start: 4901, Stop: 5842, Start Num: 25

Candidate Starts for Budski\_7:

(Start: 25 @4901 has 105 MA's), (52, 5036), (66, 5117), (71, 5138), (86, 5213), (114, 5339), (162, 5540), (166, 5558), (173, 5591), (184, 5675), (212, 5813),

Gene: Bugatti\_15 Start: 11103, Stop: 12077, Start Num: 8

Candidate Starts for Bugatti\_15:

(Start: 8 @11103 has 150 MA's), (46, 11244), (70, 11364), (79, 11403), (84, 11436), (141, 11673), (150, 11700), (154, 11727), (171, 11811), (188, 11901), (194, 11946), (195, 11952), (198, 11985), (207, 12021),

Gene: Buggy\_18 Start: 12624, Stop: 13580, Start Num: 6

Candidate Starts for Buggy\_18:

(Start: 6 @12624 has 512 MA's), (29, 12684), (37, 12732), (40, 12753), (46, 12780), (57, 12822), (61, 12852), (64, 12876), (84, 12972), (87, 12984), (118, 13107), (125, 13134), (132, 13161), (143, 13206), (181, 13365), (182, 13383), (188, 13419), (196, 13470),

Gene: Bumblebee11\_15 Start: 11491, Stop: 12423, Start Num: 6

Candidate Starts for Bumblebee11\_15:

(Start: 6 @11491 has 512 MA's), (29, 11551), (46, 11647), (47, 11662), (61, 11719), (64, 11743), (84, 11839), (101, 11923), (146, 12067), (154, 12109), (188, 12271), (191, 12304), (203, 12358), (210, 12391),

Gene: Burger\_14 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Burger\_14:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Burnsey\_8 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for Burnsey\_8:

(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (89, 5746), (96, 5782), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: Burton\_16 Start: 11710, Stop: 12711, Start Num: 6

Candidate Starts for Burton\_16:

(Start: 6 @11710 has 512 MA's), (54, 11920), (76, 12040), (80, 12061), (94, 12136), (108, 12196), (134, 12298), (154, 12382), (180, 12502), (188, 12559), (196, 12601), (197, 12607),



Gene: Button\_9 Start: 5455, Stop: 6384, Start Num: 16

Candidate Starts for Button\_9:

(Start: 16 @5455 has 7 MA's), (33, 5521), (53, 5617), (58, 5644), (77, 5740), (79, 5749), (80, 5755), (89, 5794), (96, 5830), (107, 5878), (156, 6085), (164, 6121), (165, 6124), (203, 6307), (211, 6352),

Gene: Buttons\_16 Start: 11781, Stop: 12800, Start Num: 6

Candidate Starts for Buttons\_16:

(Start: 6 @11781 has 512 MA's), (51, 11976), (54, 11991), (68, 12078), (76, 12111), (80, 12132), (94, 12207), (108, 12267), (154, 12453), (187, 12624), (188, 12630), (197, 12687), (204, 12723),

Gene: Buttrmlkdreams\_8 Start: 5370, Stop: 6326, Start Num: 8

Candidate Starts for Buttrmlkdreams\_8:

(Start: 8 @5370 has 150 MA's), (12, 5385), (Start: 25 @5412 has 105 MA's), (49, 5538), (53, 5547), (66, 5625), (77, 5670), (79, 5679), (89, 5724), (96, 5760), (113, 5835), (156, 6015), (164, 6051), (165, 6054), (170, 6081), (203, 6237), (209, 6264), (211, 6282),

Gene: BuzzBuzz\_16 Start: 11623, Stop: 12615, Start Num: 8

Candidate Starts for BuzzBuzz\_16:

(Start: 8 @11623 has 150 MA's), (46, 11764), (70, 11884), (79, 11923), (84, 11956), (108, 12067), (132, 12154), (154, 12250), (170, 12331), (178, 12358), (181, 12370), (188, 12424), (194, 12469), (195, 12475), (198, 12508), (207, 12544), (211, 12568),

Gene: Bxb1\_14 Start: 11657, Stop: 12850, Start Num: 14

Candidate Starts for Bxb1\_14:

(Start: 14 @11657 has 5 MA's), (29, 11705), (31, 11729), (46, 11801), (61, 11873), (64, 11897), (68, 11912), (84, 11993), (92, 12023), (128, 12149), (150, 12230), (154, 12257), (179, 12356), (210, 12539), (211, 12551), (222, 12683), (224, 12716), (226, 12737), (228, 12770),

Gene: Bxz2\_17 Start: 11633, Stop: 12625, Start Num: 8

Candidate Starts for Bxz2\_17:

(Start: 8 @11633 has 150 MA's), (46, 11774), (70, 11894), (79, 11933), (84, 11966), (108, 12077), (132, 12164), (154, 12260), (170, 12341), (178, 12368), (181, 12380), (188, 12434), (194, 12479), (195, 12485), (198, 12518), (207, 12554), (211, 12578),

Gene: C3\_14 Start: 12128, Stop: 13129, Start Num: 6

Candidate Starts for C3\_14:

(Start: 6 @12128 has 512 MA's), (29, 12188), (45, 12278), (46, 12284), (57, 12326), (61, 12356), (64, 12380), (75, 12425), (84, 12476), (87, 12488), (92, 12506), (128, 12656), (188, 12956), (196, 13007), (210, 13076), (211, 13088),

Gene: CLED96\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for CLED96\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: CRB1\_16 Start: 12145, Stop: 13101, Start Num: 6

Candidate Starts for CRB1\_16:

(Start: 6 @12145 has 512 MA's), (29, 12205), (37, 12253), (40, 12274), (46, 12301), (57, 12343), (61, 12373), (64, 12397), (75, 12442), (84, 12493), (87, 12505), (92, 12523), (118, 12628), (125, 12655), (132, 12682), (143, 12727), (181, 12886), (182, 12904), (188, 12940),

Gene: CactusRose\_14 Start: 11331, Stop: 12335, Start Num: 6

Candidate Starts for CactusRose\_14:

(Start: 6 @11331 has 512 MA's), (42, 11475), (44, 11484), (51, 11526), (54, 11541), (76, 11661), (80, 11682), (94, 11757), (108, 11817), (134, 11919), (154, 12003), (160, 12033), (180, 12123), (187, 12174), (188, 12180), (197, 12228),

Gene: Caelakin\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Caelakin\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: CallinAllBarbz\_6 Start: 4658, Stop: 5569, Start Num: 22

Candidate Starts for CallinAllBarbz\_6:

(Start: 22 @4658 has 2 MA's), (55, 4820), (64, 4886), (97, 5033), (138, 5201), (142, 5216), (156, 5276), (159, 5288), (209, 5525), (211, 5543), (216, 5561),

Gene: Calvinny\_18 Start: 11610, Stop: 12608, Start Num: 8

Candidate Starts for Calvinny\_18:

(Start: 8 @11610 has 150 MA's), (46, 11751), (70, 11871), (79, 11910), (84, 11943), (132, 12141), (150, 12210), (154, 12237), (170, 12318), (188, 12411), (194, 12456), (195, 12462), (198, 12495), (207, 12531), (211, 12555),

Gene: Cambiare\_8 Start: 7717, Stop: 8619, Start Num: 25

Candidate Starts for Cambiare\_8:

(Start: 25 @7717 has 105 MA's), (35, 7774), (36, 7777), (38, 7789), (40, 7804), (59, 7888), (66, 7936), (74, 7969), (83, 8020), (102, 8113), (109, 8137), (116, 8164), (126, 8191), (132, 8215), (166, 8371), (181, 8431),

Gene: Camperdownii\_14 Start: 11101, Stop: 12033, Start Num: 6

Candidate Starts for Camperdownii\_14:

(Start: 6 @11101 has 512 MA's), (29, 11161), (46, 11257), (61, 11329), (64, 11353), (84, 11449), (92, 11479), (101, 11533), (146, 11677), (154, 11719), (188, 11881), (191, 11914), (196, 11932), (203, 11968), (210, 12001),

Gene: Camri\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Camri\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Candra\_19 Start: 12273, Stop: 13244, Start Num: 5

Candidate Starts for Candra\_19:

(Start: 5 @12273 has 75 MA's), (29, 12333), (46, 12429), (57, 12471), (61, 12501), (64, 12525), (75, 12570), (84, 12621), (87, 12633), (92, 12651), (122, 12756), (164, 12942), (211, 13215),

Gene: CanesSauce\_8 Start: 5412, Stop: 6368, Start Num: 8

Candidate Starts for CanesSauce\_8:

(Start: 8 @5412 has 150 MA's), (Start: 25 @5454 has 105 MA's), (66, 5667), (77, 5712), (79, 5721), (89, 5766), (113, 5877), (144, 6003), (156, 6057), (164, 6093), (165, 6096), (170, 6123), (203, 6279), (211, 6324), (212, 6327),

Gene: Caraxes\_15 Start: 10834, Stop: 11790, Start Num: 6

Candidate Starts for Caraxes\_15:

(Start: 6 @10834 has 512 MA's), (29, 10894), (45, 10984), (46, 10990), (57, 11032), (61, 11062), (64, 11086), (75, 11131), (84, 11182), (87, 11194), (92, 11212), (132, 11371), (143, 11416), (161, 11500), (181, 11575),

Gene: Carlyle\_17 Start: 12178, Stop: 13182, Start Num: 6

Candidate Starts for Carlyle\_17:

(Start: 6 @12178 has 512 MA's), (42, 12322), (51, 12373), (54, 12388), (76, 12508), (80, 12529), (94, 12604), (108, 12664), (134, 12766), (154, 12850), (180, 12970), (188, 13027), (196, 13066), (197, 13072), (204, 13108), (207, 13123),

Gene: Carsonalex\_9 Start: 5437, Stop: 6408, Start Num: 8

Candidate Starts for Carsonalex\_9:

(Start: 8 @5437 has 150 MA's), (12, 5452), (Start: 25 @5488 has 105 MA's), (49, 5617), (89, 5803), (96, 5839), (121, 5941), (156, 6094), (170, 6160), (203, 6316), (211, 6361),

Gene: CassieYates\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for CassieYates\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Catalina\_17 Start: 12849, Stop: 13808, Start Num: 6

Candidate Starts for Catalina\_17:

(Start: 6 @12849 has 512 MA's), (29, 12909), (45, 12999), (46, 13005), (57, 13047), (61, 13077), (64, 13101), (75, 13146), (84, 13197), (87, 13209), (92, 13227), (122, 13350), (125, 13362), (181, 13593), (196, 13698),

Gene: Caviar\_16 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for Caviar\_16:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Cedasite\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Cedasite\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Centaur\_18 Start: 12652, Stop: 13608, Start Num: 6

Candidate Starts for Centaur\_18:

(Start: 6 @12652 has 512 MA's), (29, 12712), (40, 12781), (46, 12808), (57, 12850), (61, 12880), (64, 12904), (75, 12949), (84, 13000), (87, 13012), (118, 13135), (125, 13162), (132, 13189), (143, 13234), (181, 13393), (182, 13411), (188, 13447), (196, 13498),

Gene: CentreCat\_15 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for CentreCat\_15:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (61, 11708), (64, 11732), (84, 11828), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210, 12380),

Gene: Cerulean\_15 Start: 11458, Stop: 12390, Start Num: 6

Candidate Starts for Cerulean\_15:

(Start: 6 @11458 has 512 MA's), (29, 11518), (46, 11614), (47, 11629), (61, 11686), (64, 11710), (84, 11806), (92, 11836), (101, 11890), (146, 12034), (154, 12076), (188, 12238), (191, 12271), (196,

12289), (203, 12325), (210, 12358),

Gene: Chadwick\_14 Start: 10598, Stop: 11539, Start Num: 19

Candidate Starts for Chadwick\_14:

(Start: 19 @10598 has 50 MA's), (46, 10727), (61, 10799), (79, 10886), (84, 10919), (92, 10949), (125, 11060), (128, 11075), (154, 11183), (159, 11207), (171, 11267), (181, 11306), (183, 11327), (189, 11375), (198, 11432), (207, 11468), (211, 11492),

Gene: ChampagnePapi\_15 Start: 11457, Stop: 12389, Start Num: 6

Candidate Starts for ChampagnePapi\_15:

(Start: 6 @11457 has 512 MA's), (29, 11517), (46, 11613), (47, 11628), (61, 11685), (64, 11709), (84, 11805), (92, 11835), (101, 11889), (146, 12033), (154, 12075), (188, 12237), (191, 12270), (196, 12288), (203, 12324), (210, 12357),

Gene: Chanagan\_14 Start: 11173, Stop: 12174, Start Num: 6

Candidate Starts for Chanagan\_14:

(Start: 6 @11173 has 512 MA's), (42, 11317), (51, 11368), (54, 11383), (76, 11503), (80, 11524), (94, 11599), (108, 11659), (134, 11761), (154, 11845), (180, 11965), (188, 12022), (196, 12061), (197, 12067), (214, 12151),

Gene: Chance64\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Chance64\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Changeling\_19 Start: 14018, Stop: 14968, Start Num: 6

Candidate Starts for Changeling\_19:

(Start: 6 @14018 has 512 MA's), (29, 14078), (40, 14147), (46, 14174), (57, 14216), (61, 14246), (64, 14270), (75, 14315), (84, 14366), (92, 14396), (110, 14480), (132, 14549), (143, 14594), (164, 14696), (181, 14753), (182, 14771), (188, 14807), (196, 14858),

Gene: Chaph\_15 Start: 11488, Stop: 12420, Start Num: 6

Candidate Starts for Chaph\_15:

(Start: 6 @11488 has 512 MA's), (29, 11548), (46, 11644), (61, 11716), (64, 11740), (84, 11836), (101, 11920), (146, 12064), (154, 12106), (188, 12268), (191, 12301), (196, 12319), (203, 12355), (210, 12388),

Gene: Chargerpower\_16 Start: 11312, Stop: 12259, Start Num: 11

Candidate Starts for Chargerpower\_16:

(Start: 11 @11312 has 9 MA's), (29, 11363), (46, 11459), (57, 11501), (61, 11531), (64, 11555), (75, 11600), (84, 11651), (87, 11663), (127, 11819), (158, 11957), (181, 12044), (188, 12098), (196, 12149),

Gene: Charm\_16 Start: 11056, Stop: 12024, Start Num: 6

Candidate Starts for Charm\_16:

(Start: 6 @11056 has 512 MA's), (29, 11116), (46, 11212), (57, 11254), (61, 11284), (64, 11308), (75, 11353), (84, 11404), (92, 11434), (132, 11593), (154, 11689),

Gene: Chartreuse\_19 Start: 12187, Stop: 13158, Start Num: 5

Candidate Starts for Chartreuse\_19:

(Start: 5 @12187 has 75 MA's), (29, 12247), (46, 12343), (57, 12385), (61, 12415), (64, 12439), (75, 12484), (84, 12535), (87, 12547), (92, 12565), (122, 12670), (164, 12856), (211, 13129),

Gene: Che12\_17 Start: 10931, Stop: 11893, Start Num: 6

Candidate Starts for Che12\_17:

(Start: 6 @10931 has 512 MA's), (29, 10991), (45, 11081), (46, 11087), (57, 11129), (61, 11159), (64, 11183), (75, 11228), (84, 11279), (87, 11291), (92, 11309), (125, 11441), (132, 11468), (143, 11513), (181, 11672), (215, 11873),

Gene: Che9d\_7 Start: 4887, Stop: 5822, Start Num: 25

Candidate Starts for Che9d\_7:

(Start: 25 @4887 has 105 MA's), (34, 4932), (35, 4941), (43, 4986), (52, 5022), (71, 5124), (86, 5199), (128, 5379), (144, 5445), (166, 5541), (173, 5574), (174, 5592), (178, 5616), (184, 5658), (205, 5757), (209, 5775), (212, 5796),

Gene: CheeseTouch\_7 Start: 4901, Stop: 5842, Start Num: 25

Candidate Starts for CheeseTouch\_7:

(Start: 25 @4901 has 105 MA's), (52, 5036), (66, 5117), (71, 5138), (86, 5213), (114, 5339), (162, 5540), (166, 5558), (173, 5591), (184, 5675), (212, 5813),

Gene: Cherrybomb426\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Cherrybomb426\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: CherryonLim\_9 Start: 5842, Stop: 6804, Start Num: 8

Candidate Starts for CherryonLim\_9:

(Start: 8 @5842 has 150 MA's), (Start: 25 @5893 has 105 MA's), (33, 5932), (67, 6109), (77, 6151), (79, 6160), (89, 6205), (107, 6289), (132, 6385), (144, 6442), (156, 6496), (164, 6532), (209, 6745), (211, 6763),

Gene: ChickenTender\_10 Start: 5429, Stop: 6394, Start Num: 8

Candidate Starts for ChickenTender\_10:

(1, 5393), (Start: 8 @5429 has 150 MA's), (12, 5444), (Start: 25 @5480 has 105 MA's), (49, 5609), (89, 5795), (121, 5933), (156, 6086), (170, 6152), (203, 6308), (211, 6353),

Gene: ChipMunk\_18 Start: 12560, Stop: 13516, Start Num: 6

Candidate Starts for ChipMunk\_18:

(Start: 6 @12560 has 512 MA's), (29, 12620), (37, 12668), (46, 12716), (57, 12758), (61, 12788), (64, 12812), (75, 12857), (84, 12908), (92, 12938), (118, 13043), (125, 13070), (132, 13097), (143, 13142), (181, 13301), (182, 13319), (188, 13355), (196, 13406),

Gene: Chiqui\_14 Start: 11327, Stop: 12322, Start Num: 8

Candidate Starts for Chiqui\_14:

(Start: 8 @11327 has 150 MA's), (Start: 18 @11336 has 9 MA's), (46, 11468), (70, 11588), (79, 11627), (84, 11660), (108, 11771), (141, 11897), (154, 11951), (171, 12035), (179, 12062), (181, 12071), (188, 12125), (195, 12176), (198, 12209), (207, 12245), (216, 12287),

Gene: ChocoMunchkin\_8 Start: 5412, Stop: 6368, Start Num: 8

Candidate Starts for ChocoMunchkin\_8:

(Start: 8 @5412 has 150 MA's), (Start: 25 @5454 has 105 MA's), (66, 5667), (77, 5712), (79, 5721), (89, 5766), (113, 5877), (144, 6003), (156, 6057), (164, 6093), (165, 6096), (170, 6123), (203, 6279), (211, 6324), (212, 6327),

Gene: Chupacabra\_15 Start: 11254, Stop: 12189, Start Num: 6

Candidate Starts for Chupacabra\_15:

(Start: 6 @11254 has 512 MA's), (29, 11314), (46, 11410), (47, 11425), (57, 11452), (61, 11482), (64, 11506), (65, 11512), (75, 11551), (84, 11602), (92, 11632), (117, 11725), (141, 11812), (154, 11866), (158, 11887), (183, 11995), (188, 12028), (196, 12079), (203, 12115),

Gene: Ciao\_15 Start: 11560, Stop: 12570, Start Num: 6

Candidate Starts for Ciao\_15:

(Start: 6 @11560 has 512 MA's), (42, 11704), (51, 11755), (54, 11770), (76, 11890), (80, 11911), (94, 11986), (108, 12046), (129, 12130), (134, 12148), (154, 12232), (187, 12403), (188, 12409), (197, 12463),

Gene: Cici\_15 Start: 11482, Stop: 12414, Start Num: 6

Candidate Starts for Cici\_15:

(Start: 6 @11482 has 512 MA's), (29, 11542), (46, 11638), (47, 11653), (61, 11710), (64, 11734), (84, 11830), (101, 11914), (146, 12058), (154, 12100), (188, 12262), (191, 12295), (203, 12349), (210, 12382),

Gene: Cindaradix\_14 Start: 11201, Stop: 12133, Start Num: 6

Candidate Starts for Cindaradix\_14:

(Start: 6 @11201 has 512 MA's), (29, 11261), (42, 11339), (46, 11357), (47, 11372), (61, 11429), (64, 11453), (84, 11549), (92, 11579), (101, 11633), (146, 11777), (154, 11819), (188, 11981), (196, 12032), (203, 12068), (210, 12101),

Gene: Cintron\_15 Start: 11527, Stop: 12459, Start Num: 6

Candidate Starts for Cintron\_15:

(Start: 6 @11527 has 512 MA's), (29, 11587), (46, 11683), (61, 11755), (64, 11779), (84, 11875), (92, 11905), (101, 11959), (146, 12103), (154, 12145), (188, 12307), (191, 12340), (196, 12358), (203, 12394), (210, 12427),

Gene: Citius\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Citius\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Clarenza\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Clarenza\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Cleo\_8 Start: 5593, Stop: 6528, Start Num: 18

Candidate Starts for Cleo\_8:

(Start: 18 @5593 has 9 MA's), (46, 5728), (68, 5839), (73, 5860), (77, 5878), (83, 5908), (96, 5968), (107, 6016), (113, 6043), (131, 6109), (132, 6112), (156, 6223), (164, 6259), (165, 6262), (168, 6277), (170, 6289), (185, 6358), (187, 6373), (202, 6442), (209, 6472),

Gene: CloudWang3\_19 Start: 12218, Stop: 13189, Start Num: 5

Candidate Starts for CloudWang3\_19:

(Start: 5 @12218 has 75 MA's), (29, 12278), (46, 12374), (57, 12416), (61, 12446), (64, 12470), (75, 12515), (84, 12566), (87, 12578), (92, 12596), (122, 12701), (164, 12887), (211, 13160),

Gene: Cocoaberry\_15 Start: 11483, Stop: 12415, Start Num: 6

Candidate Starts for Cocoaberry\_15:

(Start: 6 @11483 has 512 MA's), (29, 11543), (46, 11639), (61, 11711), (64, 11735), (84, 11831), (101, 11915), (146, 12059), (154, 12101), (188, 12263), (191, 12296), (196, 12314), (203, 12350), (210, 12383),

Gene: Colbster\_17 Start: 11539, Stop: 12531, Start Num: 8

Candidate Starts for Colbster\_17:

(Start: 8 @11539 has 150 MA's), (46, 11680), (70, 11800), (79, 11839), (84, 11872), (108, 11983), (132, 12070), (154, 12166), (170, 12247), (178, 12274), (181, 12286), (188, 12340), (194, 12385), (195, 12391), (198, 12424), (207, 12460), (211, 12484),

Gene: Coleslaw\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Coleslaw\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Colin\_20 Start: 13838, Stop: 14809, Start Num: 2

Candidate Starts for Colin\_20:

(Start: 2 @13838 has 2 MA's), (29, 13913), (40, 13982), (46, 14009), (57, 14051), (61, 14081), (64, 14105), (75, 14150), (84, 14201), (87, 14213), (92, 14231), (96, 14261), (118, 14336), (125, 14363), (143, 14435), (164, 14537), (181, 14594), (182, 14612), (188, 14648), (196, 14699),

Gene: Commander\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Commander\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Conceptll\_15 Start: 11811, Stop: 12818, Start Num: 6

Candidate Starts for Conceptll\_15:

(Start: 6 @11811 has 512 MA's), (42, 11955), (51, 12006), (54, 12021), (76, 12141), (80, 12162), (94, 12237), (108, 12297), (121, 12348), (129, 12381), (134, 12399), (154, 12483), (187, 12654), (188, 12660), (192, 12693), (197, 12714), (207, 12765),

Gene: Connomayer\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Connomayer\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Conquerage\_17 Start: 12878, Stop: 13837, Start Num: 6

Candidate Starts for Conquerage\_17:

(Start: 6 @12878 has 512 MA's), (29, 12938), (45, 13028), (46, 13034), (57, 13076), (61, 13106), (64, 13130), (75, 13175), (84, 13226), (87, 13238), (92, 13256), (122, 13379), (125, 13391), (181, 13622), (196, 13727),

Gene: Conspiracy\_13 Start: 10617, Stop: 11546, Start Num: 19

Candidate Starts for Conspiracy\_13:

(Start: 19 @10617 has 50 MA's), (46, 10746), (57, 10788), (61, 10818), (79, 10905), (84, 10938), (154, 11202), (159, 11226), (171, 11286), (181, 11325), (183, 11346), (189, 11394), (198, 11451), (207, 11487), (211, 11511),

Gene: Coog\_13 Start: 10767, Stop: 11699, Start Num: 19

Candidate Starts for Coog\_13:

(Start: 19 @10767 has 50 MA's), (46, 10896), (57, 10938), (61, 10968), (79, 11055), (84, 11088), (154, 11352), (159, 11376), (171, 11436), (181, 11475), (183, 11496), (189, 11544), (198, 11601), (207, 11637), (211, 11661),

Gene: Cookie dough\_19 Start: 12230, Stop: 13201, Start Num: 5

Candidate Starts for Cookie dough\_19:

(Start: 5 @12230 has 75 MA's), (29, 12290), (46, 12386), (57, 12428), (61, 12458), (64, 12482), (75, 12527), (84, 12578), (87, 12590), (92, 12608), (122, 12713), (164, 12899), (211, 13172),

Gene: Corvo\_15 Start: 11755, Stop: 12771, Start Num: 6

Candidate Starts for Corvo\_15:

(Start: 6 @11755 has 512 MA's), (51, 11950), (54, 11965), (57, 11980), (68, 12052), (76, 12085), (80, 12106), (94, 12181), (108, 12241), (154, 12427), (187, 12598), (188, 12604), (197, 12661), (204, 12697),

Gene: CosmicSans\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for CosmicSans\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Cota\_6 Start: 4648, Stop: 5595, Start Num: 24

Candidate Starts for Cota\_6:

(Start: 24 @4648 has 42 MA's), (33, 4696), (40, 4738), (53, 4792), (72, 4894), (79, 4924), (83, 4954), (133, 5161), (138, 5185), (149, 5221), (153, 5257), (158, 5284), (172, 5344), (181, 5374), (197, 5467), (200, 5488), (205, 5506), (213, 5548),

Gene: Cozz\_8 Start: 5381, Stop: 6352, Start Num: 8

Candidate Starts for Cozz\_8:

(Start: 8 @5381 has 150 MA's), (12, 5396), (Start: 25 @5432 has 105 MA's), (49, 5561), (89, 5747), (96, 5783), (114, 5861), (121, 5885), (156, 6038), (170, 6104), (203, 6260), (211, 6305),

Gene: Crespo\_7 Start: 7104, Stop: 8039, Start Num: 25

Candidate Starts for Crespo\_7:

(Start: 25 @7104 has 105 MA's), (35, 7161), (36, 7164), (38, 7176), (59, 7275), (66, 7323), (74, 7356), (83, 7407), (102, 7500), (168, 7779), (175, 7818), (211, 8013),

Gene: Crispicous1\_14 Start: 11041, Stop: 12045, Start Num: 6

Candidate Starts for Crispicous1\_14:

(Start: 6 @11041 has 512 MA's), (42, 11185), (51, 11236), (54, 11251), (76, 11371), (80, 11392), (94, 11467), (108, 11527), (121, 11578), (129, 11611), (134, 11629), (154, 11713), (188, 11890), (197, 11938), (214, 12022),

Gene: Crucio\_16 Start: 12107, Stop: 13063, Start Num: 6

Candidate Starts for Crucio\_16:

(Start: 6 @12107 has 512 MA's), (29, 12167), (40, 12236), (46, 12263), (57, 12305), (61, 12335), (64, 12359), (75, 12404), (84, 12455), (92, 12485), (118, 12590), (132, 12644), (181, 12848), (182, 12866), (188, 12902), (196, 12953),

Gene: Cuco\_13 Start: 10798, Stop: 11730, Start Num: 19

Candidate Starts for Cuco\_13:

(Start: 19 @10798 has 50 MA's), (46, 10927), (57, 10969), (61, 10999), (79, 11086), (84, 11119), (154, 11383), (159, 11407), (171, 11467), (181, 11506), (183, 11527), (189, 11575), (198, 11632), (207, 11668), (211, 11692),



Gene: Cueyllyss\_15 Start: 11751, Stop: 12755, Start Num: 6

Candidate Starts for Cueyllyss\_15:

(Start: 6 @11751 has 512 MA's), (42, 11895), (44, 11904), (51, 11946), (54, 11961), (76, 12081), (80, 12102), (94, 12177), (108, 12237), (134, 12339), (154, 12423), (160, 12453), (180, 12543), (187, 12594), (188, 12600), (197, 12648),

Gene: Cullens\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for Cullens\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: D29\_17 Start: 12087, Stop: 13043, Start Num: 5

Candidate Starts for D29\_17:

(Start: 5 @12087 has 75 MA's), (29, 12147), (45, 12237), (46, 12243), (57, 12285), (61, 12315), (64, 12339), (75, 12384), (84, 12435), (87, 12447), (92, 12465), (95, 12486), (122, 12573), (125, 12585), (127, 12591), (132, 12612), (171, 12792), (181, 12816), (188, 12870), (215, 13017),

Gene: D32\_19 Start: 12087, Stop: 13043, Start Num: 5

Candidate Starts for D32\_19:

(Start: 5 @12087 has 75 MA's), (29, 12147), (45, 12237), (46, 12243), (57, 12285), (61, 12315), (64, 12339), (75, 12384), (84, 12435), (87, 12447), (92, 12465), (95, 12486), (122, 12573), (125, 12585), (127, 12591), (132, 12612), (171, 12792), (181, 12816), (188, 12870), (215, 13017),

Gene: DBQu4n\_19 Start: 12087, Stop: 13043, Start Num: 5

Candidate Starts for DBQu4n\_19:

(Start: 5 @12087 has 75 MA's), (29, 12147), (45, 12237), (46, 12243), (57, 12285), (61, 12315), (64, 12339), (75, 12384), (84, 12435), (87, 12447), (92, 12465), (95, 12486), (122, 12573), (125, 12585), (127, 12591), (132, 12612), (171, 12792), (181, 12816), (188, 12870), (215, 13017),

Gene: DD5\_16 Start: 12290, Stop: 13288, Start Num: 6

Candidate Starts for DD5\_16:

(Start: 6 @12290 has 512 MA's), (42, 12434), (51, 12485), (54, 12500), (76, 12620), (80, 12641), (94, 12716), (108, 12776), (134, 12878), (154, 12962), (180, 13082), (188, 13139), (196, 13178), (197, 13184),

Gene: DMoney\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for DMoney\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: DNAIII\_007 Start: 7112, Stop: 8047, Start Num: 25

Candidate Starts for DNAIII\_007:

(Start: 25 @7112 has 105 MA's), (35, 7169), (36, 7172), (38, 7184), (59, 7283), (66, 7331), (74, 7364), (83, 7415), (102, 7508), (168, 7787), (175, 7826), (211, 8021),

Gene: DaHudson\_17 Start: 11531, Stop: 12523, Start Num: 8

Candidate Starts for DaHudson\_17:

(Start: 8 @11531 has 150 MA's), (46, 11672), (70, 11792), (79, 11831), (84, 11864), (108, 11975), (132, 12062), (154, 12158), (170, 12239), (178, 12266), (181, 12278), (188, 12332), (194, 12377), (195, 12383), (198, 12416), (207, 12452), (211, 12476),

Gene: DaVinci\_19 Start: 12241, Stop: 13212, Start Num: 5

Candidate Starts for DaVinci\_19:

(Start: 5 @12241 has 75 MA's), (29, 12301), (46, 12397), (57, 12439), (61, 12469), (64, 12493), (75, 12538), (84, 12589), (87, 12601), (92, 12619), (122, 12724), (164, 12910), (211, 13183),

Gene: Daishi\_16 Start: 10464, Stop: 11456, Start Num: 8

Candidate Starts for Daishi\_16:

(Start: 8 @10464 has 150 MA's), (46, 10605), (70, 10725), (79, 10764), (84, 10797), (108, 10908), (132, 10995), (154, 11091), (170, 11172), (178, 11199), (181, 11211), (188, 11265), (194, 11310), (195, 11316), (198, 11349), (207, 11385), (211, 11409),

Gene: Dalmatian\_16 Start: 12257, Stop: 13213, Start Num: 6

Candidate Starts for Dalmatian\_16:

(Start: 6 @12257 has 512 MA's), (29, 12317), (40, 12386), (46, 12413), (57, 12455), (61, 12485), (64, 12509), (75, 12554), (84, 12605), (92, 12635), (118, 12740), (132, 12794), (181, 12998), (182, 13016), (188, 13052), (196, 13103),

Gene: Danforth\_12 Start: 10360, Stop: 11310, Start Num: 19

Candidate Starts for Danforth\_12:

(Start: 19 @10360 has 50 MA's), (46, 10489), (57, 10531), (79, 10648), (84, 10681), (98, 10756), (127, 10840), (150, 10930), (154, 10957), (161, 10990), (171, 11041), (181, 11080), (198, 11206), (207, 11242),

Gene: Darionha\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Darionha\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Darrell\_18 Start: 13070, Stop: 14029, Start Num: 6

Candidate Starts for Darrell\_18:

(Start: 6 @13070 has 512 MA's), (29, 13130), (45, 13220), (46, 13226), (57, 13268), (61, 13298), (64, 13322), (75, 13367), (84, 13418), (92, 13448), (110, 13532), (122, 13571), (125, 13583), (164, 13757), (181, 13814), (196, 13919),

Gene: DARTHPhader\_17 Start: 13036, Stop: 13998, Start Num: 6

Candidate Starts for DARTHPhader\_17:

(Start: 6 @13036 has 512 MA's), (29, 13096), (45, 13186), (46, 13192), (57, 13234), (61, 13264), (64, 13288), (75, 13333), (84, 13384), (92, 13414), (101, 13468), (122, 13540), (125, 13552), (132, 13579), (181, 13783), (196, 13888), (210, 13957),

Gene: Datway\_15 Start: 11500, Stop: 12432, Start Num: 6

Candidate Starts for Datway\_15:

(Start: 6 @11500 has 512 MA's), (29, 11560), (46, 11656), (47, 11671), (59, 11713), (61, 11728), (64, 11752), (84, 11848), (92, 11878), (101, 11932), (146, 12076), (154, 12118), (188, 12280), (196, 12331), (203, 12367), (210, 12400),

Gene: Deano\_15 Start: 11487, Stop: 12419, Start Num: 6

Candidate Starts for Deano\_15:

(Start: 6 @11487 has 512 MA's), (29, 11547), (46, 11643), (47, 11658), (61, 11715), (64, 11739), (84, 11835), (92, 11865), (101, 11919), (146, 12063), (154, 12105), (188, 12267), (191, 12300), (196, 12318), (203, 12354), (210, 12387),

Gene: DekHockey33\_18 Start: 11417, Stop: 12367, Start Num: 6

Candidate Starts for DekHockey33\_18:

(Start: 6 @11417 has 512 MA's), (29, 11477), (46, 11573), (61, 11645), (64, 11669), (75, 11714), (84, 11765), (92, 11795), (183, 12173), (203, 12293), (211, 12338),

Gene: Deloris\_17 Start: 12587, Stop: 13543, Start Num: 6

Candidate Starts for Deloris\_17:

(Start: 6 @12587 has 512 MA's), (Start: 21 @12611 has 36 MA's), (29, 12647), (46, 12743), (57, 12785), (61, 12815), (64, 12839), (75, 12884), (84, 12935), (87, 12947), (96, 12995), (125, 13097), (139, 13154), (188, 13382), (196, 13433),

Gene: Demsculpinboyz\_7 Start: 4878, Stop: 5813, Start Num: 25

Candidate Starts for Demsculpinboyz\_7:

(Start: 25 @4878 has 105 MA's), (34, 4923), (35, 4932), (43, 4977), (52, 5013), (71, 5115), (86, 5190), (128, 5370), (144, 5436), (166, 5532), (173, 5565), (174, 5583), (178, 5607), (184, 5649), (205, 5748), (209, 5766), (212, 5787),

Gene: Dexes\_16 Start: 12255, Stop: 13259, Start Num: 6

Candidate Starts for Dexes\_16:

(Start: 6 @12255 has 512 MA's), (54, 12465), (76, 12585), (80, 12606), (94, 12681), (108, 12741), (121, 12792), (129, 12825), (134, 12843), (154, 12927), (188, 13104), (196, 13143), (197, 13149),

Gene: Dhanush\_15 Start: 11482, Stop: 12414, Start Num: 6

Candidate Starts for Dhanush\_15:

(Start: 6 @11482 has 512 MA's), (29, 11542), (46, 11638), (61, 11710), (64, 11734), (84, 11830), (101, 11914), (146, 12058), (154, 12100), (188, 12262), (191, 12295), (196, 12313), (203, 12349), (210, 12382),

Gene: Dieselweasel\_17 Start: 11540, Stop: 12532, Start Num: 8

Candidate Starts for Dieselweasel\_17:

(Start: 8 @11540 has 150 MA's), (46, 11681), (70, 11801), (79, 11840), (84, 11873), (108, 11984), (132, 12071), (154, 12167), (170, 12248), (178, 12275), (181, 12287), (188, 12341), (194, 12386), (195, 12392), (198, 12425), (207, 12461), (211, 12485),

Gene: Dignity\_18 Start: 12569, Stop: 13525, Start Num: 6

Candidate Starts for Dignity\_18:

(Start: 6 @12569 has 512 MA's), (29, 12629), (37, 12677), (40, 12698), (46, 12725), (57, 12767), (61, 12797), (64, 12821), (84, 12917), (87, 12929), (118, 13052), (125, 13079), (132, 13106), (143, 13151), (181, 13310), (182, 13328), (188, 13364), (196, 13415),

Gene: Dinger\_12 Start: 7697, Stop: 8599, Start Num: 21

Candidate Starts for Dinger\_12:

(Start: 21 @7697 has 36 MA's), (46, 7826), (65, 7928), (76, 7970), (79, 7985), (84, 8018), (150, 8273), (161, 8333), (167, 8366),

Gene: DirtyDunning\_15 Start: 11475, Stop: 12407, Start Num: 6

Candidate Starts for DirtyDunning\_15:

(Start: 6 @11475 has 512 MA's), (29, 11535), (46, 11631), (61, 11703), (64, 11727), (84, 11823), (92, 11853), (101, 11907), (146, 12051), (154, 12093), (188, 12255), (191, 12288), (196, 12306), (203, 12342), (210, 12375),

Gene: Discoknowium\_13 Start: 10907, Stop: 11836, Start Num: 19

Candidate Starts for Discoknowium\_13:

(Start: 19 @10907 has 50 MA's), (46, 11036), (57, 11078), (61, 11108), (79, 11195), (84, 11228), (154, 11492), (159, 11516), (171, 11576), (181, 11615), (183, 11636), (189, 11684), (198, 11741), (207, 11777), (211, 11801),

Gene: Dixon\_13 Start: 10379, Stop: 11329, Start Num: 19

Candidate Starts for Dixon\_13:

(Start: 19 @10379 has 50 MA's), (46, 10508), (57, 10550), (79, 10667), (84, 10700), (98, 10775), (127, 10859), (150, 10949), (154, 10976), (161, 11009), (171, 11060), (181, 11099), (198, 11225), (207, 11261),

Gene: DontArgue\_14 Start: 9504, Stop: 10442, Start Num: 6

Candidate Starts for DontArgue\_14:

(Start: 6 @9504 has 512 MA's), (29, 9564), (42, 9642), (46, 9660), (47, 9675), (57, 9702), (61, 9732), (64, 9756), (75, 9801), (84, 9852), (92, 9882), (122, 9984), (141, 10065), (154, 10119), (196, 10332), (203, 10368), (210, 10401),

Gene: Doom\_15 Start: 11833, Stop: 12852, Start Num: 6

Candidate Starts for Doom\_15:

(Start: 6 @11833 has 512 MA's), (51, 12028), (54, 12043), (57, 12058), (68, 12130), (76, 12163), (80, 12184), (94, 12259), (108, 12319), (154, 12505), (187, 12676), (188, 12682), (197, 12739), (204, 12775),

Gene: Dorothea\_19 Start: 12240, Stop: 13211, Start Num: 5

Candidate Starts for Dorothea\_19:

(Start: 5 @12240 has 75 MA's), (29, 12300), (46, 12396), (57, 12438), (61, 12468), (64, 12492), (75, 12537), (84, 12588), (87, 12600), (92, 12618), (122, 12723), (164, 12909), (211, 13182),

Gene: DrFeelGood\_14 Start: 11358, Stop: 12377, Start Num: 6

Candidate Starts for DrFeelGood\_14:

(Start: 6 @11358 has 512 MA's), (51, 11553), (54, 11568), (57, 11583), (68, 11655), (76, 11688), (80, 11709), (94, 11784), (108, 11844), (154, 12030), (187, 12201), (188, 12207), (197, 12264), (204, 12300),

Gene: DrParker\_6 Start: 4638, Stop: 5606, Start Num: 24

Candidate Starts for DrParker\_6:

(Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (48, 4770), (53, 4782), (72, 4884), (79, 4914), (83, 4944), (94, 4995), (149, 5211), (153, 5247), (158, 5274), (172, 5334), (178, 5352), (197, 5457), (200, 5478), (205, 5496), (213, 5538),

Gene: Drake55\_18 Start: 12670, Stop: 13626, Start Num: 6

Candidate Starts for Drake55\_18:

(Start: 6 @12670 has 512 MA's), (15, 12685), (29, 12730), (46, 12826), (57, 12868), (61, 12898), (64, 12922), (75, 12967), (84, 13018), (92, 13048), (118, 13153), (125, 13180), (132, 13207), (143, 13252), (181, 13411), (182, 13429), (188, 13465), (196, 13516),

Gene: Drake94\_14 Start: 9354, Stop: 10286, Start Num: 6

Candidate Starts for Drake94\_14:

(Start: 6 @9354 has 512 MA's), (29, 9414), (42, 9492), (46, 9510), (47, 9525), (57, 9552), (61, 9582), (64, 9606), (75, 9651), (84, 9702), (127, 9852), (130, 9867), (141, 9915), (154, 9969), (196, 10182), (203, 10218), (206, 10236), (210, 10251),

Gene: Dre3\_8 Start: 5540, Stop: 6475, Start Num: 18

Candidate Starts for Dre3\_8:

(Start: 18 @5540 has 9 MA's), (46, 5675), (68, 5786), (73, 5807), (77, 5825), (83, 5855), (96, 5915), (107, 5963), (113, 5990), (131, 6056), (132, 6059), (156, 6170), (164, 6206), (165, 6209), (168, 6224), (170, 6236), (185, 6305), (187, 6320), (202, 6389), (209, 6419),

Gene: DreamCatcher\_18 Start: 12787, Stop: 13803, Start Num: 6

Candidate Starts for DreamCatcher\_18:

(Start: 6 @12787 has 512 MA's), (51, 12982), (54, 12997), (57, 13012), (68, 13084), (76, 13117), (80, 13138), (94, 13213), (108, 13273), (154, 13459), (187, 13630), (188, 13636), (197, 13693), (204, 13729), (207, 13744),

Gene: DreamTeam1\_16 Start: 11056, Stop: 12024, Start Num: 6

Candidate Starts for DreamTeam1\_16:

(Start: 6 @11056 has 512 MA's), (29, 11116), (46, 11212), (57, 11254), (61, 11284), (64, 11308), (75, 11353), (84, 11404), (92, 11434), (132, 11593), (154, 11689),

Gene: Dreamboat\_16 Start: 11485, Stop: 12495, Start Num: 6

Candidate Starts for Dreamboat\_16:

(Start: 6 @11485 has 512 MA's), (42, 11629), (51, 11680), (54, 11695), (76, 11815), (80, 11836), (94, 11911), (108, 11971), (121, 12022), (129, 12055), (134, 12073), (154, 12157), (187, 12328), (188, 12334), (197, 12388),

Gene: DroogsArmy\_16 Start: 12816, Stop: 13775, Start Num: 6

Candidate Starts for DroogsArmy\_16:

(Start: 6 @12816 has 512 MA's), (29, 12876), (40, 12945), (46, 12972), (47, 12987), (61, 13044), (65, 13074), (84, 13164), (130, 13350), (154, 13452), (188, 13626), (196, 13677), (203, 13713),

Gene: DropBear\_15 Start: 11163, Stop: 12137, Start Num: 8

Candidate Starts for DropBear\_15:

(Start: 8 @11163 has 150 MA's), (46, 11304), (70, 11424), (79, 11463), (84, 11496), (141, 11733), (150, 11760), (154, 11787), (171, 11871), (188, 11961), (194, 12006), (195, 12012), (198, 12045), (207, 12081),

Gene: Druantia\_15 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for Druantia\_15:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (61, 11708), (64, 11732), (84, 11828), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210, 12380),

Gene: Dublin\_12 Start: 10766, Stop: 11698, Start Num: 19

Candidate Starts for Dublin\_12:

(Start: 19 @10766 has 50 MA's), (46, 10895), (57, 10937), (61, 10967), (79, 11054), (84, 11087), (131, 11252), (154, 11351), (159, 11375), (171, 11435), (181, 11474), (183, 11495), (189, 11543), (198, 11600), (207, 11636), (211, 11660),

Gene: DudeLittle\_16 Start: 12259, Stop: 13215, Start Num: 6

Candidate Starts for DudeLittle\_16:

(Start: 6 @12259 has 512 MA's), (29, 12319), (40, 12388), (46, 12415), (57, 12457), (61, 12487), (64, 12511), (75, 12556), (84, 12607), (92, 12637), (118, 12742), (132, 12796), (181, 13000), (182, 13018), (188, 13054), (196, 13105),

Gene: Dulcie\_14 Start: 11232, Stop: 12230, Start Num: 6

Candidate Starts for Dulcie\_14:

(Start: 6 @11232 has 512 MA's), (42, 11376), (51, 11427), (54, 11442), (76, 11562), (80, 11583), (94, 11658), (108, 11718), (134, 11820), (154, 11904), (180, 12024), (188, 12081), (196, 12120), (197, 12126),

Gene: Duplo\_19 Start: 12128, Stop: 13084, Start Num: 5

Candidate Starts for Duplo\_19:

(Start: 5 @12128 has 75 MA's), (29, 12188), (45, 12278), (46, 12284), (57, 12326), (61, 12356), (64, 12380), (75, 12425), (84, 12476), (87, 12488), (92, 12506), (95, 12527), (122, 12614), (125, 12626), (127, 12632), (132, 12653), (171, 12833), (181, 12857), (188, 12911), (215, 13058),

Gene: Dussy\_16 Start: 11593, Stop: 12609, Start Num: 6

Candidate Starts for Dussy\_16:

(Start: 6 @11593 has 512 MA's), (51, 11788), (54, 11803), (57, 11818), (68, 11890), (76, 11923), (80, 11944), (94, 12019), (108, 12079), (154, 12265), (187, 12436), (188, 12442), (197, 12499), (204, 12535),

Gene: DustyMartin\_18 Start: 11324, Stop: 12259, Start Num: 6

Candidate Starts for DustyMartin\_18:

(Start: 6 @11324 has 512 MA's), (29, 11384), (42, 11462), (46, 11480), (47, 11495), (57, 11522), (61, 11552), (64, 11576), (84, 11672), (92, 11702), (117, 11795), (141, 11882), (154, 11936), (158, 11957), (183, 12065), (188, 12098), (196, 12149), (203, 12185),

Gene: Dynamix\_16 Start: 11642, Stop: 12640, Start Num: 6

Candidate Starts for Dynamix\_16:

(Start: 6 @11642 has 512 MA's), (42, 11786), (51, 11837), (54, 11852), (76, 11972), (80, 11993), (94, 12068), (108, 12128), (129, 12212), (134, 12230), (154, 12314), (180, 12434), (188, 12491), (196, 12530), (197, 12536),

Gene: ECartman\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for ECartman\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: EZMoney23\_20 Start: 14135, Stop: 15100, Start Num: 6

Candidate Starts for EZMoney23\_20:

(Start: 6 @14135 has 512 MA's), (29, 14195), (46, 14291), (57, 14333), (61, 14363), (64, 14387), (75, 14432), (84, 14483), (110, 14597), (132, 14675), (143, 14720), (164, 14822), (181, 14879), (182, 14897), (188, 14933), (196, 14984), (215, 15080),

Gene: Eagle\_14 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Eagle\_14:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: EagleEye\_18 Start: 12405, Stop: 13361, Start Num: 6

Candidate Starts for EagleEye\_18:

(Start: 6 @12405 has 512 MA's), (29, 12465), (45, 12555), (46, 12561), (57, 12603), (61, 12633), (64, 12657), (75, 12702), (84, 12753), (92, 12783), (101, 12837), (122, 12903), (206, 13305),

Gene: Eaglepride\_16 Start: 11253, Stop: 12191, Start Num: 6

Candidate Starts for Eaglepride\_16:

(Start: 6 @11253 has 512 MA's), (29, 11313), (42, 11391), (46, 11409), (47, 11424), (57, 11451), (61, 11481), (64, 11505), (65, 11511), (84, 11601), (92, 11631), (103, 11691), (141, 11814), (154, 11868), (188, 12030), (196, 12081), (203, 12117),

Gene: Eapen\_15 Start: 11481, Stop: 12413, Start Num: 6

Candidate Starts for Eapen\_15:

(Start: 6 @11481 has 512 MA's), (29, 11541), (46, 11637), (61, 11709), (64, 11733), (84, 11829), (101, 11913), (146, 12057), (154, 12099), (188, 12261), (191, 12294), (196, 12312), (203, 12348), (210, 12381),

Gene: Ebony\_16 Start: 12757, Stop: 13737, Start Num: 5

Candidate Starts for Ebony\_16:

(Start: 5 @12757 has 75 MA's), (29, 12817), (33, 12847), (45, 12907), (46, 12913), (57, 12955), (61, 12985), (64, 13009), (75, 13054), (84, 13105), (87, 13117), (92, 13135), (110, 13219), (122, 13255), (125, 13267), (132, 13294), (188, 13552), (206, 13657),

Gene: Echild\_16 Start: 12262, Stop: 13218, Start Num: 6

Candidate Starts for Echild\_16:

(Start: 6 @12262 has 512 MA's), (29, 12322), (37, 12370), (40, 12391), (46, 12418), (57, 12460), (61, 12490), (75, 12559), (84, 12610), (118, 12745), (143, 12844), (182, 13021), (188, 13057), (196, 13108),

Gene: Ecliptus\_7 Start: 4921, Stop: 5862, Start Num: 25

Candidate Starts for Ecliptus\_7:

(Start: 25 @4921 has 105 MA's), (52, 5056), (66, 5137), (71, 5158), (86, 5233), (114, 5359), (162, 5560), (166, 5578), (173, 5611), (184, 5695), (212, 5833),

Gene: Edison31\_15 Start: 11282, Stop: 12223, Start Num: 6

Candidate Starts for Edison31\_15:

(Start: 6 @11282 has 512 MA's), (29, 11342), (42, 11420), (46, 11438), (47, 11453), (57, 11480), (61, 11510), (64, 11534), (84, 11630), (87, 11642), (92, 11660), (108, 11735), (117, 11756), (141, 11843), (154, 11897), (183, 12026), (188, 12059), (196, 12110), (203, 12146),

Gene: EdogawaKiddo\_15 Start: 12848, Stop: 13807, Start Num: 6

Candidate Starts for EdogawaKiddo\_15:

(Start: 6 @12848 has 512 MA's), (29, 12908), (45, 12998), (46, 13004), (57, 13046), (61, 13076), (64, 13100), (75, 13145), (84, 13196), (87, 13208), (92, 13226), (122, 13349), (125, 13361), (181, 13592), (196, 13697),

Gene: Edtherson\_16 Start: 12091, Stop: 13107, Start Num: 6

Candidate Starts for Edtherson\_16:

(Start: 6 @12091 has 512 MA's), (51, 12286), (54, 12301), (76, 12421), (80, 12442), (94, 12517), (108, 12577), (154, 12763), (187, 12934), (188, 12940), (197, 12997), (204, 13033),

Gene: Eidsmoe\_17 Start: 12878, Stop: 13837, Start Num: 6

Candidate Starts for Eidsmoe\_17:

(Start: 6 @12878 has 512 MA's), (29, 12938), (45, 13028), (46, 13034), (57, 13076), (61, 13106), (64, 13130), (75, 13175), (84, 13226), (87, 13238), (92, 13256), (122, 13379), (125, 13391), (181, 13622), (196, 13727),

Gene: EITiger69\_13 Start: 10628, Stop: 11569, Start Num: 19

Candidate Starts for EITiger69\_13:

(Start: 19 @10628 has 50 MA's), (46, 10757), (61, 10829), (79, 10916), (84, 10949), (125, 11090), (154, 11213), (159, 11237), (171, 11297), (181, 11336), (183, 11357), (189, 11405), (198, 11462), (207, 11498), (211, 11522),

Gene: Elephantoon\_17 Start: 12496, Stop: 13455, Start Num: 6

Candidate Starts for Elephantoon\_17:

(Start: 6 @12496 has 512 MA's), (29, 12556), (45, 12646), (46, 12652), (57, 12694), (61, 12724), (64, 12748), (75, 12793), (84, 12844), (92, 12874), (122, 12997), (125, 13009), (164, 13183), (181, 13240), (196, 13345),

Gene: Elinal\_9 Start: 5097, Stop: 6056, Start Num: 8

Candidate Starts for Elinal\_9:

(Start: 8 @5097 has 150 MA's), (Start: 25 @5148 has 105 MA's), (50, 5277), (67, 5364), (77, 5406), (79, 5415), (89, 5460), (107, 5544), (132, 5640), (144, 5697), (156, 5751), (164, 5787), (209, 6000), (211, 6018), (221, 6048),

Gene: Elliott\_8 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for Elliott\_8:

(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (89, 5746), (96, 5782), (114, 5860), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: Emalyn\_7 Start: 5103, Stop: 6074, Start Num: 8

Candidate Starts for Emalyn\_7:

(Start: 8 @5103 has 150 MA's), (Start: 25 @5154 has 105 MA's), (66, 5367), (77, 5412), (79, 5421), (89, 5466), (113, 5577), (121, 5604), (156, 5757), (164, 5793), (165, 5796), (170, 5823), (203, 5979), (211, 6024), (212, 6027),

Gene: EmyBug\_17 Start: 12878, Stop: 13837, Start Num: 6

Candidate Starts for EmyBug\_17:

(Start: 6 @12878 has 512 MA's), (29, 12938), (45, 13028), (46, 13034), (57, 13076), (61, 13106), (64, 13130), (75, 13175), (84, 13226), (87, 13238), (92, 13256), (122, 13379), (125, 13391), (181, 13622), (196, 13727),

Gene: Enochoraptor\_6 Start: 4655, Stop: 5602, Start Num: 24

Candidate Starts for Enochoraptor\_6:

(Start: 24 @4655 has 42 MA's), (33, 4703), (35, 4715), (39, 4742), (53, 4799), (63, 4862), (76, 4916), (79, 4931), (82, 4955), (83, 4961), (108, 5075), (133, 5168), (138, 5192), (149, 5228), (153, 5264), (158, 5291), (163, 5309), (172, 5351), (178, 5369), (200, 5495), (205, 5513), (206, 5522), (213, 5555),

Gene: Enoki\_6 Start: 4636, Stop: 5583, Start Num: 24

Candidate Starts for Enoki\_6:

(Start: 23 @4633 has 3 MA's), (Start: 24 @4636 has 42 MA's), (33, 4684), (40, 4726), (48, 4768), (53, 4780), (72, 4882), (79, 4912), (83, 4942), (94, 4993), (133, 5149), (138, 5173), (149, 5209), (153, 5245), (158, 5272), (172, 5332), (200, 5476), (205, 5494), (206, 5503), (213, 5536),

Gene: EnzoK\_15 Start: 11824, Stop: 12822, Start Num: 6

Candidate Starts for EnzoK\_15:

(Start: 6 @11824 has 512 MA's), (42, 11968), (54, 12034), (62, 12091), (76, 12154), (80, 12175), (94, 12250), (108, 12310), (134, 12412), (154, 12496), (180, 12616), (188, 12673), (196, 12712), (197, 12718),

Gene: EpicPhail\_17 Start: 11539, Stop: 12531, Start Num: 8

Candidate Starts for EpicPhail\_17:



(Start: 8 @11539 has 150 MA's), (46, 11680), (70, 11800), (79, 11839), (84, 11872), (108, 11983), (132, 12070), (154, 12166), (170, 12247), (178, 12274), (181, 12286), (188, 12340), (194, 12385), (195, 12391), (198, 12424), (207, 12460), (211, 12484),

Gene: Epsocamisio\_18 Start: 11295, Stop: 12245, Start Num: 6

Candidate Starts for Epsocamisio\_18:

(Start: 6 @11295 has 512 MA's), (29, 11355), (46, 11451), (61, 11523), (64, 11547), (75, 11592), (84, 11643), (92, 11673), (183, 12051), (203, 12171), (211, 12216),

Gene: Equemioh13\_18 Start: 12655, Stop: 13611, Start Num: 6

Candidate Starts for Equemioh13\_18:

(Start: 6 @12655 has 512 MA's), (29, 12715), (40, 12784), (46, 12811), (57, 12853), (61, 12883), (64, 12907), (75, 12952), (84, 13003), (87, 13015), (118, 13138), (125, 13165), (132, 13192), (143, 13237), (181, 13396), (182, 13414), (188, 13450), (196, 13501),

Gene: EricB\_19 Start: 12231, Stop: 13202, Start Num: 5

Candidate Starts for EricB\_19:

(Start: 5 @12231 has 75 MA's), (29, 12291), (46, 12387), (57, 12429), (61, 12459), (64, 12483), (75, 12528), (84, 12579), (87, 12591), (92, 12609), (122, 12714), (164, 12900), (211, 13173),

Gene: Erik\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Erik\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Eris\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Eris\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Eros\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Eros\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (92, 11857), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Espica\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Espica\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Espresso\_15 Start: 11685, Stop: 12692, Start Num: 6

Candidate Starts for Espresso\_15:

(Start: 6 @11685 has 512 MA's), (42, 11829), (51, 11880), (54, 11895), (76, 12015), (80, 12036), (94, 12111), (108, 12171), (121, 12222), (129, 12255), (134, 12273), (154, 12357), (187, 12528), (188, 12534), (197, 12588),

Gene: Et2Brutus\_15 Start: 12702, Stop: 13691, Start Num: 5

Candidate Starts for Et2Brutus\_15:

(Start: 5 @12702 has 75 MA's), (29, 12762), (33, 12792), (45, 12852), (46, 12858), (57, 12900), (61, 12930), (64, 12954), (75, 12999), (84, 13050), (87, 13062), (92, 13080), (110, 13164), (122, 13200), (125, 13212), (132, 13239), (188, 13497), (206, 13602),

Gene: Euphoria\_15 Start: 11582, Stop: 12589, Start Num: 6

Candidate Starts for Euphoria\_15:

(Start: 6 @11582 has 512 MA's), (42, 11726), (44, 11735), (51, 11777), (54, 11792), (76, 11912), (80, 11933), (94, 12008), (108, 12068), (134, 12170), (154, 12254), (160, 12284), (187, 12425), (188, 12431), (197, 12479),

Gene: Eurydice\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Eurydice\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: EvilGenius\_18 Start: 12570, Stop: 13526, Start Num: 6

Candidate Starts for EvilGenius\_18:

(Start: 6 @12570 has 512 MA's), (29, 12630), (37, 12678), (46, 12726), (57, 12768), (61, 12798), (64, 12822), (75, 12867), (84, 12918), (92, 12948), (118, 13053), (125, 13080), (132, 13107), (143, 13152), (181, 13311), (182, 13329), (188, 13365), (196, 13416),

Gene: Expelliarmus\_12 Start: 10346, Stop: 11296, Start Num: 19

Candidate Starts for Expelliarmus\_12:

(Start: 19 @10346 has 50 MA's), (46, 10475), (57, 10517), (79, 10634), (84, 10667), (98, 10742), (127, 10826), (150, 10916), (154, 10943), (161, 10976), (171, 11027), (181, 11066), (198, 11192), (207, 11228),

Gene: ExplosioNervosa\_17 Start: 12881, Stop: 13840, Start Num: 6

Candidate Starts for ExplosioNervosa\_17:

(Start: 6 @12881 has 512 MA's), (29, 12941), (45, 13031), (46, 13037), (57, 13079), (61, 13109), (64, 13133), (75, 13178), (84, 13229), (87, 13241), (92, 13259), (122, 13382), (125, 13394), (181, 13625), (196, 13730),

Gene: Eyeball\_15 Start: 11329, Stop: 12330, Start Num: 6

Candidate Starts for Eyeball\_15:

(Start: 6 @11329 has 512 MA's), (42, 11473), (51, 11524), (54, 11539), (76, 11659), (80, 11680), (94, 11755), (108, 11815), (129, 11899), (134, 11917), (154, 12001), (180, 12121), (188, 12178), (196, 12217), (197, 12223),

Gene: Fajezeel\_17 Start: 11905, Stop: 12903, Start Num: 6

Candidate Starts for Fajezeel\_17:

(Start: 6 @11905 has 512 MA's), (42, 12049), (51, 12100), (54, 12115), (76, 12235), (80, 12256), (94, 12331), (108, 12391), (134, 12493), (154, 12577), (180, 12697), (188, 12754), (196, 12793), (197, 12799),

Gene: Fameo\_16 Start: 12175, Stop: 13140, Start Num: 6

Candidate Starts for Fameo\_16:

(Start: 6 @12175 has 512 MA's), (29, 12235), (40, 12304), (46, 12331), (57, 12373), (61, 12403), (64, 12427), (75, 12472), (84, 12523), (110, 12637), (125, 12694), (132, 12721), (143, 12766), (181, 12925), (182, 12943), (188, 12979), (196, 13030),

Gene: Farber\_17 Start: 11532, Stop: 12524, Start Num: 8

Candidate Starts for Farber\_17:

(Start: 8 @11532 has 150 MA's), (45, 11667), (46, 11673), (70, 11793), (79, 11832), (84, 11865), (108, 11976), (132, 12063), (154, 12159), (170, 12240), (178, 12267), (181, 12279), (188, 12333), (194,

12378), (195, 12384), (198, 12417), (207, 12453), (211, 12477),

Gene: Fascinus\_14 Start: 11332, Stop: 12333, Start Num: 6

Candidate Starts for Fascinus\_14:

(Start: 6 @11332 has 512 MA's), (54, 11542), (76, 11662), (80, 11683), (94, 11758), (108, 11818), (129, 11902), (134, 11920), (154, 12004), (188, 12181), (196, 12220), (197, 12226),

Gene: FatCactus\_14 Start: 10320, Stop: 11276, Start Num: 6

Candidate Starts for FatCactus\_14:

(Start: 6 @10320 has 512 MA's), (29, 10380), (32, 10407), (40, 10449), (45, 10470), (46, 10476), (57, 10518), (61, 10548), (64, 10572), (75, 10617), (84, 10668), (87, 10680), (92, 10698), (132, 10857), (161, 10986), (171, 11037), (196, 11166), (206, 11220), (215, 11262),

Gene: Fayely\_17 Start: 12881, Stop: 13840, Start Num: 6

Candidate Starts for Fayely\_17:

(Start: 6 @12881 has 512 MA's), (29, 12941), (45, 13031), (46, 13037), (57, 13079), (61, 13109), (64, 13133), (75, 13178), (84, 13229), (87, 13241), (92, 13259), (122, 13382), (125, 13394), (181, 13625), (196, 13730),

Gene: Feastonyeet\_7 Start: 5120, Stop: 6079, Start Num: 8

Candidate Starts for Feastonyeet\_7:

(Start: 8 @5120 has 150 MA's), (Start: 25 @5171 has 105 MA's), (50, 5300), (67, 5387), (77, 5429), (79, 5438), (89, 5483), (107, 5567), (132, 5663), (144, 5720), (156, 5774), (164, 5810), (209, 6023), (211, 6041),

Gene: Fenn\_16 Start: 12897, Stop: 13913, Start Num: 6

Candidate Starts for Fenn\_16:

(Start: 6 @12897 has 512 MA's), (51, 13092), (54, 13107), (57, 13122), (68, 13194), (76, 13227), (80, 13248), (94, 13323), (108, 13383), (154, 13569), (187, 13740), (188, 13746), (197, 13803),

Gene: Fernando\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for Fernando\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: Fibonacci\_16 Start: 12702, Stop: 13691, Start Num: 5

Candidate Starts for Fibonacci\_16:

(Start: 5 @12702 has 75 MA's), (29, 12762), (33, 12792), (45, 12852), (46, 12858), (57, 12900), (61, 12930), (64, 12954), (75, 12999), (84, 13050), (87, 13062), (92, 13080), (110, 13164), (122, 13200), (125, 13212), (132, 13239), (188, 13497), (206, 13602),

Gene: FiringLine\_16 Start: 12107, Stop: 13063, Start Num: 6

Candidate Starts for FiringLine\_16:

(Start: 6 @12107 has 512 MA's), (29, 12167), (40, 12236), (46, 12263), (57, 12305), (61, 12335), (75, 12404), (84, 12455), (92, 12485), (118, 12590), (132, 12644), (181, 12848), (182, 12866), (188, 12902), (196, 12953),

Gene: First\_0016 Start: 12180, Stop: 13136, Start Num: 6

Candidate Starts for First\_0016:

(Start: 6 @12180 has 512 MA's), (Start: 21 @12204 has 36 MA's), (29, 12240), (46, 12336), (57, 12378), (61, 12408), (64, 12432), (75, 12477), (84, 12528), (87, 12540), (96, 12588), (125, 12690), (139, 12747), (188, 12975), (196, 13026),

Gene: FlagStaff\_7 Start: 7210, Stop: 8112, Start Num: 25

Candidate Starts for FlagStaff\_7:

(Start: 25 @7210 has 105 MA's), (35, 7267), (36, 7270), (38, 7282), (40, 7297), (59, 7381), (66, 7429), (74, 7462), (102, 7606), (116, 7657), (126, 7684), (132, 7708), (157, 7828), (166, 7864), (181, 7924), (209, 8071),

Gene: Flare16\_16 Start: 12213, Stop: 13169, Start Num: 6

Candidate Starts for Flare16\_16:

(Start: 6 @12213 has 512 MA's), (29, 12273), (40, 12342), (46, 12369), (57, 12411), (61, 12441), (64, 12465), (75, 12510), (84, 12561), (87, 12573), (118, 12696), (125, 12723), (132, 12750), (143, 12795), (181, 12954), (182, 12972), (188, 13008), (196, 13059),

Gene: Flaverint\_16 Start: 12699, Stop: 13688, Start Num: 5

Candidate Starts for Flaverint\_16:

(Start: 5 @12699 has 75 MA's), (29, 12759), (33, 12789), (45, 12849), (46, 12855), (57, 12897), (61, 12927), (64, 12951), (75, 12996), (84, 13047), (87, 13059), (92, 13077), (110, 13161), (122, 13197), (125, 13209), (132, 13236), (188, 13494), (206, 13599),

Gene: Florean\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Florean\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Flux\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Flux\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: FlyCatcher\_19 Start: 13102, Stop: 14091, Start Num: 7

Candidate Starts for FlyCatcher\_19:

(Start: 7 @13102 has 1 MA's), (40, 13219), (46, 13246), (70, 13366), (73, 13378), (79, 13405), (84, 13438), (115, 13576), (123, 13603), (132, 13633), (151, 13708), (170, 13810), (178, 13837), (181, 13849), (182, 13867), (196, 13969), (198, 13990),

Gene: ForGetIt\_13 Start: 10643, Stop: 11572, Start Num: 19

Candidate Starts for ForGetIt\_13:

(Start: 19 @10643 has 50 MA's), (46, 10772), (57, 10814), (61, 10844), (79, 10931), (84, 10964), (154, 11228), (159, 11252), (171, 11312), (181, 11351), (183, 11372), (189, 11420), (198, 11477), (207, 11513), (211, 11537),

Gene: Forsytheast\_14 Start: 11595, Stop: 12593, Start Num: 6

Candidate Starts for Forsytheast\_14:

(Start: 6 @11595 has 512 MA's), (42, 11739), (51, 11790), (54, 11805), (76, 11925), (80, 11946), (94, 12021), (108, 12081), (134, 12183), (154, 12267), (180, 12387), (188, 12444), (196, 12483), (197, 12489),

Gene: Francis47\_15 Start: 11834, Stop: 12853, Start Num: 6

Candidate Starts for Francis47\_15:

(Start: 6 @11834 has 512 MA's), (51, 12029), (54, 12044), (76, 12164), (80, 12185), (94, 12260), (108, 12320), (154, 12506), (187, 12677), (188, 12683), (197, 12740), (204, 12776),

Gene: Fred313\_15 Start: 10808, Stop: 11803, Start Num: 8

Candidate Starts for Fred313\_15:

(Start: 8 @10808 has 150 MA's), (Start: 18 @10823 has 9 MA's), (46, 10955), (70, 11075), (79, 11114), (84, 11147), (108, 11258), (110, 11267), (141, 11384), (154, 11438), (171, 11522), (178, 11546), (181, 11558), (188, 11612), (195, 11663), (198, 11696), (207, 11732),

Gene: Fribs8\_9 Start: 6098, Stop: 7033, Start Num: 18

Candidate Starts for Fribs8\_9:

(Start: 18 @6098 has 9 MA's), (40, 6206), (46, 6233), (73, 6365), (77, 6383), (86, 6425), (89, 6437), (96, 6473), (107, 6521), (113, 6548), (131, 6614), (132, 6617), (156, 6728), (159, 6740), (164, 6764), (165, 6767), (168, 6782), (170, 6794), (185, 6863), (202, 6947), (209, 6977),

Gene: Frickyeah\_7 Start: 4897, Stop: 5835, Start Num: 25

Candidate Starts for Frickyeah\_7:

(Start: 25 @4897 has 105 MA's), (33, 4939), (34, 4942), (52, 5032), (71, 5134), (85, 5206), (86, 5209), (131, 5398), (166, 5551), (168, 5563), (178, 5626), (186, 5680), (209, 5785), (212, 5806),

Gene: Froghopper\_16 Start: 11274, Stop: 12281, Start Num: 6

Candidate Starts for Froghopper\_16:

(Start: 6 @11274 has 512 MA's), (42, 11418), (51, 11469), (54, 11484), (76, 11604), (80, 11625), (94, 11700), (108, 11760), (129, 11844), (134, 11862), (154, 11946), (188, 12123), (196, 12162), (197, 12168),

Gene: Frosty24\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Frosty24\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Funston\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Funston\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Fushigi\_16 Start: 11997, Stop: 13010, Start Num: 6

Candidate Starts for Fushigi\_16:

(Start: 6 @11997 has 512 MA's), (42, 12141), (51, 12192), (54, 12207), (76, 12327), (80, 12348), (94, 12423), (108, 12483), (121, 12534), (129, 12567), (134, 12585), (154, 12669), (187, 12840), (188, 12846), (197, 12903), (207, 12954),

Gene: GMonster\_14 Start: 11202, Stop: 12221, Start Num: 6

Candidate Starts for GMonster\_14:

(Start: 6 @11202 has 512 MA's), (51, 11397), (54, 11412), (76, 11532), (80, 11553), (94, 11628), (108, 11688), (154, 11874), (187, 12045), (188, 12051), (197, 12108), (204, 12144),

Gene: GTE2\_06 Start: 5063, Stop: 6028, Start Num: 8

Candidate Starts for GTE2\_06:

(Start: 8 @5063 has 150 MA's), (Start: 25 @5114 has 105 MA's), (66, 5327), (77, 5372), (79, 5381), (89, 5426), (113, 5537), (156, 5717), (164, 5753), (165, 5756), (170, 5783), (203, 5939), (211, 5984), (212, 5987),

Gene: Gadost\_15 Start: 11483, Stop: 12415, Start Num: 6

Candidate Starts for Gadost\_15:

(Start: 6 @11483 has 512 MA's), (29, 11543), (46, 11639), (61, 11711), (64, 11735), (84, 11831), (101, 11915), (146, 12059), (154, 12101), (188, 12263), (191, 12296), (196, 12314), (203, 12350), (210, 12383),

Gene: GageAP\_17 Start: 12323, Stop: 13327, Start Num: 6

Candidate Starts for GageAP\_17:

(Start: 6 @12323 has 512 MA's), (42, 12467), (44, 12476), (51, 12518), (54, 12533), (76, 12653), (80, 12674), (94, 12749), (108, 12809), (134, 12911), (154, 12995), (180, 13115), (187, 13166), (188, 13172), (197, 13220),

Gene: Gail\_15 Start: 11224, Stop: 12171, Start Num: 11

Candidate Starts for Gail\_15:

(Start: 11 @11224 has 9 MA's), (29, 11275), (46, 11371), (57, 11413), (61, 11443), (68, 11482), (75, 11512), (84, 11563), (181, 11956), (188, 12010), (196, 12061),

Gene: Gandalf20\_16 Start: 12389, Stop: 13387, Start Num: 6

Candidate Starts for Gandalf20\_16:

(Start: 6 @12389 has 512 MA's), (42, 12533), (51, 12584), (54, 12599), (76, 12719), (80, 12740), (94, 12815), (108, 12875), (134, 12977), (154, 13061), (180, 13181), (188, 13238), (196, 13277), (197, 13283),

Gene: Garak\_20 Start: 12235, Stop: 13206, Start Num: 5

Candidate Starts for Garak\_20:

(Start: 5 @12235 has 75 MA's), (29, 12295), (46, 12391), (57, 12433), (61, 12463), (64, 12487), (75, 12532), (84, 12583), (87, 12595), (92, 12613), (122, 12718), (164, 12904), (211, 13177),

Gene: GaugeLDP\_18 Start: 13484, Stop: 14458, Start Num: 2

Candidate Starts for GaugeLDP\_18:

(Start: 2 @13484 has 2 MA's), (Start: 20 @13523 has 2 MA's), (29, 13559), (46, 13655), (57, 13697), (61, 13727), (64, 13751), (75, 13796), (84, 13847), (92, 13877), (101, 13931), (132, 14036), (154, 14132), (159, 14156), (196, 14348), (198, 14369),

Gene: Gemma\_17 Start: 11610, Stop: 12608, Start Num: 8

Candidate Starts for Gemma\_17:

(Start: 8 @11610 has 150 MA's), (46, 11751), (70, 11871), (79, 11910), (84, 11943), (132, 12141), (150, 12210), (154, 12237), (170, 12318), (188, 12411), (194, 12456), (195, 12462), (198, 12495), (207, 12531), (211, 12555),

Gene: George\_12 Start: 10799, Stop: 11731, Start Num: 19

Candidate Starts for George\_12:

(Start: 19 @10799 has 50 MA's), (46, 10928), (57, 10970), (61, 11000), (79, 11087), (84, 11120), (154, 11384), (159, 11408), (171, 11468), (181, 11507), (183, 11528), (189, 11576), (198, 11633), (207, 11669), (211, 11693),

Gene: Georgie2\_17 Start: 12108, Stop: 13064, Start Num: 6

Candidate Starts for Georgie2\_17:

(Start: 6 @12108 has 512 MA's), (29, 12168), (40, 12237), (46, 12264), (57, 12306), (61, 12336), (75, 12405), (84, 12456), (92, 12486), (118, 12591), (132, 12645), (181, 12849), (182, 12867), (188, 12903), (196, 12954),

Gene: Getalong\_7 Start: 4897, Stop: 5835, Start Num: 25

Candidate Starts for Getalong\_7:

(Start: 25 @4897 has 105 MA's), (33, 4939), (34, 4942), (52, 5032), (71, 5134), (85, 5206), (86, 5209), (131, 5398), (166, 5551), (168, 5563), (178, 5626), (186, 5680), (209, 5785), (212, 5806),

Gene: Ghoulboy\_13 Start: 10876, Stop: 11808, Start Num: 19

Candidate Starts for Ghoulboy\_13:

(Start: 19 @10876 has 50 MA's), (46, 11005), (57, 11047), (61, 11077), (79, 11164), (84, 11197), (125, 11338), (154, 11461), (159, 11485), (171, 11545), (181, 11584), (183, 11605), (189, 11653), (198, 11710), (207, 11746), (211, 11770),

Gene: GiKK\_11 Start: 5758, Stop: 6687, Start Num: 16

Candidate Starts for GiKK\_11:

(Start: 16 @5758 has 7 MA's), (49, 5911), (53, 5920), (58, 5947), (77, 6043), (79, 6052), (80, 6058), (89, 6097), (96, 6133), (107, 6181), (156, 6388), (164, 6424), (165, 6427), (203, 6610), (211, 6655),

Gene: Gibbous\_8 Start: 5540, Stop: 6475, Start Num: 18

Candidate Starts for Gibbous\_8:

(Start: 18 @5540 has 9 MA's), (46, 5675), (68, 5786), (73, 5807), (77, 5825), (83, 5855), (96, 5915), (107, 5963), (113, 5990), (131, 6056), (132, 6059), (156, 6170), (164, 6206), (165, 6209), (168, 6224), (170, 6236), (185, 6305), (187, 6320), (202, 6389), (209, 6419),

Gene: Gideon\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Gideon\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Gilberta\_16 Start: 12696, Stop: 13685, Start Num: 5

Candidate Starts for Gilberta\_16:

(Start: 5 @12696 has 75 MA's), (29, 12756), (33, 12786), (45, 12846), (46, 12852), (57, 12894), (61, 12924), (64, 12948), (75, 12993), (84, 13044), (87, 13056), (92, 13074), (110, 13158), (122, 13194), (125, 13206), (132, 13233), (188, 13491), (206, 13596),

Gene: GingkoMaracino\_17 Start: 11425, Stop: 12417, Start Num: 8

Candidate Starts for GingkoMaracino\_17:

(Start: 8 @11425 has 150 MA's), (46, 11566), (70, 11686), (79, 11725), (84, 11758), (108, 11869), (132, 11956), (154, 12052), (170, 12133), (178, 12160), (181, 12172), (188, 12226), (194, 12271), (195, 12277), (198, 12310), (207, 12346), (211, 12370),

Gene: Giroux\_15 Start: 11103, Stop: 12077, Start Num: 8

Candidate Starts for Giroux\_15:

(Start: 8 @11103 has 150 MA's), (46, 11244), (70, 11364), (79, 11403), (84, 11436), (141, 11673), (150, 11700), (154, 11727), (171, 11811), (188, 11901), (194, 11946), (195, 11952), (198, 11985), (207, 12021),

Gene: Gladiator\_19 Start: 12209, Stop: 13180, Start Num: 5

Candidate Starts for Gladiator\_19:

(Start: 5 @12209 has 75 MA's), (29, 12269), (46, 12365), (57, 12407), (61, 12437), (64, 12461), (75, 12506), (84, 12557), (87, 12569), (92, 12587), (122, 12692),

Gene: GoldHunter\_9 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for GoldHunter\_9:

(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (89, 5746), (96, 5782), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: GoldenAsh\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for GoldenAsh\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Gollum\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Gollum\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Gomashi\_7 Start: 7104, Stop: 8039, Start Num: 25

Candidate Starts for Gomashi\_7:

(Start: 25 @7104 has 105 MA's), (35, 7161), (36, 7164), (38, 7176), (59, 7275), (66, 7323), (74, 7356), (83, 7407), (102, 7500), (168, 7779), (175, 7818), (211, 8013),

Gene: Gompeii16\_15 Start: 11794, Stop: 12813, Start Num: 6

Candidate Starts for Gompeii16\_15:

(Start: 6 @11794 has 512 MA's), (51, 11989), (54, 12004), (76, 12124), (80, 12145), (94, 12220), (108, 12280), (154, 12466), (187, 12637), (188, 12643), (197, 12700), (204, 12736),

Gene: Goose\_15 Start: 11255, Stop: 12190, Start Num: 6

Candidate Starts for Goose\_15:

(Start: 6 @11255 has 512 MA's), (29, 11315), (46, 11411), (47, 11426), (57, 11453), (61, 11483), (64, 11507), (65, 11513), (75, 11552), (84, 11603), (92, 11633), (117, 11726), (141, 11813), (154, 11867), (158, 11888), (183, 11996), (188, 12029), (196, 12080), (203, 12116),

Gene: Graduation\_17 Start: 12355, Stop: 13353, Start Num: 6

Candidate Starts for Graduation\_17:

(Start: 6 @12355 has 512 MA's), (42, 12499), (54, 12565), (76, 12685), (80, 12706), (94, 12781), (108, 12841), (134, 12943), (154, 13027), (180, 13147), (188, 13204), (196, 13243), (197, 13249),

Gene: Gratitude\_17 Start: 12655, Stop: 13611, Start Num: 6

Candidate Starts for Gratitude\_17:

(Start: 6 @12655 has 512 MA's), (29, 12715), (40, 12784), (46, 12811), (57, 12853), (61, 12883), (64, 12907), (75, 12952), (84, 13003), (87, 13015), (118, 13138), (125, 13165), (132, 13192), (143, 13237), (181, 13396), (182, 13414), (188, 13450), (196, 13501),

Gene: GrecoEtereo\_16 Start: 11894, Stop: 12901, Start Num: 6

Candidate Starts for GrecoEtereo\_16:

(Start: 6 @11894 has 512 MA's), (42, 12038), (44, 12047), (51, 12089), (54, 12104), (76, 12224), (80, 12245), (94, 12320), (108, 12380), (134, 12482), (154, 12566), (160, 12596), (187, 12737), (188, 12743), (197, 12791),

Gene: GreedyLawyer\_19 Start: 12240, Stop: 13211, Start Num: 5

Candidate Starts for GreedyLawyer\_19:

(Start: 5 @12240 has 75 MA's), (29, 12300), (46, 12396), (57, 12438), (61, 12468), (64, 12492), (75, 12537), (84, 12588), (87, 12600), (92, 12618), (122, 12723), (164, 12909), (211, 13182),

Gene: Greg\_17 Start: 11905, Stop: 12903, Start Num: 6

Candidate Starts for Greg\_17:

(Start: 6 @11905 has 512 MA's), (42, 12049), (51, 12100), (54, 12115), (76, 12235), (80, 12256), (94, 12331), (108, 12391), (134, 12493), (154, 12577), (180, 12697), (188, 12754), (196, 12793), (197, 12799),



Gene: Grif\_17 Start: 11622, Stop: 12614, Start Num: 8

Candidate Starts for Grif\_17:

(Start: 8 @11622 has 150 MA's), (46, 11763), (70, 11883), (79, 11922), (84, 11955), (108, 12066), (132, 12153), (154, 12249), (170, 12330), (178, 12357), (181, 12369), (188, 12423), (194, 12468), (195, 12474), (198, 12507), (207, 12543), (211, 12567),

Gene: Grizzly\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Grizzly\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Groundhog\_12 Start: 10347, Stop: 11297, Start Num: 19

Candidate Starts for Groundhog\_12:

(Start: 19 @10347 has 50 MA's), (46, 10476), (57, 10518), (79, 10635), (84, 10668), (98, 10743), (127, 10827), (150, 10917), (154, 10944), (161, 10977), (171, 11028), (181, 11067), (198, 11193), (207, 11229),

Gene: Groupthink\_18 Start: 11610, Stop: 12608, Start Num: 8

Candidate Starts for Groupthink\_18:

(Start: 8 @11610 has 150 MA's), (46, 11751), (70, 11871), (79, 11910), (84, 11943), (132, 12141), (150, 12210), (154, 12237), (170, 12318), (188, 12411), (194, 12456), (195, 12462), (198, 12495), (207, 12531), (211, 12555),

Gene: Grub\_17 Start: 11531, Stop: 12523, Start Num: 8

Candidate Starts for Grub\_17:

(Start: 8 @11531 has 150 MA's), (46, 11672), (70, 11792), (79, 11831), (84, 11864), (108, 11975), (132, 12062), (154, 12158), (170, 12239), (178, 12266), (181, 12278), (188, 12332), (194, 12377), (195, 12383), (198, 12416), (207, 12452), (211, 12476),

Gene: Grum1\_17 Start: 11532, Stop: 12524, Start Num: 8

Candidate Starts for Grum1\_17:

(Start: 8 @11532 has 150 MA's), (46, 11673), (70, 11793), (79, 11832), (84, 11865), (108, 11976), (132, 12063), (154, 12159), (170, 12240), (178, 12267), (181, 12279), (188, 12333), (194, 12378), (195, 12384), (198, 12417), (207, 12453), (211, 12477),

Gene: Gruunaga\_19 Start: 12209, Stop: 13180, Start Num: 5

Candidate Starts for Gruunaga\_19:

(Start: 5 @12209 has 75 MA's), (29, 12269), (46, 12365), (57, 12407), (61, 12437), (64, 12461), (75, 12506), (84, 12557), (87, 12569), (92, 12587), (122, 12692),

Gene: GtownJaz\_17 Start: 11540, Stop: 12532, Start Num: 8

Candidate Starts for GtownJaz\_17:

(Start: 8 @11540 has 150 MA's), (46, 11681), (70, 11801), (79, 11840), (84, 11873), (108, 11984), (132, 12071), (154, 12167), (170, 12248), (178, 12275), (181, 12287), (188, 12341), (194, 12386), (195, 12392), (198, 12425), (207, 12461), (211, 12485),

Gene: Gwendoluna\_17 Start: 12775, Stop: 13782, Start Num: 6

Candidate Starts for Gwendoluna\_17:

(Start: 6 @12775 has 512 MA's), (54, 12985), (76, 13105), (80, 13126), (94, 13201), (108, 13261), (121, 13312), (129, 13345), (134, 13363), (154, 13447), (188, 13624), (196, 13663), (197, 13669),

Gene: Gyzlar\_17 Start: 12537, Stop: 13556, Start Num: 6

Candidate Starts for Gyzlar\_17:

(Start: 6 @12537 has 512 MA's), (51, 12732), (54, 12747), (76, 12867), (80, 12888), (94, 12963), (108, 13023), (154, 13209), (187, 13380), (188, 13386), (197, 13443),

Gene: HINdeR\_15 Start: 12923, Stop: 13882, Start Num: 6

Candidate Starts for HINdeR\_15:

(Start: 6 @12923 has 512 MA's), (29, 12983), (46, 13079), (47, 13094), (61, 13151), (65, 13181), (84, 13271), (130, 13457), (154, 13559), (183, 13700), (196, 13784), (203, 13820),

Gene: Halo\_7 Start: 7104, Stop: 8039, Start Num: 25

Candidate Starts for Halo\_7:

(Start: 25 @7104 has 105 MA's), (35, 7161), (36, 7164), (38, 7176), (41, 7197), (66, 7323), (74, 7356), (130, 7605), (138, 7650), (159, 7737), (168, 7779), (181, 7848), (211, 8013),

Gene: HamSlice\_14 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for HamSlice\_14:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (61, 11708), (64, 11732), (84, 11828), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210, 12380),

Gene: Hami1\_17 Start: 11978, Stop: 12982, Start Num: 6

Candidate Starts for Hami1\_17:

(Start: 6 @11978 has 512 MA's), (42, 12122), (44, 12131), (51, 12173), (54, 12188), (76, 12308), (80, 12329), (94, 12404), (108, 12464), (134, 12566), (154, 12650), (160, 12680), (180, 12770), (187, 12821), (188, 12827), (197, 12875),

Gene: Hammer\_19 Start: 12209, Stop: 13195, Start Num: 3

Candidate Starts for Hammer\_19:

(Start: 3 @12209 has 1 MA's), (9, 12233), (Start: 21 @12248 has 36 MA's), (29, 12284), (46, 12380), (57, 12422), (61, 12452), (64, 12476), (75, 12521), (84, 12572), (87, 12584), (92, 12602), (122, 12707),

Gene: HanShotFirst\_15 Start: 11197, Stop: 12201, Start Num: 6

Candidate Starts for HanShotFirst\_15:

(Start: 6 @11197 has 512 MA's), (54, 11407), (76, 11527), (80, 11548), (94, 11623), (108, 11683), (121, 11734), (122, 11737), (129, 11767), (134, 11785), (154, 11869), (188, 12046), (196, 12085), (197, 12091), (204, 12127),

Gene: Hanray\_16 Start: 12884, Stop: 13843, Start Num: 6

Candidate Starts for Hanray\_16:

(Start: 6 @12884 has 512 MA's), (29, 12944), (45, 13034), (46, 13040), (57, 13082), (61, 13112), (64, 13136), (75, 13181), (84, 13232), (87, 13244), (92, 13262), (122, 13385), (125, 13397), (181, 13628), (196, 13733),

Gene: Happiness\_15 Start: 11485, Stop: 12417, Start Num: 6

Candidate Starts for Happiness\_15:

(Start: 6 @11485 has 512 MA's), (29, 11545), (46, 11641), (47, 11656), (61, 11713), (64, 11737), (84, 11833), (92, 11863), (101, 11917), (146, 12061), (154, 12103), (188, 12265), (191, 12298), (196, 12316), (203, 12352), (210, 12385),

Gene: Harlequin\_12 Start: 7701, Stop: 8603, Start Num: 21

Candidate Starts for Harlequin\_12:

(Start: 21 @7701 has 36 MA's), (46, 7830), (65, 7932), (76, 7974), (79, 7989), (84, 8022), (150, 8277), (161, 8337), (167, 8370),

Gene: HarryHoudini\_18 Start: 12670, Stop: 13626, Start Num: 6

Candidate Starts for HarryHoudini\_18:

(Start: 6 @12670 has 512 MA's), (15, 12685), (29, 12730), (46, 12826), (57, 12868), (61, 12898), (64, 12922), (75, 12967), (84, 13018), (92, 13048), (118, 13153), (125, 13180), (132, 13207), (143, 13252), (181, 13411), (182, 13429), (188, 13465), (196, 13516),

Gene: HarryOW\_16 Start: 11894, Stop: 12901, Start Num: 6

Candidate Starts for HarryOW\_16:

(Start: 6 @11894 has 512 MA's), (42, 12038), (44, 12047), (51, 12089), (54, 12104), (76, 12224), (80, 12245), (94, 12320), (108, 12380), (134, 12482), (154, 12566), (160, 12596), (187, 12737), (188, 12743), (197, 12791),

Gene: HashRod\_18 Start: 11623, Stop: 12615, Start Num: 8

Candidate Starts for HashRod\_18:

(Start: 8 @11623 has 150 MA's), (46, 11764), (70, 11884), (79, 11923), (84, 11956), (108, 12067), (132, 12154), (154, 12250), (170, 12331), (178, 12358), (181, 12370), (188, 12424), (194, 12469), (195, 12475), (198, 12508), (207, 12544), (211, 12568),

Gene: HaveUMetTed\_18 Start: 11610, Stop: 12602, Start Num: 8

Candidate Starts for HaveUMetTed\_18:

(Start: 8 @11610 has 150 MA's), (46, 11751), (70, 11871), (79, 11910), (84, 11943), (132, 12141), (150, 12210), (154, 12237), (170, 12318), (188, 12411), (194, 12456), (195, 12462), (198, 12495), (207, 12531), (211, 12555),

Gene: Heathen\_15 Start: 10904, Stop: 11878, Start Num: 8

Candidate Starts for Heathen\_15:

(Start: 8 @10904 has 150 MA's), (46, 11045), (70, 11165), (79, 11204), (84, 11237), (141, 11474), (150, 11501), (154, 11528), (171, 11612), (188, 11702), (194, 11747), (195, 11753), (198, 11786), (207, 11822),

Gene: Heffalump\_18 Start: 13977, Stop: 14942, Start Num: 6

Candidate Starts for Heffalump\_18:

(Start: 6 @13977 has 512 MA's), (29, 14037), (40, 14106), (46, 14133), (57, 14175), (61, 14205), (64, 14229), (75, 14274), (84, 14325), (110, 14439), (125, 14496), (132, 14523), (143, 14568), (181, 14727), (182, 14745), (188, 14781), (193, 14820),

Gene: HelDan\_15 Start: 11156, Stop: 12130, Start Num: 8

Candidate Starts for HelDan\_15:

(Start: 8 @11156 has 150 MA's), (46, 11297), (70, 11417), (79, 11456), (84, 11489), (141, 11726), (150, 11753), (154, 11780), (171, 11864), (188, 11954), (194, 11999), (195, 12005), (198, 12038), (207, 12074),

Gene: Heliosoles\_17 Start: 11610, Stop: 12608, Start Num: 8

Candidate Starts for Heliosoles\_17:

(Start: 8 @11610 has 150 MA's), (46, 11751), (70, 11871), (79, 11910), (84, 11943), (132, 12141), (150, 12210), (154, 12237), (170, 12318), (188, 12411), (194, 12456), (195, 12462), (198, 12495), (207, 12531), (211, 12555),

Gene: Helmet\_20 Start: 12235, Stop: 13206, Start Num: 5

Candidate Starts for Helmet\_20:

(Start: 5 @12235 has 75 MA's), (29, 12295), (46, 12391), (57, 12433), (61, 12463), (64, 12487), (75, 12532), (84, 12583), (87, 12595), (92, 12613), (122, 12718), (164, 12904), (211, 13177),

Gene: Herbertwm\_14 Start: 11015, Stop: 11998, Start Num: 5

Candidate Starts for Herbertwm\_14:

(Start: 5 @11015 has 75 MA's), (29, 11075), (32, 11102), (45, 11165), (46, 11171), (57, 11213), (61, 11243), (64, 11267), (75, 11312), (84, 11363), (87, 11375), (110, 11477), (122, 11507), (125, 11519), (132, 11546), (164, 11693), (196, 11888), (208, 11948),

Gene: Hercules11\_17 Start: 11546, Stop: 12538, Start Num: 8

Candidate Starts for Hercules11\_17:

(Start: 8 @11546 has 150 MA's), (46, 11687), (70, 11807), (79, 11846), (84, 11879), (108, 11990), (132, 12077), (154, 12173), (170, 12254), (178, 12281), (181, 12293), (188, 12347), (194, 12392), (195, 12398), (198, 12431), (207, 12467), (211, 12491),

Gene: Hermia\_17 Start: 12336, Stop: 13343, Start Num: 6

Candidate Starts for Hermia\_17:

(Start: 6 @12336 has 512 MA's), (42, 12480), (51, 12531), (54, 12546), (76, 12666), (80, 12687), (94, 12762), (108, 12822), (129, 12906), (134, 12924), (154, 13008), (188, 13185), (196, 13224), (197, 13230),

Gene: HermioneGrange\_15 Start: 11307, Stop: 12311, Start Num: 6

Candidate Starts for HermioneGrange\_15:

(Start: 6 @11307 has 512 MA's), (54, 11517), (76, 11637), (80, 11658), (94, 11733), (108, 11793), (134, 11895), (154, 11979), (180, 12099), (188, 12156), (196, 12195), (197, 12201),

Gene: Hexamo\_19 Start: 12190, Stop: 13161, Start Num: 5

Candidate Starts for Hexamo\_19:

(Start: 5 @12190 has 75 MA's), (29, 12250), (46, 12346), (57, 12388), (61, 12418), (64, 12442), (75, 12487), (84, 12538), (87, 12550), (92, 12568), (122, 12673), (164, 12859), (211, 13132),

Gene: Hexbug\_10 Start: 6434, Stop: 7372, Start Num: 13

Candidate Starts for Hexbug\_10:

(Start: 13 @6434 has 2 MA's), (17, 6440), (33, 6506), (49, 6593), (53, 6602), (77, 6725), (79, 6734), (80, 6740), (89, 6779), (96, 6815), (107, 6863), (114, 6893), (156, 7070), (164, 7106), (165, 7109), (203, 7292), (211, 7337),

Gene: HippoPololi\_10 Start: 6182, Stop: 7129, Start Num: 18

Candidate Starts for HippoPololi\_10:

(Start: 18 @6182 has 9 MA's), (46, 6317), (68, 6428), (73, 6449), (77, 6467), (83, 6497), (86, 6509), (89, 6521), (107, 6605), (113, 6632), (125, 6674), (132, 6701), (156, 6812), (164, 6848), (165, 6851), (168, 6866), (170, 6878), (185, 6947), (187, 6962), (202, 7031), (209, 7061),

Gene: Hiro\_12 Start: 7701, Stop: 8603, Start Num: 21

Candidate Starts for Hiro\_12:

(Start: 21 @7701 has 36 MA's), (46, 7830), (65, 7932), (76, 7974), (79, 7989), (84, 8022), (150, 8277), (161, 8337), (167, 8370),

Gene: Horex\_16 Start: 12884, Stop: 13843, Start Num: 6

Candidate Starts for Horex\_16:

(Start: 6 @12884 has 512 MA's), (29, 12944), (45, 13034), (46, 13040), (57, 13082), (61, 13112), (64, 13136), (75, 13181), (84, 13232), (87, 13244), (92, 13262), (122, 13385), (125, 13397), (181, 13628), (196, 13733),

Gene: Holli\_15 Start: 11272, Stop: 12204, Start Num: 6

Candidate Starts for Holli\_15:

(Start: 6 @11272 has 512 MA's), (29, 11332), (46, 11428), (61, 11500), (64, 11524), (84, 11620), (101, 11704), (146, 11848), (154, 11890), (188, 12052), (191, 12085), (196, 12103), (203, 12139), (210, 12172),

Gene: Holliday\_7 Start: 4901, Stop: 5842, Start Num: 25

Candidate Starts for Holliday\_7:

(Start: 25 @4901 has 105 MA's), (52, 5036), (66, 5117), (71, 5138), (86, 5213), (114, 5339), (162, 5540), (166, 5558), (173, 5591), (184, 5675), (212, 5813),

Gene: Homines\_15 Start: 11612, Stop: 12619, Start Num: 6

Candidate Starts for Homines\_15:

(Start: 6 @11612 has 512 MA's), (42, 11756), (51, 11807), (54, 11822), (76, 11942), (80, 11963), (94, 12038), (108, 12098), (121, 12149), (129, 12182), (134, 12200), (154, 12284), (187, 12455), (188, 12461), (197, 12515),

Gene: Hookmount\_16 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for Hookmount\_16:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Hoot\_19 Start: 12219, Stop: 13190, Start Num: 5

Candidate Starts for Hoot\_19:

(Start: 5 @12219 has 75 MA's), (29, 12279), (46, 12375), (57, 12417), (61, 12447), (64, 12471), (75, 12516), (84, 12567), (87, 12579), (92, 12597), (122, 12702), (164, 12888), (211, 13161),

Gene: Hope\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Hope\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Hope4ever\_15 Start: 11714, Stop: 12730, Start Num: 6

Candidate Starts for Hope4ever\_15:

(Start: 6 @11714 has 512 MA's), (42, 11858), (51, 11909), (54, 11924), (76, 12044), (80, 12065), (94, 12140), (108, 12200), (121, 12251), (122, 12254), (129, 12284), (134, 12302), (154, 12386), (187, 12557), (188, 12563), (192, 12596), (197, 12617), (204, 12653),

Gene: Horseradish\_9 Start: 5276, Stop: 6229, Start Num: 8

Candidate Starts for Horseradish\_9:

(Start: 8 @5276 has 150 MA's), (12, 5291), (Start: 25 @5318 has 105 MA's), (49, 5444), (53, 5453), (66, 5531), (77, 5576), (79, 5585), (89, 5630), (96, 5666), (113, 5741), (156, 5921), (164, 5957), (165, 5960), (170, 5987), (203, 6143), (209, 6170), (211, 6188),

Gene: HortumSL17\_17 Start: 12848, Stop: 13807, Start Num: 6

Candidate Starts for HortumSL17\_17:

(Start: 6 @12848 has 512 MA's), (29, 12908), (45, 12998), (46, 13004), (57, 13046), (61, 13076), (64, 13100), (75, 13145), (84, 13196), (87, 13208), (92, 13226), (122, 13349), (125, 13361), (181, 13592), (196, 13697),

Gene: Horus\_7 Start: 4897, Stop: 5835, Start Num: 25

Candidate Starts for Horus\_7:

(Start: 25 @4897 has 105 MA's), (33, 4939), (34, 4942), (52, 5032), (71, 5134), (85, 5206), (86, 5209), (131, 5398), (166, 5551), (168, 5563), (178, 5626), (186, 5680), (209, 5785), (212, 5806),

Gene: Hotshotbaby7\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Hotshotbaby7\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Houdini22\_15 Start: 11483, Stop: 12415, Start Num: 6

Candidate Starts for Houdini22\_15:

(Start: 6 @11483 has 512 MA's), (29, 11543), (46, 11639), (61, 11711), (64, 11735), (84, 11831), (101, 11915), (146, 12059), (154, 12101), (188, 12263), (191, 12296), (196, 12314), (203, 12350), (210, 12383),

Gene: HuhtaEnerson15\_13 Start: 10799, Stop: 11731, Start Num: 19

Candidate Starts for HuhtaEnerson15\_13:

(Start: 19 @10799 has 50 MA's), (46, 10928), (57, 10970), (61, 11000), (79, 11087), (84, 11120), (154, 11384), (159, 11408), (171, 11468), (181, 11507), (183, 11528), (189, 11576), (198, 11633), (207, 11669), (211, 11693),

Gene: Hum25\_6 Start: 5020, Stop: 5922, Start Num: 20

Candidate Starts for Hum25\_6:

(Start: 20 @5020 has 2 MA's), (39, 5116), (45, 5140), (64, 5242), (68, 5257), (75, 5287), (105, 5440), (122, 5479), (132, 5515), (188, 5779), (190, 5797),

Gene: Hutc2\_16 Start: 12702, Stop: 13691, Start Num: 5

Candidate Starts for Hutc2\_16:

(Start: 5 @12702 has 75 MA's), (29, 12762), (33, 12792), (45, 12852), (46, 12858), (57, 12900), (61, 12930), (64, 12954), (75, 12999), (84, 13050), (87, 13062), (92, 13080), (110, 13164), (122, 13200), (125, 13212), (132, 13239), (188, 13497), (206, 13602),

Gene: Huxley\_15 Start: 11543, Stop: 12475, Start Num: 6

Candidate Starts for Huxley\_15:

(Start: 6 @11543 has 512 MA's), (29, 11603), (46, 11699), (61, 11771), (64, 11795), (84, 11891), (101, 11975), (146, 12119), (154, 12161), (188, 12323), (191, 12356), (196, 12374), (203, 12410), (210, 12443),

Gene: ICleared\_15 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for ICleared\_15:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (47, 11651), (61, 11708), (64, 11732), (84, 11828), (92, 11858), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210, 12380),

Gene: ILeeKay\_17 Start: 11766, Stop: 12764, Start Num: 6

Candidate Starts for ILeeKay\_17:

(Start: 6 @11766 has 512 MA's), (42, 11910), (51, 11961), (54, 11976), (76, 12096), (80, 12117), (94, 12192), (108, 12252), (129, 12336), (134, 12354), (154, 12438), (180, 12558), (188, 12615), (196, 12654), (197, 12660),

Gene: Iceman\_15 Start: 11481, Stop: 12413, Start Num: 6

Candidate Starts for Iceman\_15:

(Start: 6 @11481 has 512 MA's), (29, 11541), (46, 11637), (47, 11652), (61, 11709), (64, 11733), (84, 11829), (92, 11859), (101, 11913), (146, 12057), (154, 12099), (188, 12261), (191, 12294), (196,

12312), (203, 12348), (210, 12381),

Gene: Ichabod\_16 Start: 11618, Stop: 12628, Start Num: 6

Candidate Starts for Ichabod\_16:

(Start: 6 @11618 has 512 MA's), (42, 11762), (51, 11813), (54, 11828), (76, 11948), (80, 11969), (94, 12044), (108, 12104), (129, 12188), (134, 12206), (154, 12290), (187, 12461), (188, 12467), (197, 12521),

Gene: IdentityCrisis\_7 Start: 6019, Stop: 6936, Start Num: 25

Candidate Starts for IdentityCrisis\_7:

(Start: 25 @6019 has 105 MA's), (46, 6130), (52, 6154), (74, 6265), (93, 6352), (94, 6364), (96, 6376), (106, 6421), (113, 6451), (114, 6454), (130, 6508), (131, 6511), (135, 6529), (144, 6568), (150, 6592), (153, 6622), (169, 6706), (178, 6733), (188, 6799),

Gene: Idleandcovert\_15 Start: 11103, Stop: 12077, Start Num: 8

Candidate Starts for Idleandcovert\_15:

(Start: 8 @11103 has 150 MA's), (46, 11244), (70, 11364), (79, 11403), (84, 11436), (141, 11673), (150, 11700), (154, 11727), (171, 11811), (188, 11901), (194, 11946), (195, 11952), (198, 11985), (207, 12021),

Gene: IgnatiusPatJac\_14 Start: 11592, Stop: 12590, Start Num: 6

Candidate Starts for IgnatiusPatJac\_14:

(Start: 6 @11592 has 512 MA's), (42, 11736), (51, 11787), (54, 11802), (76, 11922), (80, 11943), (94, 12018), (108, 12078), (134, 12180), (154, 12264), (180, 12384), (188, 12441), (196, 12480), (197, 12486),

Gene: Indra\_19 Start: 12235, Stop: 13206, Start Num: 5

Candidate Starts for Indra\_19:

(Start: 5 @12235 has 75 MA's), (29, 12295), (46, 12391), (57, 12433), (61, 12463), (64, 12487), (75, 12532), (84, 12583), (87, 12595), (92, 12613), (122, 12718), (164, 12904), (211, 13177),

Gene: Insomnia\_16 Start: 12751, Stop: 13740, Start Num: 5

Candidate Starts for Insomnia\_16:

(Start: 5 @12751 has 75 MA's), (29, 12811), (33, 12841), (45, 12901), (46, 12907), (57, 12949), (61, 12979), (64, 13003), (75, 13048), (84, 13099), (87, 13111), (92, 13129), (110, 13213), (122, 13249), (125, 13261), (132, 13288), (188, 13546), (206, 13651),

Gene: Inyanga\_14 Start: 11381, Stop: 12385, Start Num: 6

Candidate Starts for Inyanga\_14:

(Start: 6 @11381 has 512 MA's), (42, 11525), (51, 11576), (54, 11591), (76, 11711), (80, 11732), (94, 11807), (108, 11867), (121, 11918), (129, 11951), (134, 11969), (154, 12053), (188, 12230), (197, 12278), (214, 12362),

Gene: Iqorha\_14 Start: 11381, Stop: 12385, Start Num: 6

Candidate Starts for Iqorha\_14:

(Start: 6 @11381 has 512 MA's), (42, 11525), (44, 11534), (51, 11576), (54, 11591), (76, 11711), (80, 11732), (94, 11807), (108, 11867), (129, 11951), (134, 11969), (154, 12053), (188, 12230), (197, 12278), (214, 12362),

Gene: Iracema64\_15 Start: 11457, Stop: 12389, Start Num: 6

Candidate Starts for Iracema64\_15:

(Start: 6 @11457 has 512 MA's), (29, 11517), (46, 11613), (47, 11628), (61, 11685), (64, 11709), (84, 11805), (92, 11835), (101, 11889), (146, 12033), (154, 12075), (188, 12237), (191, 12270), (196,

12288), (203, 12324), (210, 12357),

Gene: IronMan\_18 Start: 13861, Stop: 14817, Start Num: 6

Candidate Starts for IronMan\_18:

(Start: 6 @13861 has 512 MA's), (29, 13921), (40, 13990), (46, 14017), (57, 14059), (61, 14089), (64, 14113), (75, 14158), (84, 14209), (92, 14239), (125, 14371), (181, 14602), (188, 14656),

Gene: Isca\_15 Start: 10978, Stop: 11982, Start Num: 8

Candidate Starts for Isca\_15:

(Start: 8 @10978 has 150 MA's), (46, 11125), (70, 11245), (79, 11284), (84, 11317), (108, 11428), (110, 11437), (119, 11464), (141, 11554), (154, 11608), (171, 11692), (188, 11782), (195, 11833), (198, 11866), (207, 11902), (220, 11959),

Gene: Isiphiwo\_19 Start: 12230, Stop: 13201, Start Num: 5

Candidate Starts for Isiphiwo\_19:

(Start: 5 @12230 has 75 MA's), (29, 12290), (46, 12386), (57, 12428), (61, 12458), (64, 12482), (75, 12527), (84, 12578), (87, 12590), (92, 12608), (122, 12713), (164, 12899), (211, 13172),

Gene: Iwokeuplikedis\_16 Start: 11914, Stop: 12870, Start Num: 6

Candidate Starts for Iwokeuplikedis\_16:

(Start: 6 @11914 has 512 MA's), (29, 11974), (40, 12043), (46, 12070), (57, 12112), (61, 12142), (64, 12166), (75, 12211), (84, 12262), (87, 12274), (92, 12292), (118, 12397), (125, 12424), (132, 12451), (143, 12496), (164, 12598), (181, 12655), (182, 12673), (196, 12760),

Gene: JC27\_17 Start: 12218, Stop: 13225, Start Num: 6

Candidate Starts for JC27\_17:

(Start: 6 @12218 has 512 MA's), (42, 12362), (51, 12413), (54, 12428), (76, 12548), (80, 12569), (94, 12644), (108, 12704), (129, 12788), (134, 12806), (154, 12890), (188, 13067), (196, 13106), (197, 13112),

Gene: JF2\_15 Start: 10746, Stop: 11738, Start Num: 8

Candidate Starts for JF2\_15:

(Start: 8 @10746 has 150 MA's), (Start: 18 @10755 has 9 MA's), (46, 10887), (70, 11007), (79, 11046), (84, 11079), (108, 11190), (110, 11199), (141, 11316), (154, 11370), (171, 11454), (188, 11544), (195, 11595), (198, 11628), (207, 11664),

Gene: JF4\_15 Start: 10746, Stop: 11738, Start Num: 8

Candidate Starts for JF4\_15:

(Start: 8 @10746 has 150 MA's), (Start: 18 @10755 has 9 MA's), (46, 10887), (70, 11007), (79, 11046), (84, 11079), (108, 11190), (110, 11199), (141, 11316), (154, 11370), (171, 11454), (188, 11544), (195, 11595), (198, 11628), (207, 11664),

Gene: JHC117\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for JHC117\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: JSwag\_18 Start: 11281, Stop: 12231, Start Num: 6

Candidate Starts for JSwag\_18:

(Start: 6 @11281 has 512 MA's), (29, 11341), (46, 11437), (61, 11509), (64, 11533), (75, 11578), (84, 11629), (92, 11659), (183, 12037), (203, 12157), (211, 12202),



Gene: Jaan\_19 Start: 14251, Stop: 15207, Start Num: 6

Candidate Starts for Jaan\_19:

(Start: 6 @14251 has 512 MA's), (29, 14311), (40, 14380), (46, 14407), (57, 14449), (61, 14479), (64, 14503), (75, 14548), (84, 14599), (92, 14629), (125, 14761), (139, 14818), (181, 14992), (188, 15046),

Gene: Jabbawokkie\_8 Start: 5401, Stop: 6336, Start Num: 25

Candidate Starts for Jabbawokkie\_8:

(Start: 25 @5401 has 105 MA's), (34, 5446), (35, 5455), (43, 5500), (52, 5536), (71, 5638), (86, 5713), (128, 5893), (144, 5959), (166, 6055), (173, 6088), (174, 6106), (178, 6130), (184, 6172), (205, 6271), (209, 6289), (212, 6310),

Gene: Jabiru\_13 Start: 10679, Stop: 11620, Start Num: 19

Candidate Starts for Jabiru\_13:

(Start: 19 @10679 has 50 MA's), (46, 10808), (61, 10880), (79, 10967), (84, 11000), (92, 11030), (125, 11141), (154, 11264), (159, 11288), (171, 11348), (181, 11387), (183, 11408), (189, 11456), (198, 11513), (207, 11549), (211, 11573),

Gene: Jabith\_16 Start: 12751, Stop: 13740, Start Num: 5

Candidate Starts for Jabith\_16:

(Start: 5 @12751 has 75 MA's), (29, 12811), (33, 12841), (45, 12901), (46, 12907), (57, 12949), (61, 12979), (64, 13003), (75, 13048), (84, 13099), (87, 13111), (92, 13129), (110, 13213), (122, 13249), (125, 13261), (132, 13288), (188, 13546), (206, 13651),

Gene: JackSparrow\_16 Start: 11934, Stop: 12938, Start Num: 6

Candidate Starts for JackSparrow\_16:

(Start: 6 @11934 has 512 MA's), (27, 11991), (42, 12078), (44, 12087), (51, 12129), (54, 12144), (76, 12264), (80, 12285), (94, 12360), (108, 12420), (134, 12522), (154, 12606), (160, 12636), (180, 12726), (187, 12777), (188, 12783), (197, 12831),

Gene: Jamzy\_11 Start: 5769, Stop: 6698, Start Num: 16

Candidate Starts for Jamzy\_11:

(Start: 16 @5769 has 7 MA's), (33, 5835), (53, 5931), (58, 5958), (77, 6054), (79, 6063), (80, 6069), (81, 6078), (96, 6144), (107, 6192), (156, 6399), (164, 6435), (203, 6621),

Gene: Jane\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Jane\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Jankie\_6 Start: 4667, Stop: 5581, Start Num: 22

Candidate Starts for Jankie\_6:

(Start: 22 @4667 has 2 MA's), (55, 4829), (64, 4895), (72, 4928), (114, 5117), (120, 5129), (131, 5174), (138, 5210), (156, 5285), (159, 5297), (208, 5531), (209, 5534),

Gene: Jasper\_16 Start: 11429, Stop: 12439, Start Num: 6

Candidate Starts for Jasper\_16:

(Start: 6 @11429 has 512 MA's), (42, 11573), (51, 11624), (54, 11639), (76, 11759), (80, 11780), (94, 11855), (108, 11915), (121, 11966), (129, 11999), (134, 12017), (154, 12101), (187, 12272), (188, 12278), (197, 12332),

Gene: Jaykayelowell\_15 Start: 11478, Stop: 12410, Start Num: 6

Candidate Starts for Jaykayelowell\_15:

(Start: 6 @11478 has 512 MA's), (29, 11538), (46, 11634), (61, 11706), (64, 11730), (84, 11826), (101, 11910), (146, 12054), (154, 12096), (188, 12258), (191, 12291), (196, 12309), (203, 12345), (210, 12378),

Gene: Jeeves\_15 Start: 11236, Stop: 12183, Start Num: 11

Candidate Starts for Jeeves\_15:

(Start: 11 @11236 has 9 MA's), (29, 11287), (46, 11383), (47, 11398), (57, 11425), (61, 11455), (75, 11524), (84, 11575), (87, 11587), (127, 11743), (159, 11884), (181, 11968), (188, 12022),

Gene: Jeffabunny\_19 Start: 12243, Stop: 13214, Start Num: 5

Candidate Starts for Jeffabunny\_19:

(Start: 5 @12243 has 75 MA's), (29, 12303), (46, 12399), (57, 12441), (61, 12471), (64, 12495), (75, 12540), (84, 12591), (87, 12603), (92, 12621), (122, 12726), (164, 12912),

Gene: JenCasNa\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for JenCasNa\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: JeppNRM\_18 Start: 11608, Stop: 12606, Start Num: 8

Candidate Starts for JeppNRM\_18:

(Start: 8 @11608 has 150 MA's), (46, 11749), (70, 11869), (79, 11908), (84, 11941), (132, 12139), (150, 12208), (154, 12235), (170, 12316), (188, 12409), (194, 12454), (195, 12460), (198, 12493), (207, 12529), (211, 12553),

Gene: Jerm\_18 Start: 12585, Stop: 13541, Start Num: 6

Candidate Starts for Jerm\_18:

(Start: 6 @12585 has 512 MA's), (29, 12645), (37, 12693), (40, 12714), (46, 12741), (57, 12783), (61, 12813), (64, 12837), (84, 12933), (87, 12945), (118, 13068), (125, 13095), (132, 13122), (143, 13167), (181, 13326), (182, 13344), (188, 13380), (196, 13431),

Gene: Jerm2\_16 Start: 11807, Stop: 12808, Start Num: 6

Candidate Starts for Jerm2\_16:

(Start: 6 @11807 has 512 MA's), (54, 12017), (76, 12137), (80, 12158), (94, 12233), (108, 12293), (134, 12395), (154, 12479), (180, 12599), (188, 12656), (196, 12695), (197, 12701),

Gene: Jester\_12 Start: 7701, Stop: 8603, Start Num: 21

Candidate Starts for Jester\_12:

(Start: 21 @7701 has 36 MA's), (46, 7830), (65, 7932), (76, 7974), (79, 7989), (84, 8022), (150, 8277), (161, 8337), (167, 8370),

Gene: JetBlade\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for JetBlade\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: JewelBug\_19 Start: 12241, Stop: 13212, Start Num: 5

Candidate Starts for JewelBug\_19:

(Start: 5 @12241 has 75 MA's), (29, 12301), (46, 12397), (57, 12439), (61, 12469), (64, 12493), (75, 12538), (84, 12589), (87, 12601), (92, 12619), (122, 12724), (164, 12910), (211, 13183),

Gene: Jiawan\_16 Start: 12884, Stop: 13843, Start Num: 6

Candidate Starts for Jiawan\_16:

(Start: 6 @12884 has 512 MA's), (29, 12944), (45, 13034), (46, 13040), (57, 13082), (61, 13112), (64, 13136), (75, 13181), (84, 13232), (87, 13244), (92, 13262), (122, 13385), (125, 13397), (181, 13628), (196, 13733),

Gene: Jobu08\_17 Start: 11608, Stop: 12600, Start Num: 8

Candidate Starts for Jobu08\_17:

(Start: 8 @11608 has 150 MA's), (46, 11749), (70, 11869), (79, 11908), (84, 11941), (108, 12052), (132, 12139), (154, 12235), (170, 12316), (178, 12343), (181, 12355), (188, 12409), (194, 12454), (195, 12460), (198, 12493), (207, 12529), (211, 12553),

Gene: Jolene\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Jolene\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Jolie2\_7 Start: 6247, Stop: 7173, Start Num: 25

Candidate Starts for Jolie2\_7:

(Start: 25 @6247 has 105 MA's), (35, 6304), (36, 6307), (38, 6319), (59, 6418), (66, 6466), (74, 6499), (132, 6754), (168, 6922), (188, 7039), (197, 7075), (211, 7147), (218, 7165),

Gene: Jonghyun\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Jonghyun\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: JoongJeon\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for JoongJeon\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: JorRay\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for JorRay\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Jordennis\_19 Start: 12230, Stop: 13201, Start Num: 5

Candidate Starts for Jordennis\_19:

(Start: 5 @12230 has 75 MA's), (29, 12290), (46, 12386), (57, 12428), (61, 12458), (64, 12482), (75, 12527), (84, 12578), (87, 12590), (92, 12608), (122, 12713), (164, 12899), (211, 13172),

Gene: Jorgensen\_15 Start: 11390, Stop: 12388, Start Num: 6

Candidate Starts for Jorgensen\_15:

(Start: 6 @11390 has 512 MA's), (42, 11534), (51, 11585), (54, 11600), (76, 11720), (80, 11741), (94, 11816), (108, 11876), (129, 11960), (134, 11978), (154, 12062), (180, 12182), (188, 12239), (196, 12278), (197, 12284),

Gene: Joselito\_16 Start: 12699, Stop: 13688, Start Num: 5

Candidate Starts for Joselito\_16:

(Start: 5 @12699 has 75 MA's), (29, 12759), (33, 12789), (45, 12849), (46, 12855), (57, 12897), (61, 12927), (64, 12951), (75, 12996), (84, 13047), (87, 13059), (92, 13077), (110, 13161), (122, 13197),

(125, 13209), (132, 13236), (188, 13494), (206, 13599),

Gene: JoshKayV\_18 Start: 12589, Stop: 13545, Start Num: 6

Candidate Starts for JoshKayV\_18:

(Start: 6 @12589 has 512 MA's), (15, 12604), (29, 12649), (37, 12697), (40, 12718), (46, 12745), (57, 12787), (61, 12817), (64, 12841), (75, 12886), (84, 12937), (87, 12949), (92, 12967), (118, 13072), (125, 13099), (181, 13330),

Gene: Journey13\_14 Start: 11269, Stop: 12270, Start Num: 6

Candidate Starts for Journey13\_14:

(Start: 6 @11269 has 512 MA's), (29, 11329), (46, 11425), (57, 11467), (61, 11497), (64, 11521), (75, 11566), (84, 11617), (92, 11647), (108, 11722), (130, 11785), (154, 11887), (158, 11908), (176, 11998), (181, 12025), (188, 12079), (216, 12229),

Gene: Jovo\_13 Start: 10908, Stop: 11840, Start Num: 19

Candidate Starts for Jovo\_13:

(Start: 19 @10908 has 50 MA's), (46, 11037), (57, 11079), (61, 11109), (79, 11196), (84, 11229), (154, 11493), (159, 11517), (171, 11577), (181, 11616), (183, 11637), (189, 11685), (198, 11742), (207, 11778), (211, 11802),

Gene: Jsquared\_15 Start: 11031, Stop: 11981, Start Num: 6

Candidate Starts for Jsquared\_15:

(Start: 6 @11031 has 512 MA's), (29, 11091), (40, 11160), (46, 11187), (57, 11229), (61, 11259), (64, 11283), (75, 11328), (84, 11379), (92, 11409), (110, 11493), (132, 11562), (143, 11607), (164, 11709), (179, 11757), (181, 11766), (182, 11784), (188, 11820), (196, 11871),

Gene: JuliaChild\_17 Start: 12065, Stop: 13072, Start Num: 6

Candidate Starts for JuliaChild\_17:

(Start: 6 @12065 has 512 MA's), (54, 12275), (76, 12395), (80, 12416), (94, 12491), (111, 12572), (129, 12635), (134, 12653), (154, 12737), (188, 12914), (197, 12962),

Gene: KADY\_18 Start: 11623, Stop: 12615, Start Num: 8

Candidate Starts for KADY\_18:

(Start: 8 @11623 has 150 MA's), (46, 11764), (70, 11884), (79, 11923), (84, 11956), (108, 12067), (132, 12154), (154, 12250), (170, 12331), (178, 12358), (181, 12370), (188, 12424), (194, 12469), (195, 12475), (198, 12508), (207, 12544), (211, 12568),

Gene: KBG\_16 Start: 12499, Stop: 13509, Start Num: 6

Candidate Starts for KBG\_16:

(Start: 6 @12499 has 512 MA's), (51, 12694), (54, 12709), (76, 12829), (80, 12850), (94, 12925), (108, 12985), (154, 13171), (187, 13342), (188, 13348), (197, 13405), (204, 13441),

Gene: KFPoly\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for KFPoly\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: KSSJEB\_15 Start: 11403, Stop: 12413, Start Num: 6

Candidate Starts for KSSJEB\_15:

(Start: 6 @11403 has 512 MA's), (42, 11547), (51, 11598), (54, 11613), (76, 11733), (80, 11754), (94, 11829), (108, 11889), (129, 11973), (134, 11991), (154, 12075), (187, 12246), (188, 12252), (197, 12306),

Gene: Kachowdy\_15 Start: 11156, Stop: 12130, Start Num: 8

Candidate Starts for Kachowdy\_15:

(Start: 8 @11156 has 150 MA's), (46, 11297), (70, 11417), (79, 11456), (84, 11489), (141, 11726), (150, 11753), (154, 11780), (171, 11864), (188, 11954), (194, 11999), (195, 12005), (198, 12038), (207, 12074),

Gene: Kalb97\_18 Start: 11608, Stop: 12606, Start Num: 8

Candidate Starts for Kalb97\_18:

(Start: 8 @11608 has 150 MA's), (46, 11749), (70, 11869), (79, 11908), (84, 11941), (132, 12139), (150, 12208), (154, 12235), (170, 12316), (188, 12409), (194, 12454), (195, 12460), (198, 12493), (207, 12529), (211, 12553),

Gene: Kalnoky\_18 Start: 11610, Stop: 12608, Start Num: 8

Candidate Starts for Kalnoky\_18:

(Start: 8 @11610 has 150 MA's), (46, 11751), (70, 11871), (79, 11910), (84, 11943), (132, 12141), (150, 12210), (154, 12237), (170, 12318), (188, 12411), (194, 12456), (195, 12462), (198, 12495), (207, 12531), (211, 12555),

Gene: Kalpine\_19 Start: 13947, Stop: 14903, Start Num: 6

Candidate Starts for Kalpine\_19:

(Start: 6 @13947 has 512 MA's), (29, 14007), (40, 14076), (46, 14103), (57, 14145), (61, 14175), (64, 14199), (75, 14244), (84, 14295), (87, 14307), (92, 14325), (118, 14430), (125, 14457), (143, 14529), (164, 14631), (181, 14688), (182, 14706), (188, 14742), (196, 14793),

Gene: Kamaru\_7 Start: 4901, Stop: 5842, Start Num: 25

Candidate Starts for Kamaru\_7:

(Start: 25 @4901 has 105 MA's), (52, 5036), (66, 5117), (71, 5138), (86, 5213), (114, 5339), (162, 5540), (166, 5558), (173, 5591), (184, 5675), (212, 5813),

Gene: Kampy\_15 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for Kampy\_15:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (61, 11708), (64, 11732), (84, 11828), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210, 12380),

Gene: Kanely\_16 Start: 12174, Stop: 13175, Start Num: 6

Candidate Starts for Kanely\_16:

(Start: 6 @12174 has 512 MA's), (42, 12318), (51, 12369), (54, 12384), (76, 12504), (80, 12525), (94, 12600), (108, 12660), (129, 12744), (134, 12762), (154, 12846), (180, 12966), (188, 13023), (196, 13062), (197, 13068),

Gene: Kareem\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Kareem\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Kasen3\_7 Start: 7104, Stop: 8039, Start Num: 25

Candidate Starts for Kasen3\_7:

(Start: 25 @7104 has 105 MA's), (35, 7161), (36, 7164), (38, 7176), (59, 7275), (66, 7323), (74, 7356), (83, 7407), (102, 7500), (168, 7779), (175, 7818), (211, 8013),

Gene: Katalie136\_15 Start: 11491, Stop: 12423, Start Num: 6

Candidate Starts for Katalie136\_15:

(Start: 6 @11491 has 512 MA's), (29, 11551), (46, 11647), (47, 11662), (61, 11719), (64, 11743), (84, 11839), (101, 11923), (146, 12067), (154, 12109), (188, 12271), (191, 12304), (203, 12358), (210, 12391),

Gene: KatherineG\_18 Start: 11417, Stop: 12367, Start Num: 6

Candidate Starts for KatherineG\_18:

(Start: 6 @11417 has 512 MA's), (29, 11477), (46, 11573), (61, 11645), (64, 11669), (75, 11714), (84, 11765), (92, 11795), (183, 12173), (203, 12293), (211, 12338),

Gene: KayGee\_8 Start: 5097, Stop: 6056, Start Num: 8

Candidate Starts for KayGee\_8:

(Start: 8 @5097 has 150 MA's), (Start: 25 @5148 has 105 MA's), (50, 5277), (67, 5364), (77, 5406), (79, 5415), (89, 5460), (107, 5544), (132, 5640), (144, 5697), (156, 5751), (164, 5787), (209, 6000), (211, 6018), (221, 6048),

Gene: Kazan\_19 Start: 12246, Stop: 13217, Start Num: 5

Candidate Starts for Kazan\_19:

(Start: 5 @12246 has 75 MA's), (29, 12306), (46, 12402), (57, 12444), (61, 12474), (64, 12498), (75, 12543), (84, 12594), (87, 12606), (92, 12624), (122, 12729), (164, 12915), (211, 13188),

Gene: Keiki\_6 Start: 4648, Stop: 5595, Start Num: 24

Candidate Starts for Keiki\_6:

(Start: 24 @4648 has 42 MA's), (33, 4696), (40, 4738), (53, 4792), (72, 4894), (79, 4924), (83, 4954), (133, 5161), (138, 5185), (149, 5221), (153, 5257), (158, 5284), (172, 5344), (181, 5374), (197, 5467), (200, 5488), (205, 5506), (213, 5548),

Gene: Kenmech\_18 Start: 12679, Stop: 13695, Start Num: 6

Candidate Starts for Kenmech\_18:

(Start: 6 @12679 has 512 MA's), (51, 12874), (54, 12889), (57, 12904), (68, 12976), (76, 13009), (80, 13030), (94, 13105), (108, 13165), (154, 13351), (187, 13522), (188, 13528), (197, 13585), (204, 13621),

Gene: Kenna\_7 Start: 4897, Stop: 5835, Start Num: 25

Candidate Starts for Kenna\_7:

(Start: 25 @4897 has 105 MA's), (33, 4939), (34, 4942), (52, 5032), (71, 5134), (85, 5206), (86, 5209), (131, 5398), (166, 5551), (168, 5563), (178, 5626), (186, 5680), (209, 5785), (212, 5806),

Gene: Kerberos\_19 Start: 12087, Stop: 13043, Start Num: 5

Candidate Starts for Kerberos\_19:

(Start: 5 @12087 has 75 MA's), (29, 12147), (45, 12237), (46, 12243), (57, 12285), (61, 12315), (64, 12339), (75, 12384), (84, 12435), (87, 12447), (92, 12465), (95, 12486), (122, 12573), (125, 12585), (127, 12591), (132, 12612), (171, 12792), (181, 12816), (188, 12870), (215, 13017),

Gene: Keziacharles14\_15 Start: 10993, Stop: 11961, Start Num: 6

Candidate Starts for Keziacharles14\_15:

(Start: 6 @10993 has 512 MA's), (Start: 21 @11017 has 36 MA's), (29, 11053), (46, 11149), (61, 11221), (64, 11245), (84, 11341), (87, 11353), (92, 11371), (118, 11476),

Gene: Killigrew\_13 Start: 11039, Stop: 12049, Start Num: 6

Candidate Starts for Killigrew\_13:

(Start: 6 @11039 has 512 MA's), (42, 11183), (51, 11234), (54, 11249), (76, 11369), (80, 11390), (94, 11465), (108, 11525), (121, 11576), (129, 11609), (134, 11627), (154, 11711), (187, 11882), (188,

11888), (192, 11921), (197, 11942), (207, 11993),

Gene: Kimona\_12 Start: 8892, Stop: 9875, Start Num: 6

Candidate Starts for Kimona\_12:

(Start: 6 @8892 has 512 MA's), (40, 9021), (46, 9048), (47, 9063), (57, 9090), (61, 9120), (84, 9240), (127, 9411), (132, 9432), (154, 9528), (159, 9552), (167, 9594), (178, 9636), (181, 9648), (188, 9702), (203, 9789),

Gene: KingCyrus\_18 Start: 12560, Stop: 13516, Start Num: 6

Candidate Starts for KingCyrus\_18:

(Start: 6 @12560 has 512 MA's), (29, 12620), (37, 12668), (46, 12716), (57, 12758), (61, 12788), (64, 12812), (75, 12857), (84, 12908), (92, 12938), (118, 13043), (125, 13070), (132, 13097), (143, 13142), (181, 13301), (182, 13319), (188, 13355), (196, 13406),

Gene: Kingmustik0402\_15 Start: 11471, Stop: 12403, Start Num: 6

Candidate Starts for Kingmustik0402\_15:

(Start: 6 @11471 has 512 MA's), (29, 11531), (46, 11627), (61, 11699), (64, 11723), (84, 11819), (101, 11903), (146, 12047), (154, 12089), (188, 12251), (191, 12284), (196, 12302), (203, 12338), (210, 12371),

Gene: Kinmap\_15 Start: 12025, Stop: 12972, Start Num: 11

Candidate Starts for Kinmap\_15:

(Start: 11 @12025 has 9 MA's), (29, 12076), (46, 12172), (47, 12187), (57, 12214), (61, 12244), (75, 12313), (84, 12364), (108, 12469), (118, 12499), (154, 12649), (181, 12757), (196, 12862),

Gene: Kipper29\_19 Start: 12240, Stop: 13211, Start Num: 5

Candidate Starts for Kipper29\_19:

(Start: 5 @12240 has 75 MA's), (29, 12300), (46, 12396), (57, 12438), (61, 12468), (64, 12492), (75, 12537), (84, 12588), (87, 12600), (92, 12618), (122, 12723), (164, 12909), (211, 13182),

Gene: KittenMittens\_14 Start: 9362, Stop: 10294, Start Num: 6

Candidate Starts for KittenMittens\_14:

(Start: 6 @9362 has 512 MA's), (29, 9422), (42, 9500), (46, 9518), (47, 9533), (57, 9560), (61, 9590), (64, 9614), (75, 9659), (84, 9710), (127, 9860), (130, 9875), (141, 9923), (154, 9977), (196, 10190), (203, 10226), (206, 10244), (210, 10259),

Gene: Koan\_14 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Koan\_14:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Koduck\_16 Start: 11343, Stop: 12323, Start Num: 2

Candidate Starts for Koduck\_16:

(Start: 2 @11343 has 2 MA's), (Start: 20 @11382 has 2 MA's), (29, 11418), (46, 11514), (57, 11556), (61, 11586), (64, 11610), (75, 11655), (84, 11706), (92, 11736), (110, 11820), (131, 11895), (164, 12045), (188, 12156), (215, 12303),

Gene: Koko\_19 Start: 12235, Stop: 13206, Start Num: 5

Candidate Starts for Koko\_19:

(Start: 5 @12235 has 75 MA's), (29, 12295), (46, 12391), (57, 12433), (61, 12463), (64, 12487), (75, 12532), (84, 12583), (87, 12595), (92, 12613), (122, 12718), (164, 12904),

Gene: Koreni\_14 Start: 11128, Stop: 12060, Start Num: 6

Candidate Starts for Koreni\_14:

(Start: 6 @11128 has 512 MA's), (29, 11188), (46, 11284), (61, 11356), (64, 11380), (84, 11476), (101, 11560), (146, 11704), (154, 11746), (188, 11908), (191, 11941), (196, 11959), (203, 11995), (210, 12028),

Gene: Kratak\_15 Start: 11474, Stop: 12406, Start Num: 6

Candidate Starts for Kratak\_15:

(Start: 6 @11474 has 512 MA's), (29, 11534), (46, 11630), (61, 11702), (64, 11726), (84, 11822), (92, 11852), (101, 11906), (146, 12050), (154, 12092), (188, 12254), (191, 12287), (196, 12305), (203, 12341), (210, 12374),

Gene: Kremtemulon\_15 Start: 11527, Stop: 12459, Start Num: 6

Candidate Starts for Kremtemulon\_15:

(Start: 6 @11527 has 512 MA's), (29, 11587), (46, 11683), (61, 11755), (64, 11779), (84, 11875), (92, 11905), (101, 11959), (146, 12103), (154, 12145), (188, 12307), (191, 12340), (196, 12358), (203, 12394), (210, 12427),

Gene: Krishelle\_12 Start: 7716, Stop: 8618, Start Num: 21

Candidate Starts for Krishelle\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (150, 8292), (161, 8352), (167, 8385),

Gene: Kristoff\_16 Start: 11433, Stop: 12371, Start Num: 6

Candidate Starts for Kristoff\_16:

(Start: 6 @11433 has 512 MA's), (29, 11493), (42, 11571), (46, 11589), (47, 11604), (57, 11631), (61, 11661), (64, 11685), (84, 11781), (87, 11793), (92, 11811), (108, 11886), (117, 11907), (154, 12048), (158, 12069), (183, 12177), (188, 12210), (196, 12261), (203, 12297),

Gene: Kubed\_6 Start: 4642, Stop: 5589, Start Num: 24

Candidate Starts for Kubed\_6:

(Start: 23 @4639 has 3 MA's), (Start: 24 @4642 has 42 MA's), (33, 4690), (40, 4732), (48, 4774), (72, 4888), (79, 4918), (83, 4948), (94, 4999), (108, 5062), (125, 5122), (133, 5155), (138, 5179), (149, 5215), (153, 5251), (158, 5278), (172, 5338), (181, 5368), (200, 5482), (205, 5500), (206, 5509), (213, 5542),

Gene: Kugel\_16 Start: 11675, Stop: 12868, Start Num: 14

Candidate Starts for Kugel\_16:

(Start: 14 @11675 has 5 MA's), (29, 11723), (31, 11747), (46, 11819), (61, 11891), (64, 11915), (68, 11930), (84, 12011), (92, 12041), (128, 12167), (150, 12248), (154, 12275), (179, 12374), (210, 12557), (211, 12569), (222, 12701), (224, 12734), (226, 12755), (228, 12788),

Gene: KyMonks1A\_17 Start: 11909, Stop: 12907, Start Num: 6

Candidate Starts for KyMonks1A\_17:

(Start: 6 @11909 has 512 MA's), (42, 12053), (51, 12104), (54, 12119), (76, 12239), (80, 12260), (94, 12335), (108, 12395), (129, 12479), (134, 12497), (154, 12581), (180, 12701), (188, 12758), (196, 12797), (197, 12803),

Gene: Kyee\_15 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for Kyee\_15:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (61, 11708), (64, 11732), (84, 11828), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210, 12380),



Gene: Kykar\_13 Start: 11172, Stop: 12365, Start Num: 14

Candidate Starts for Kykar\_13:

(Start: 14 @11172 has 5 MA's), (29, 11220), (31, 11244), (46, 11316), (61, 11388), (64, 11412), (68, 11427), (84, 11508), (92, 11538), (128, 11664), (150, 11745), (154, 11772), (179, 11871), (210, 12054), (211, 12066), (226, 12252), (228, 12285),

Gene: L5\_17 Start: 11351, Stop: 12331, Start Num: 2

Candidate Starts for L5\_17:

(Start: 2 @11351 has 2 MA's), (Start: 20 @11390 has 2 MA's), (29, 11426), (46, 11522), (57, 11564), (61, 11594), (64, 11618), (75, 11663), (84, 11714), (92, 11744), (110, 11828), (131, 11903), (164, 12053), (188, 12164), (215, 12311),

Gene: LBerry\_17 Start: 11539, Stop: 12531, Start Num: 8

Candidate Starts for LBerry\_17:

(Start: 8 @11539 has 150 MA's), (46, 11680), (70, 11800), (79, 11839), (84, 11872), (108, 11983), (132, 12070), (154, 12166), (170, 12247), (178, 12274), (181, 12286), (188, 12340), (194, 12385), (195, 12391), (198, 12424), (207, 12460), (211, 12484),

Gene: LHTSCC\_15 Start: 11457, Stop: 12389, Start Num: 6

Candidate Starts for LHTSCC\_15:

(Start: 6 @11457 has 512 MA's), (29, 11517), (46, 11613), (47, 11628), (61, 11685), (64, 11709), (84, 11805), (92, 11835), (101, 11889), (146, 12033), (154, 12075), (188, 12237), (191, 12270), (196, 12288), (203, 12324), (210, 12357),

Gene: LadyBird\_16 Start: 12129, Stop: 13085, Start Num: 6

Candidate Starts for LadyBird\_16:

(Start: 6 @12129 has 512 MA's), (Start: 21 @12153 has 36 MA's), (29, 12189), (46, 12285), (57, 12327), (61, 12357), (64, 12381), (75, 12426), (84, 12477), (87, 12489), (96, 12537), (125, 12639), (188, 12924), (196, 12975),

Gene: Lambert1\_16 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for Lambert1\_16:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Lamina13\_15 Start: 11185, Stop: 12183, Start Num: 6

Candidate Starts for Lamina13\_15:

(Start: 6 @11185 has 512 MA's), (42, 11329), (51, 11380), (54, 11395), (76, 11515), (80, 11536), (94, 11611), (108, 11671), (134, 11773), (154, 11857), (180, 11977), (188, 12034), (196, 12073), (197, 12079),

Gene: Landor\_17 Start: 13903, Stop: 14859, Start Num: 6

Candidate Starts for Landor\_17:

(Start: 6 @13903 has 512 MA's), (29, 13963), (40, 14032), (46, 14059), (57, 14101), (61, 14131), (64, 14155), (75, 14200), (84, 14251), (92, 14281), (125, 14413), (139, 14470), (181, 14644), (188, 14698),

Gene: LappelDuVide\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for LappelDuVide\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Larenn\_17 Start: 12444, Stop: 13400, Start Num: 6

Candidate Starts for Larenn\_17:

(Start: 6 @12444 has 512 MA's), (29, 12504), (40, 12573), (46, 12600), (57, 12642), (61, 12672), (64, 12696), (75, 12741), (84, 12792), (118, 12927), (125, 12954), (132, 12981), (143, 13026), (181, 13185), (182, 13203), (188, 13239), (196, 13290),

Gene: LarryKay\_17 Start: 11625, Stop: 12617, Start Num: 8

Candidate Starts for LarryKay\_17:

(Start: 8 @11625 has 150 MA's), (46, 11766), (70, 11886), (79, 11925), (84, 11958), (108, 12069), (132, 12156), (154, 12252), (170, 12333), (178, 12360), (181, 12372), (188, 12426), (194, 12471), (195, 12477), (198, 12510), (207, 12546), (211, 12570),

Gene: LastResort\_18 Start: 11295, Stop: 12245, Start Num: 6

Candidate Starts for LastResort\_18:

(Start: 6 @11295 has 512 MA's), (29, 11355), (46, 11451), (61, 11523), (64, 11547), (75, 11592), (84, 11643), (92, 11673), (183, 12051), (203, 12171), (211, 12216),

Gene: Lauchelly\_6 Start: 4637, Stop: 5584, Start Num: 24

Candidate Starts for Lauchelly\_6:

(Start: 24 @4637 has 42 MA's), (33, 4685), (39, 4724), (48, 4769), (53, 4781), (72, 4883), (79, 4913), (83, 4943), (101, 5036), (108, 5057), (133, 5150), (145, 5198), (149, 5210), (153, 5246), (172, 5333), (178, 5351), (200, 5477), (206, 5504), (213, 5537),

Gene: Lauer\_7 Start: 5150, Stop: 6109, Start Num: 8

Candidate Starts for Lauer\_7:

(Start: 8 @5150 has 150 MA's), (Start: 25 @5201 has 105 MA's), (50, 5330), (67, 5417), (77, 5459), (79, 5468), (89, 5513), (107, 5597), (132, 5693), (144, 5750), (156, 5804), (164, 5840), (209, 6053), (211, 6071),

Gene: Lemur\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Lemur\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (47, 11650), (61, 11707), (64, 11731), (84, 11827), (92, 11857), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Lemuria\_7 Start: 6287, Stop: 7213, Start Num: 25

Candidate Starts for Lemuria\_7:

(Start: 25 @6287 has 105 MA's), (35, 6344), (36, 6347), (38, 6359), (59, 6458), (66, 6506), (74, 6539), (132, 6794), (168, 6962), (178, 7010), (181, 7022), (197, 7115), (211, 7187), (218, 7205),

Gene: LeoAvram\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for LeoAvram\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Leogania\_18 Start: 14303, Stop: 15259, Start Num: 6

Candidate Starts for Leogania\_18:

(Start: 6 @14303 has 512 MA's), (29, 14363), (40, 14432), (46, 14459), (57, 14501), (61, 14531), (64, 14555), (75, 14600), (84, 14651), (118, 14786), (125, 14813), (164, 14987), (182, 15062), (188, 15098), (196, 15149),

Gene: Leroy\_7 Start: 4898, Stop: 5836, Start Num: 25

Candidate Starts for Leroy\_7:

(Start: 25 @4898 has 105 MA's), (33, 4940), (34, 4943), (52, 5033), (71, 5135), (85, 5207), (86, 5210), (131, 5399), (166, 5552), (168, 5564), (178, 5627), (186, 5681), (209, 5786), (212, 5807),

Gene: Lesedi\_14 Start: 11344, Stop: 12351, Start Num: 6

Candidate Starts for Lesedi\_14:

(Start: 6 @11344 has 512 MA's), (42, 11488), (44, 11497), (51, 11539), (54, 11554), (76, 11674), (80, 11695), (94, 11770), (108, 11830), (121, 11881), (134, 11932), (154, 12016), (160, 12046), (187, 12187), (188, 12193), (197, 12241),

Gene: Lev2\_13 Start: 10620, Stop: 11552, Start Num: 19

Candidate Starts for Lev2\_13:

(Start: 19 @10620 has 50 MA's), (46, 10749), (61, 10821), (79, 10908), (84, 10941), (125, 11082), (154, 11205), (159, 11229), (171, 11289), (181, 11328), (183, 11349), (189, 11397), (198, 11454), (207, 11490), (211, 11514),

Gene: Levia\_14 Start: 12373, Stop: 13377, Start Num: 6

Candidate Starts for Levia\_14:

(Start: 6 @12373 has 512 MA's), (42, 12517), (44, 12526), (51, 12568), (54, 12583), (76, 12703), (80, 12724), (94, 12799), (108, 12859), (134, 12961), (154, 13045), (160, 13075), (180, 13165), (187, 13216), (188, 13222), (197, 13270),

Gene: Leviathan\_18 Start: 12617, Stop: 13573, Start Num: 6

Candidate Starts for Leviathan\_18:

(Start: 6 @12617 has 512 MA's), (29, 12677), (37, 12725), (40, 12746), (46, 12773), (57, 12815), (61, 12845), (64, 12869), (84, 12965), (87, 12977), (118, 13100), (125, 13127), (132, 13154), (143, 13199), (181, 13358), (182, 13376), (188, 13412), (196, 13463),

Gene: Leviosa\_6 Start: 4642, Stop: 5604, Start Num: 24

Candidate Starts for Leviosa\_6:

(Start: 23 @4639 has 3 MA's), (Start: 24 @4642 has 42 MA's), (33, 4690), (40, 4732), (53, 4786), (72, 4888), (79, 4918), (83, 4948), (108, 5062), (130, 5137), (133, 5155), (153, 5251), (172, 5338), (197, 5461), (200, 5482), (206, 5509), (213, 5542),

Gene: Licorice\_17 Start: 12202, Stop: 13221, Start Num: 6

Candidate Starts for Licorice\_17:

(Start: 6 @12202 has 512 MA's), (51, 12397), (54, 12412), (57, 12427), (68, 12499), (76, 12532), (80, 12553), (94, 12628), (108, 12688), (154, 12874), (187, 13045), (188, 13051), (197, 13108), (204, 13144),

Gene: Liefie\_7 Start: 7102, Stop: 8037, Start Num: 25

Candidate Starts for Liefie\_7:

(Start: 25 @7102 has 105 MA's), (35, 7159), (36, 7162), (38, 7174), (59, 7273), (66, 7321), (74, 7354), (83, 7405), (102, 7498), (168, 7777), (175, 7816), (211, 8011),

Gene: LilBandit\_6 Start: 4638, Stop: 5588, Start Num: 23

Candidate Starts for LilBandit\_6:

(Start: 23 @4638 has 3 MA's), (Start: 24 @4641 has 42 MA's), (33, 4689), (40, 4731), (53, 4785), (72, 4887), (79, 4917), (83, 4947), (94, 4998), (108, 5061), (133, 5154), (138, 5178), (149, 5214), (153, 5250), (158, 5277), (163, 5295), (172, 5337), (181, 5367), (197, 5460), (200, 5481), (205, 5499), (206, 5508), (213, 5541),

Gene: LilBib\_16 Start: 12144, Stop: 13151, Start Num: 6

Candidate Starts for LilBib\_16:

(Start: 6 @12144 has 512 MA's), (54, 12354), (76, 12474), (80, 12495), (94, 12570), (108, 12630), (129, 12714), (134, 12732), (154, 12816), (188, 12993), (196, 13032), (197, 13038),

Gene: LilTurb\_18 Start: 12644, Stop: 13600, Start Num: 6

Candidate Starts for LilTurb\_18:

(Start: 6 @12644 has 512 MA's), (29, 12704), (37, 12752), (40, 12773), (46, 12800), (57, 12842), (61, 12872), (64, 12896), (84, 12992), (87, 13004), (118, 13127), (125, 13154), (132, 13181), (143, 13226), (181, 13385), (182, 13403), (188, 13439), (196, 13490),

Gene: Lilbunny\_19 Start: 12216, Stop: 13187, Start Num: 5

Candidate Starts for Lilbunny\_19:

(Start: 5 @12216 has 75 MA's), (29, 12276), (46, 12372), (57, 12414), (61, 12444), (64, 12468), (75, 12513), (84, 12564), (87, 12576), (92, 12594), (122, 12699), (164, 12885), (211, 13158),

Gene: Lilit\_17 Start: 11532, Stop: 12524, Start Num: 8

Candidate Starts for Lilit\_17:

(Start: 8 @11532 has 150 MA's), (46, 11673), (70, 11793), (79, 11832), (84, 11865), (108, 11976), (132, 12063), (154, 12159), (170, 12240), (178, 12267), (181, 12279), (188, 12333), (194, 12378), (195, 12384), (198, 12417), (207, 12453), (211, 12477),

Gene: Lilleskat\_15 Start: 12848, Stop: 13807, Start Num: 6

Candidate Starts for Lilleskat\_15:

(Start: 6 @12848 has 512 MA's), (29, 12908), (45, 12998), (46, 13004), (57, 13046), (61, 13076), (64, 13100), (75, 13145), (84, 13196), (87, 13208), (92, 13226), (122, 13349), (125, 13361), (181, 13592), (196, 13697),

Gene: Lillie\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Lillie\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: LionsBait\_17 Start: 13914, Stop: 14870, Start Num: 6

Candidate Starts for LionsBait\_17:

(Start: 6 @13914 has 512 MA's), (29, 13974), (40, 14043), (46, 14070), (57, 14112), (61, 14142), (64, 14166), (75, 14211), (84, 14262), (87, 14274), (96, 14322), (118, 14397), (125, 14424), (139, 14481), (188, 14709), (196, 14760),

Gene: LitninMcQueen\_7 Start: 4901, Stop: 5842, Start Num: 25

Candidate Starts for LitninMcQueen\_7:

(Start: 25 @4901 has 105 MA's), (52, 5036), (66, 5117), (71, 5138), (86, 5213), (114, 5339), (162, 5540), (166, 5558), (173, 5591), (184, 5675), (212, 5813),

Gene: LittleB\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for LittleB\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (92, 11857), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: LittleCherry\_13 Start: 10800, Stop: 11732, Start Num: 19

Candidate Starts for LittleCherry\_13:

(Start: 19 @10800 has 50 MA's), (46, 10929), (57, 10971), (61, 11001), (79, 11088), (84, 11121), (154, 11385), (159, 11409), (171, 11469), (181, 11508), (183, 11529), (189, 11577), (198, 11634), (207, 11670), (211, 11694),

Gene: LittleGuy\_15 Start: 11425, Stop: 12357, Start Num: 6

Candidate Starts for LittleGuy\_15:

(Start: 6 @11425 has 512 MA's), (29, 11485), (46, 11581), (61, 11653), (64, 11677), (84, 11773), (92, 11803), (101, 11857), (146, 12001), (154, 12043), (188, 12205), (191, 12238), (196, 12256), (203, 12292), (210, 12325),

Gene: LochMonster\_15 Start: 11454, Stop: 12386, Start Num: 6

Candidate Starts for LochMonster\_15:

(Start: 6 @11454 has 512 MA's), (29, 11514), (46, 11610), (61, 11682), (64, 11706), (84, 11802), (92, 11832), (101, 11886), (146, 12030), (154, 12072), (188, 12234), (191, 12267), (196, 12285), (203, 12321), (210, 12354),

Gene: Lockley\_15 Start: 11523, Stop: 12521, Start Num: 6

Candidate Starts for Lockley\_15:

(Start: 6 @11523 has 512 MA's), (42, 11667), (51, 11718), (54, 11733), (76, 11853), (80, 11874), (94, 11949), (108, 12009), (134, 12111), (154, 12195), (180, 12315), (188, 12372), (196, 12411), (197, 12417),

Gene: Loka\_19 Start: 13850, Stop: 14797, Start Num: 11

Candidate Starts for Loka\_19:

(10, 13844), (Start: 11 @13850 has 9 MA's), (29, 13901), (37, 13949), (46, 13997), (47, 14012), (57, 14039), (61, 14069), (68, 14108), (84, 14189), (107, 14291), (154, 14474), (179, 14573), (181, 14582), (188, 14636),

Gene: LoneWolf\_17 Start: 12688, Stop: 13647, Start Num: 6

Candidate Starts for LoneWolf\_17:

(Start: 6 @12688 has 512 MA's), (29, 12748), (45, 12838), (46, 12844), (57, 12886), (61, 12916), (64, 12940), (75, 12985), (84, 13036), (87, 13048), (92, 13066), (96, 13096), (122, 13189), (125, 13201), (181, 13432), (196, 13537),

Gene: Looper\_19 Start: 11295, Stop: 12245, Start Num: 6

Candidate Starts for Looper\_19:

(Start: 6 @11295 has 512 MA's), (29, 11355), (46, 11451), (61, 11523), (64, 11547), (75, 11592), (84, 11643), (92, 11673), (183, 12051), (203, 12171), (211, 12216),

Gene: Lopton\_16 Start: 12951, Stop: 13952, Start Num: 6

Candidate Starts for Lopton\_16:

(Start: 6 @12951 has 512 MA's), (54, 13161), (76, 13281), (80, 13302), (94, 13377), (108, 13437), (129, 13521), (134, 13539), (154, 13623), (188, 13800), (196, 13839), (197, 13845), (214, 13929),

Gene: Lorenzo\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Lorenzo\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Loser\_19 Start: 13935, Stop: 14891, Start Num: 6

Candidate Starts for Loser\_19:

(Start: 6 @13935 has 512 MA's), (29, 13995), (40, 14064), (46, 14091), (57, 14133), (61, 14163), (64, 14187), (75, 14232), (84, 14283), (92, 14313), (96, 14343), (132, 14472), (143, 14517), (164, 14619), (182, 14694), (188, 14730), (196, 14781),

Gene: Louie6\_17 Start: 11626, Stop: 12618, Start Num: 8

Candidate Starts for Louie6\_17:

(Start: 8 @11626 has 150 MA's), (46, 11767), (70, 11887), (79, 11926), (84, 11959), (108, 12070), (132, 12157), (154, 12253), (170, 12334), (178, 12361), (181, 12373), (188, 12427), (194, 12472), (195, 12478), (198, 12511), (207, 12547), (211, 12571),

Gene: LouisV14\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for LouisV14\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Lowa\_17 Start: 11531, Stop: 12523, Start Num: 8

Candidate Starts for Lowa\_17:

(Start: 8 @11531 has 150 MA's), (46, 11672), (70, 11792), (79, 11831), (84, 11864), (108, 11975), (132, 12062), (154, 12158), (170, 12239), (178, 12266), (181, 12278), (188, 12332), (194, 12377), (195, 12383), (198, 12416), (207, 12452), (211, 12476),

Gene: Luchador\_16 Start: 12226, Stop: 13173, Start Num: 11

Candidate Starts for Luchador\_16:

(Start: 11 @12226 has 9 MA's), (29, 12277), (46, 12373), (47, 12388), (57, 12415), (61, 12445), (68, 12484), (75, 12514), (84, 12565), (87, 12577), (118, 12700), (127, 12733), (181, 12958), (188, 13012), (196, 13063),

Gene: Lucivia\_16 Start: 12748, Stop: 13737, Start Num: 5

Candidate Starts for Lucivia\_16:

(Start: 5 @12748 has 75 MA's), (29, 12808), (33, 12838), (45, 12898), (46, 12904), (57, 12946), (61, 12976), (64, 13000), (75, 13045), (84, 13096), (87, 13108), (92, 13126), (110, 13210), (122, 13246), (125, 13258), (132, 13285), (188, 13543), (206, 13648),

Gene: Lucky10\_6 Start: 4488, Stop: 5390, Start Num: 25

Candidate Starts for Lucky10\_6:

(Start: 25 @4488 has 105 MA's), (26, 4494), (40, 4572), (46, 4599), (69, 4713), (73, 4731), (74, 4737), (116, 4932), (163, 5118), (166, 5130), (168, 5142), (178, 5184), (188, 5253), (199, 5310), (205, 5331),

Gene: Lucyedi\_17 Start: 12342, Stop: 13298, Start Num: 6

Candidate Starts for Lucyedi\_17:

(Start: 6 @12342 has 512 MA's), (29, 12402), (45, 12492), (46, 12498), (57, 12540), (61, 12570), (64, 12594), (75, 12639), (84, 12690), (92, 12720), (101, 12774), (122, 12840), (206, 13242),

Gene: LugYA\_19 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for LugYA\_19:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: LunarLander\_15 Start: 11312, Stop: 12316, Start Num: 6

Candidate Starts for LunarLander\_15:

(Start: 6 @11312 has 512 MA's), (42, 11456), (44, 11465), (51, 11507), (54, 11522), (76, 11642), (80, 11663), (94, 11738), (108, 11798), (134, 11900), (154, 11984), (160, 12014), (180, 12104), (187,

12155), (188, 12161), (197, 12209),

Gene: Lunsford\_16 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Lunsford\_16:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (47, 11650), (61, 11707), (64, 11731), (84, 11827), (92, 11857), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Lutum\_7 Start: 4897, Stop: 5835, Start Num: 25

Candidate Starts for Lutum\_7:

(Start: 25 @4897 has 105 MA's), (33, 4939), (34, 4942), (52, 5032), (71, 5134), (85, 5206), (86, 5209), (131, 5398), (166, 5551), (168, 5563), (178, 5626), (186, 5680), (209, 5785), (212, 5806),

Gene: MA5\_15 Start: 10708, Stop: 11679, Start Num: 8

Candidate Starts for MA5\_15:

(Start: 8 @10708 has 150 MA's), (46, 10849), (70, 10969), (79, 11008), (84, 11041), (110, 11161), (141, 11278), (154, 11332), (170, 11413), (178, 11440), (188, 11506), (194, 11551), (195, 11557), (198, 11590), (207, 11626),

Gene: MAnor\_8 Start: 5091, Stop: 6050, Start Num: 8

Candidate Starts for MAnor\_8:

(Start: 8 @5091 has 150 MA's), (Start: 25 @5142 has 105 MA's), (33, 5181), (67, 5358), (77, 5400), (79, 5409), (89, 5454), (107, 5538), (132, 5634), (144, 5691), (156, 5745), (164, 5781), (209, 5994), (211, 6012),

Gene: MEAK\_6 Start: 4640, Stop: 5587, Start Num: 24

Candidate Starts for MEAK\_6:

(Start: 23 @4637 has 3 MA's), (Start: 24 @4640 has 42 MA's), (33, 4688), (40, 4730), (48, 4772), (53, 4784), (72, 4886), (79, 4916), (84, 4949), (133, 5153), (138, 5177), (149, 5213), (153, 5249), (158, 5276), (172, 5336), (181, 5366), (200, 5480), (206, 5507), (213, 5540),

Gene: MK4\_15 Start: 10980, Stop: 11972, Start Num: 8

Candidate Starts for MK4\_15:

(Start: 8 @10980 has 150 MA's), (Start: 18 @10989 has 9 MA's), (46, 11121), (70, 11241), (79, 11280), (84, 11313), (108, 11424), (110, 11433), (141, 11550), (154, 11604), (171, 11688), (188, 11778), (195, 11829), (198, 11862), (207, 11898),

Gene: MOOREtheMARYer\_7 Start: 7192, Stop: 8094, Start Num: 25

Candidate Starts for MOOREtheMARYer\_7:

(Start: 25 @7192 has 105 MA's), (28, 7201), (36, 7249), (66, 7408), (69, 7417), (74, 7441), (83, 7492), (84, 7495), (131, 7681), (136, 7702), (166, 7834), (184, 7933), (188, 7957),

Gene: MPlant7149\_14 Start: 11161, Stop: 12162, Start Num: 6

Candidate Starts for MPlant7149\_14:

(Start: 6 @11161 has 512 MA's), (54, 11371), (76, 11491), (80, 11512), (94, 11587), (108, 11647), (121, 11698), (122, 11701), (129, 11731), (134, 11749), (154, 11833), (188, 12010), (196, 12049), (197, 12055),

Gene: MScarn\_10 Start: 5370, Stop: 6326, Start Num: 8

Candidate Starts for MScarn\_10:

(Start: 8 @5370 has 150 MA's), (12, 5385), (Start: 25 @5412 has 105 MA's), (49, 5538), (53, 5547), (66, 5625), (77, 5670), (79, 5679), (89, 5724), (96, 5760), (113, 5835), (156, 6015), (164, 6051), (165, 6054), (170, 6081), (203, 6237), (209, 6264), (211, 6282),

Gene: MaCh\_16 Start: 12696, Stop: 13685, Start Num: 5

Candidate Starts for MaCh\_16:

(Start: 5 @12696 has 75 MA's), (29, 12756), (33, 12786), (45, 12846), (46, 12852), (57, 12894), (61, 12924), (64, 12948), (75, 12993), (84, 13044), (87, 13056), (92, 13074), (110, 13158), (122, 13194), (125, 13206), (132, 13233), (188, 13491), (206, 13596),

Gene: MaVan\_10 Start: 6293, Stop: 7219, Start Num: 18

Candidate Starts for MaVan\_10:

(Start: 18 @6293 has 9 MA's), (46, 6428), (68, 6539), (77, 6578), (83, 6608), (89, 6632), (96, 6668), (107, 6716), (113, 6743), (130, 6806), (131, 6809), (132, 6812), (156, 6923), (164, 6959), (168, 6977), (170, 6989), (185, 7058), (187, 7073), (202, 7142), (209, 7172),

Gene: Mabel\_16 Start: 12763, Stop: 13752, Start Num: 5

Candidate Starts for Mabel\_16:

(Start: 5 @12763 has 75 MA's), (29, 12823), (33, 12853), (45, 12913), (46, 12919), (57, 12961), (61, 12991), (64, 13015), (75, 13060), (84, 13111), (87, 13123), (92, 13141), (110, 13225), (122, 13261), (125, 13273), (132, 13300), (188, 13558), (206, 13663),

Gene: MadMarie\_17 Start: 11541, Stop: 12533, Start Num: 8

Candidate Starts for MadMarie\_17:

(Start: 8 @11541 has 150 MA's), (46, 11682), (70, 11802), (79, 11841), (84, 11874), (108, 11985), (132, 12072), (154, 12168), (170, 12249), (178, 12276), (181, 12288), (188, 12342), (194, 12387), (195, 12393), (198, 12426), (207, 12462), (211, 12486),

Gene: Magnar\_15 Start: 11308, Stop: 12309, Start Num: 6

Candidate Starts for Magnar\_15:

(Start: 6 @11308 has 512 MA's), (54, 11518), (76, 11638), (80, 11659), (94, 11734), (108, 11794), (129, 11878), (134, 11896), (154, 11980), (188, 12157), (196, 12196), (197, 12202), (214, 12286),

Gene: Magnito\_14 Start: 11060, Stop: 12073, Start Num: 6

Candidate Starts for Magnito\_14:

(Start: 6 @11060 has 512 MA's), (42, 11204), (51, 11255), (54, 11270), (76, 11390), (80, 11411), (94, 11486), (108, 11546), (121, 11597), (134, 11648), (154, 11732), (187, 11903), (188, 11909), (197, 11966), (207, 12017),

Gene: Mainiac\_17 Start: 11532, Stop: 12524, Start Num: 8

Candidate Starts for Mainiac\_17:

(Start: 8 @11532 has 150 MA's), (46, 11673), (70, 11793), (79, 11832), (84, 11865), (108, 11976), (132, 12063), (154, 12159), (170, 12240), (178, 12267), (181, 12279), (188, 12333), (194, 12378), (195, 12384), (198, 12417), (207, 12453), (211, 12477),

Gene: MajorMajor\_15 Start: 11078, Stop: 12034, Start Num: 6

Candidate Starts for MajorMajor\_15:

(Start: 6 @11078 has 512 MA's), (29, 11138), (40, 11207), (46, 11234), (57, 11276), (61, 11306), (64, 11330), (75, 11375), (84, 11426), (118, 11561), (125, 11588), (132, 11615), (143, 11660), (181, 11819), (182, 11837), (188, 11873), (196, 11924),

Gene: Makemake\_15 Start: 12792, Stop: 13802, Start Num: 6

Candidate Starts for Makemake\_15:

(Start: 6 @12792 has 512 MA's), (42, 12936), (51, 12987), (54, 13002), (76, 13122), (80, 13143), (94, 13218), (108, 13278), (121, 13329), (129, 13362), (134, 13380), (154, 13464), (187, 13635), (188, 13641), (197, 13695),



Gene: Malec\_17 Start: 12449, Stop: 13405, Start Num: 6

Candidate Starts for Malec\_17:

(Start: 6 @12449 has 512 MA's), (29, 12509), (40, 12578), (46, 12605), (57, 12647), (61, 12677), (64, 12701), (75, 12746), (84, 12797), (118, 12932), (125, 12959), (132, 12986), (143, 13031), (181, 13190), (182, 13208), (188, 13244), (196, 13295),

Gene: Maliketh\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Maliketh\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Malinsilva\_19 Start: 11531, Stop: 12523, Start Num: 8

Candidate Starts for Malinsilva\_19:

(Start: 8 @11531 has 150 MA's), (46, 11672), (70, 11792), (79, 11831), (84, 11864), (108, 11975), (132, 12062), (154, 12158), (170, 12239), (178, 12266), (181, 12278), (188, 12332), (194, 12377), (195, 12383), (198, 12416), (207, 12452), (211, 12476),

Gene: Malisha\_7 Start: 5938, Stop: 6879, Start Num: 25

Candidate Starts for Malisha\_7:

(Start: 25 @5938 has 105 MA's), (52, 6073), (71, 6175), (86, 6250), (162, 6577), (163, 6583), (166, 6595), (168, 6607), (178, 6670), (184, 6712), (209, 6829), (212, 6850),

Gene: Maminiaina\_17 Start: 12612, Stop: 13571, Start Num: 6

Candidate Starts for Maminiaina\_17:

(Start: 6 @12612 has 512 MA's), (29, 12672), (45, 12762), (46, 12768), (57, 12810), (61, 12840), (64, 12864), (75, 12909), (84, 12960), (92, 12990), (110, 13074), (122, 13113), (125, 13125), (164, 13299), (181, 13356), (196, 13461),

Gene: Manatee\_16 Start: 11592, Stop: 12593, Start Num: 6

Candidate Starts for Manatee\_16:

(Start: 6 @11592 has 512 MA's), (42, 11736), (51, 11787), (54, 11802), (76, 11922), (80, 11943), (94, 12018), (108, 12078), (134, 12180), (154, 12264), (180, 12384), (188, 12441), (196, 12480), (197, 12486), (207, 12537),

Gene: Manu\_18 Start: 11610, Stop: 12608, Start Num: 8

Candidate Starts for Manu\_18:

(Start: 8 @11610 has 150 MA's), (46, 11751), (70, 11871), (79, 11910), (84, 11943), (132, 12141), (150, 12210), (154, 12237), (170, 12318), (188, 12411), (194, 12456), (195, 12462), (198, 12495), (207, 12531), (211, 12555),

Gene: MarQuardt\_17 Start: 11540, Stop: 12532, Start Num: 8

Candidate Starts for MarQuardt\_17:

(Start: 8 @11540 has 150 MA's), (46, 11681), (70, 11801), (79, 11840), (84, 11873), (108, 11984), (132, 12071), (154, 12167), (170, 12248), (178, 12275), (181, 12287), (188, 12341), (194, 12386), (195, 12392), (198, 12425), (207, 12461), (211, 12485),

Gene: Marcell\_15 Start: 11521, Stop: 12540, Start Num: 6

Candidate Starts for Marcell\_15:

(Start: 6 @11521 has 512 MA's), (51, 11716), (54, 11731), (57, 11746), (68, 11818), (76, 11851), (80, 11872), (94, 11947), (108, 12007), (154, 12193), (187, 12364), (188, 12370), (197, 12427), (204, 12463),

Gene: Marchesa\_15 Start: 11154, Stop: 12128, Start Num: 8

Candidate Starts for Marchesa\_15:

(Start: 8 @11154 has 150 MA's), (46, 11295), (70, 11415), (79, 11454), (84, 11487), (141, 11724), (150, 11751), (154, 11778), (171, 11862), (188, 11952), (194, 11997), (195, 12003), (198, 12036), (207, 12072),

Gene: Marchy\_14 Start: 11148, Stop: 12152, Start Num: 6

Candidate Starts for Marchy\_14:

(Start: 6 @11148 has 512 MA's), (42, 11292), (44, 11301), (51, 11343), (54, 11358), (76, 11478), (80, 11499), (94, 11574), (108, 11634), (134, 11736), (154, 11820), (160, 11850), (180, 11940), (187, 11991), (188, 11997), (197, 12045),

Gene: Marco3\_15 Start: 11792, Stop: 12790, Start Num: 6

Candidate Starts for Marco3\_15:

(Start: 6 @11792 has 512 MA's), (42, 11936), (51, 11987), (54, 12002), (76, 12122), (80, 12143), (94, 12218), (108, 12278), (134, 12380), (154, 12464), (180, 12584), (188, 12641), (196, 12680), (197, 12686),

Gene: Margaret\_11 Start: 6145, Stop: 7074, Start Num: 16

Candidate Starts for Margaret\_11:

(Start: 16 @6145 has 7 MA's), (33, 6211), (53, 6307), (58, 6334), (77, 6430), (79, 6439), (80, 6445), (89, 6484), (96, 6520), (107, 6568), (156, 6775), (164, 6811), (203, 6997),

Gene: Marge\_16 Start: 12044, Stop: 13048, Start Num: 6

Candidate Starts for Marge\_16:

(Start: 6 @12044 has 512 MA's), (42, 12188), (44, 12197), (51, 12239), (54, 12254), (76, 12374), (80, 12395), (94, 12470), (108, 12530), (129, 12614), (134, 12632), (154, 12716), (160, 12746), (180, 12836), (187, 12887), (188, 12893), (197, 12941), (214, 13025),

Gene: Margo\_16 Start: 11659, Stop: 12651, Start Num: 8

Candidate Starts for Margo\_16:

(Start: 8 @11659 has 150 MA's), (46, 11800), (79, 11959), (84, 11992), (130, 12184), (141, 12232), (150, 12259), (154, 12286), (170, 12367), (175, 12382), (181, 12406), (188, 12460), (194, 12505), (195, 12511), (198, 12544), (207, 12580), (216, 12622),

Gene: Marie\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for Marie\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: Marius\_18 Start: 11610, Stop: 12608, Start Num: 8

Candidate Starts for Marius\_18:

(Start: 8 @11610 has 150 MA's), (46, 11751), (70, 11871), (79, 11910), (84, 11943), (132, 12141), (150, 12210), (154, 12237), (170, 12318), (188, 12411), (194, 12456), (195, 12462), (198, 12495), (207, 12531), (211, 12555),

Gene: Marmie\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Marmie\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Maroc7\_14 Start: 11333, Stop: 12334, Start Num: 6

Candidate Starts for Maroc7\_14:

(Start: 6 @11333 has 512 MA's), (54, 11543), (76, 11663), (80, 11684), (94, 11759), (108, 11819), (129, 11903), (134, 11921), (154, 12005), (188, 12182), (196, 12221), (197, 12227), (214, 12311),

Gene: Marsha\_15 Start: 11777, Stop: 12796, Start Num: 6

Candidate Starts for Marsha\_15:

(Start: 6 @11777 has 512 MA's), (51, 11972), (54, 11987), (68, 12074), (76, 12107), (80, 12128), (94, 12203), (108, 12263), (154, 12449), (187, 12620), (188, 12626), (197, 12683), (204, 12719),

Gene: MaryBeth\_15 Start: 11755, Stop: 12756, Start Num: 6

Candidate Starts for MaryBeth\_15:

(Start: 6 @11755 has 512 MA's), (42, 11899), (51, 11950), (54, 11965), (76, 12085), (80, 12106), (94, 12181), (108, 12241), (134, 12343), (154, 12427), (180, 12547), (188, 12604), (196, 12643), (197, 12649), (207, 12700),

Gene: MarysWell\_12 Start: 10767, Stop: 11699, Start Num: 19

Candidate Starts for MarysWell\_12:

(Start: 19 @10767 has 50 MA's), (46, 10896), (57, 10938), (61, 10968), (79, 11055), (84, 11088), (154, 11352), (159, 11376), (171, 11436), (181, 11475), (183, 11496), (189, 11544), (198, 11601), (207, 11637), (211, 11661),

Gene: Maverick\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Maverick\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Maxo\_15 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for Maxo\_15:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (61, 11708), (64, 11732), (84, 11828), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210, 12380),

Gene: Mayonnaise\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Mayonnaise\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Mayweather\_9 Start: 5712, Stop: 6671, Start Num: 8

Candidate Starts for Mayweather\_9:

(Start: 8 @5712 has 150 MA's), (Start: 25 @5763 has 105 MA's), (33, 5802), (67, 5979), (77, 6021), (79, 6030), (89, 6075), (107, 6159), (132, 6255), (144, 6312), (156, 6366), (164, 6402), (209, 6615), (211, 6633),

Gene: Mazhar510\_15 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for Mazhar510\_15:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (61, 11708), (64, 11732), (84, 11828), (92, 11858), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210, 12380),

Gene: McFly\_19 Start: 12240, Stop: 13211, Start Num: 5

Candidate Starts for McFly\_19:

(Start: 5 @12240 has 75 MA's), (29, 12300), (46, 12396), (57, 12438), (61, 12468), (64, 12492), (75, 12537), (84, 12588), (87, 12600), (92, 12618), (122, 12723), (164, 12909), (211, 13182),

Gene: McGuire\_16 Start: 11638, Stop: 12636, Start Num: 6

Candidate Starts for McGuire\_16:

(Start: 6 @11638 has 512 MA's), (42, 11782), (51, 11833), (54, 11848), (76, 11968), (80, 11989), (94, 12064), (108, 12124), (129, 12208), (134, 12226), (154, 12310), (180, 12430), (188, 12487), (196, 12526), (197, 12532),

Gene: McSinger\_16 Start: 11719, Stop: 12735, Start Num: 6

Candidate Starts for McSinger\_16:

(Start: 6 @11719 has 512 MA's), (51, 11914), (54, 11929), (57, 11944), (68, 12016), (76, 12049), (80, 12070), (94, 12145), (108, 12205), (154, 12391), (187, 12562), (188, 12568), (197, 12625),

Gene: Medusa\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Medusa\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: MeeZee\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for MeeZee\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Melvin\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Melvin\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Mercurio\_8 Start: 6915, Stop: 7841, Start Num: 25

Candidate Starts for Mercurio\_8:

(Start: 25 @6915 has 105 MA's), (35, 6972), (36, 6975), (38, 6987), (40, 7002), (59, 7086), (66, 7134), (74, 7167), (83, 7218), (114, 7356), (137, 7455), (159, 7548), (168, 7590), (181, 7650), (211, 7815), (218, 7833),

Gene: MetalQZJ\_15 Start: 11755, Stop: 12756, Start Num: 6

Candidate Starts for MetalQZJ\_15:

(Start: 6 @11755 has 512 MA's), (42, 11899), (51, 11950), (54, 11965), (76, 12085), (80, 12106), (94, 12181), (108, 12241), (134, 12343), (154, 12427), (180, 12547), (188, 12604), (196, 12643), (197, 12649), (207, 12700),

Gene: Methuselah\_17 Start: 11622, Stop: 12614, Start Num: 8

Candidate Starts for Methuselah\_17:

(Start: 8 @11622 has 150 MA's), (46, 11763), (70, 11883), (79, 11922), (84, 11955), (108, 12066), (132, 12153), (154, 12249), (170, 12330), (178, 12357), (181, 12369), (188, 12423), (194, 12468), (195, 12474), (198, 12507), (207, 12543), (211, 12567),

Gene: Micasa\_13 Start: 10768, Stop: 11700, Start Num: 19

Candidate Starts for Micasa\_13:

(Start: 19 @10768 has 50 MA's), (46, 10897), (57, 10939), (61, 10969), (79, 11056), (84, 11089), (154, 11353), (159, 11377), (171, 11437), (181, 11476), (183, 11497), (189, 11545), (198, 11602), (207, 11638), (211, 11662),

Gene: Michley\_15 Start: 11502, Stop: 12503, Start Num: 6

Candidate Starts for Michley\_15:

(Start: 6 @11502 has 512 MA's), (42, 11646), (51, 11697), (54, 11712), (76, 11832), (80, 11853), (94, 11928), (108, 11988), (129, 12072), (134, 12090), (154, 12174), (180, 12294), (188, 12351), (196, 12390), (197, 12396), (214, 12480),

Gene: Microwolf\_17 Start: 11540, Stop: 12532, Start Num: 8

Candidate Starts for Microwolf\_17:

(Start: 8 @11540 has 150 MA's), (46, 11681), (70, 11801), (79, 11840), (84, 11873), (108, 11984), (132, 12071), (154, 12167), (170, 12248), (178, 12275), (181, 12287), (188, 12341), (194, 12386), (195, 12392), (198, 12425), (207, 12461), (211, 12485),

Gene: MiculUcigas\_16 Start: 12213, Stop: 13169, Start Num: 6

Candidate Starts for MiculUcigas\_16:

(Start: 6 @12213 has 512 MA's), (29, 12273), (40, 12342), (46, 12369), (57, 12411), (61, 12441), (64, 12465), (75, 12510), (84, 12561), (87, 12573), (118, 12696), (125, 12723), (132, 12750), (143, 12795), (181, 12954), (182, 12972), (188, 13008), (196, 13059),

Gene: Midas2\_13 Start: 10767, Stop: 11699, Start Num: 19

Candidate Starts for Midas2\_13:

(Start: 19 @10767 has 50 MA's), (46, 10896), (57, 10938), (61, 10968), (79, 11055), (84, 11088), (154, 11352), (159, 11376), (171, 11436), (181, 11475), (183, 11496), (189, 11544), (198, 11601), (207, 11637), (211, 11661),

Gene: Miko\_19 Start: 13819, Stop: 14766, Start Num: 11

Candidate Starts for Miko\_19:

(10, 13813), (Start: 11 @13819 has 9 MA's), (29, 13870), (46, 13966), (47, 13981), (57, 14008), (61, 14038), (68, 14077), (84, 14158), (107, 14260), (139, 14377), (154, 14443), (179, 14542), (181, 14551), (188, 14605), (196, 14656),

Gene: Milcery\_13 Start: 10804, Stop: 11736, Start Num: 19

Candidate Starts for Milcery\_13:

(Start: 19 @10804 has 50 MA's), (46, 10933), (57, 10975), (61, 11005), (79, 11092), (84, 11125), (154, 11389), (159, 11413), (171, 11473), (181, 11512), (183, 11533), (189, 11581), (198, 11638), (207, 11674), (211, 11698),

Gene: Millski\_15 Start: 11482, Stop: 12414, Start Num: 6

Candidate Starts for Millski\_15:

(Start: 6 @11482 has 512 MA's), (29, 11542), (46, 11638), (61, 11710), (64, 11734), (84, 11830), (101, 11914), (146, 12058), (154, 12100), (188, 12262), (191, 12295), (196, 12313), (203, 12349), (210, 12382),

Gene: MinecraftSteve\_19 Start: 11417, Stop: 12367, Start Num: 6

Candidate Starts for MinecraftSteve\_19:

(Start: 6 @11417 has 512 MA's), (29, 11477), (46, 11573), (61, 11645), (64, 11669), (75, 11714), (84, 11765), (92, 11795), (183, 12173), (203, 12293), (211, 12338),

Gene: Miramae\_15 Start: 11439, Stop: 12371, Start Num: 6

Candidate Starts for Miramae\_15:

(Start: 6 @11439 has 512 MA's), (29, 11499), (46, 11595), (47, 11610), (61, 11667), (64, 11691), (84, 11787), (101, 11871), (146, 12015), (154, 12057), (191, 12252), (196, 12270), (210, 12339),

Gene: Misomonster\_19 Start: 11622, Stop: 12614, Start Num: 8

Candidate Starts for Misomonster\_19:

(Start: 8 @11622 has 150 MA's), (46, 11763), (70, 11883), (79, 11922), (84, 11955), (108, 12066), (132, 12153), (154, 12249), (170, 12330), (178, 12357), (181, 12369), (188, 12423), (194, 12468), (195, 12474), (198, 12507), (207, 12543), (211, 12567),

Gene: MissWhite\_16 Start: 11203, Stop: 12207, Start Num: 6

Candidate Starts for MissWhite\_16:

(Start: 6 @11203 has 512 MA's), (29, 11263), (46, 11359), (57, 11401), (61, 11431), (64, 11455), (75, 11500), (84, 11551), (92, 11581), (131, 11722), (154, 11824), (158, 11845), (176, 11935), (181, 11962), (188, 12016), (216, 12166),

Gene: Mkhuseli\_16 Start: 11665, Stop: 12669, Start Num: 6

Candidate Starts for Mkhuseli\_16:

(Start: 6 @11665 has 512 MA's), (42, 11809), (44, 11818), (51, 11860), (54, 11875), (76, 11995), (80, 12016), (94, 12091), (108, 12151), (129, 12235), (134, 12253), (154, 12337), (187, 12508), (188, 12514), (197, 12562),

Gene: Molly\_16 Start: 11363, Stop: 12364, Start Num: 6

Candidate Starts for Molly\_16:

(Start: 6 @11363 has 512 MA's), (54, 11573), (76, 11693), (80, 11714), (94, 11789), (108, 11849), (129, 11933), (134, 11951), (154, 12035), (188, 12212), (196, 12251), (197, 12257), (214, 12341),

Gene: Monet\_17 Start: 12561, Stop: 13577, Start Num: 6

Candidate Starts for Monet\_17:

(Start: 6 @12561 has 512 MA's), (51, 12756), (54, 12771), (76, 12891), (80, 12912), (94, 12987), (108, 13047), (154, 13233), (187, 13404), (188, 13410), (197, 13467), (204, 13503),

Gene: MoneyMay\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for MoneyMay\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: Moose\_14 Start: 11595, Stop: 12593, Start Num: 6

Candidate Starts for Moose\_14:

(Start: 6 @11595 has 512 MA's), (42, 11739), (51, 11790), (54, 11805), (76, 11925), (80, 11946), (94, 12021), (108, 12081), (134, 12183), (154, 12267), (180, 12387), (188, 12444), (196, 12483), (197, 12489),

Gene: Morkie\_6 Start: 4456, Stop: 5358, Start Num: 25

Candidate Starts for Morkie\_6:

(Start: 25 @4456 has 105 MA's), (35, 4513), (46, 4570), (66, 4675), (74, 4708), (114, 4897), (116, 4903), (157, 5074), (177, 5155), (209, 5314),

Gene: Morpher26\_15 Start: 11491, Stop: 12423, Start Num: 6

Candidate Starts for Morpher26\_15:

(Start: 6 @11491 has 512 MA's), (29, 11551), (46, 11647), (47, 11662), (61, 11719), (64, 11743), (84, 11839), (101, 11923), (146, 12067), (154, 12109), (188, 12271), (191, 12304), (203, 12358), (210, 12391),

Gene: Morrow\_15 Start: 11482, Stop: 12414, Start Num: 6

Candidate Starts for Morrow\_15:

(Start: 6 @11482 has 512 MA's), (29, 11542), (46, 11638), (61, 11710), (64, 11734), (84, 11830), (101, 11914), (146, 12058), (154, 12100), (188, 12262), (191, 12295), (196, 12313), (203, 12349), (210, 12382),

Gene: Mowgli\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Mowgli\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Moyashi\_6 Start: 4638, Stop: 5609, Start Num: 24

Candidate Starts for Moyashi\_6:

(Start: 23 @4635 has 3 MA's), (Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (72, 4884), (79, 4914), (84, 4947), (108, 5058), (133, 5151), (138, 5175), (149, 5211), (153, 5247), (158, 5274), (172, 5334), (200, 5478), (205, 5496), (213, 5538),

Gene: MrAK\_6 Start: 4647, Stop: 5618, Start Num: 24

Candidate Starts for MrAK\_6:

(Start: 24 @4647 has 42 MA's), (33, 4695), (40, 4737), (53, 4791), (72, 4893), (79, 4923), (84, 4956), (94, 5004), (108, 5067), (133, 5160), (138, 5184), (149, 5220), (153, 5256), (172, 5343), (200, 5487), (205, 5505), (206, 5514), (213, 5547),

Gene: MrGordo\_15 Start: 11315, Stop: 12316, Start Num: 6

Candidate Starts for MrGordo\_15:

(Start: 6 @11315 has 512 MA's), (42, 11459), (51, 11510), (54, 11525), (76, 11645), (80, 11666), (94, 11741), (108, 11801), (134, 11903), (154, 11987), (180, 12107), (188, 12164), (196, 12203), (197, 12209), (214, 12293),

Gene: MrSmee\_6 Start: 4404, Stop: 5294, Start Num: 25

Candidate Starts for MrSmee\_6:

(Start: 25 @4404 has 105 MA's), (46, 4515), (106, 4806), (110, 4821), (135, 4911), (148, 4962), (168, 5058), (181, 5106), (214, 5280),

Gene: Mryolo\_14 Start: 11346, Stop: 12350, Start Num: 6

Candidate Starts for Mryolo\_14:

(Start: 6 @11346 has 512 MA's), (42, 11490), (44, 11499), (51, 11541), (54, 11556), (76, 11676), (80, 11697), (94, 11772), (108, 11832), (134, 11934), (154, 12018), (160, 12048), (180, 12138), (187, 12189), (188, 12195), (197, 12243),

Gene: MuchMore\_19 Start: 11531, Stop: 12523, Start Num: 8

Candidate Starts for MuchMore\_19:

(Start: 8 @11531 has 150 MA's), (46, 11672), (70, 11792), (79, 11831), (84, 11864), (108, 11975), (132, 12062), (154, 12158), (170, 12239), (178, 12266), (181, 12278), (188, 12332), (194, 12377), (195, 12383), (198, 12416), (207, 12452), (211, 12476),

Gene: Mulciber\_16 Start: 12699, Stop: 13688, Start Num: 5

Candidate Starts for Mulciber\_16:

(Start: 5 @12699 has 75 MA's), (29, 12759), (33, 12789), (45, 12849), (46, 12855), (57, 12897), (61, 12927), (64, 12951), (75, 12996), (84, 13047), (87, 13059), (92, 13077), (110, 13161), (122, 13197), (125, 13209), (132, 13236), (188, 13494), (206, 13599),

Gene: Mule\_15 Start: 11631, Stop: 12638, Start Num: 6

Candidate Starts for Mule\_15:

(Start: 6 @11631 has 512 MA's), (42, 11775), (44, 11784), (51, 11826), (54, 11841), (76, 11961), (80, 11982), (94, 12057), (108, 12117), (134, 12219), (154, 12303), (160, 12333), (187, 12474), (188, 12480), (197, 12528),

Gene: Munch\_16 Start: 12699, Stop: 13688, Start Num: 5

Candidate Starts for Munch\_16:

(Start: 5 @12699 has 75 MA's), (29, 12759), (33, 12789), (45, 12849), (46, 12855), (57, 12897), (61, 12927), (64, 12951), (75, 12996), (84, 13047), (87, 13059), (92, 13077), (110, 13161), (122, 13197), (125, 13209), (132, 13236), (188, 13494), (206, 13599),

Gene: Mundrea\_15 Start: 11442, Stop: 12374, Start Num: 6

Candidate Starts for Mundrea\_15:

(Start: 6 @11442 has 512 MA's), (29, 11502), (46, 11598), (47, 11613), (61, 11670), (64, 11694), (84, 11790), (92, 11820), (101, 11874), (146, 12018), (154, 12060), (188, 12222), (196, 12273), (203, 12309), (210, 12342),

Gene: MunkgeeRoachy\_8 Start: 5428, Stop: 6399, Start Num: 8

Candidate Starts for MunkgeeRoachy\_8:

(Start: 8 @5428 has 150 MA's), (12, 5443), (Start: 25 @5479 has 105 MA's), (49, 5608), (89, 5794), (96, 5830), (121, 5932), (156, 6085), (170, 6151), (203, 6307), (211, 6352),

Gene: Museum\_17 Start: 11649, Stop: 12650, Start Num: 6

Candidate Starts for Museum\_17:

(Start: 6 @11649 has 512 MA's), (54, 11859), (76, 11979), (80, 12000), (94, 12075), (108, 12135), (134, 12237), (154, 12321), (180, 12441), (188, 12498), (196, 12540), (197, 12546),

Gene: MyraDee\_13 Start: 9598, Stop: 10551, Start Num: 19

Candidate Starts for MyraDee\_13:

(Start: 19 @9598 has 50 MA's), (46, 9727), (79, 9886), (84, 9919), (95, 9970), (122, 10075), (154, 10210), (181, 10330), (188, 10384), (196, 10435), (198, 10456),

Gene: Myxus\_17 Start: 12848, Stop: 13807, Start Num: 6

Candidate Starts for Myxus\_17:

(Start: 6 @12848 has 512 MA's), (29, 12908), (45, 12998), (46, 13004), (57, 13046), (61, 13076), (64, 13100), (75, 13145), (84, 13196), (87, 13208), (92, 13226), (122, 13349), (125, 13361), (181, 13592), (196, 13697),

Gene: NEHalo\_15 Start: 11157, Stop: 12161, Start Num: 6

Candidate Starts for NEHalo\_15:

(Start: 6 @11157 has 512 MA's), (42, 11301), (51, 11352), (54, 11367), (76, 11487), (80, 11508), (94, 11583), (108, 11643), (134, 11745), (154, 11829), (180, 11949), (188, 12006), (196, 12045), (197, 12051),

Gene: NaSiaTalie\_16 Start: 12210, Stop: 13166, Start Num: 6

Candidate Starts for NaSiaTalie\_16:

(Start: 6 @12210 has 512 MA's), (29, 12270), (40, 12339), (46, 12366), (57, 12408), (61, 12438), (64, 12462), (75, 12507), (84, 12558), (87, 12570), (118, 12693), (125, 12720), (132, 12747), (143, 12792), (181, 12951), (182, 12969), (188, 13005), (196, 13056),

Gene: Naca\_13 Start: 10712, Stop: 11653, Start Num: 19

Candidate Starts for Naca\_13:



(Start: 19 @10712 has 50 MA's), (46, 10841), (61, 10913), (79, 11000), (84, 11033), (92, 11063), (125, 11174), (128, 11189), (154, 11297), (159, 11321), (171, 11381), (181, 11420), (183, 11441), (189, 11489), (198, 11546), (207, 11582), (211, 11606),

Gene: Naiad\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Naiad\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Naira\_16 Start: 12897, Stop: 13913, Start Num: 6

Candidate Starts for Naira\_16:

(Start: 6 @12897 has 512 MA's), (51, 13092), (54, 13107), (57, 13122), (68, 13194), (76, 13227), (80, 13248), (94, 13323), (108, 13383), (154, 13569), (187, 13740), (188, 13746), (197, 13803),

Gene: Naji\_19 Start: 12087, Stop: 13043, Start Num: 5

Candidate Starts for Naji\_19:

(Start: 5 @12087 has 75 MA's), (29, 12147), (45, 12237), (46, 12243), (57, 12285), (61, 12315), (64, 12339), (75, 12384), (84, 12435), (87, 12447), (92, 12465), (95, 12486), (122, 12573), (125, 12585), (127, 12591), (132, 12612), (171, 12792), (181, 12816), (188, 12870), (215, 13017),

Gene: Nancinator\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Nancinator\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Natosaleda\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Natosaleda\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: NearlyHeadless\_13 Start: 10396, Stop: 11346, Start Num: 19

Candidate Starts for NearlyHeadless\_13:

(Start: 19 @10396 has 50 MA's), (46, 10525), (57, 10567), (79, 10684), (84, 10717), (98, 10792), (127, 10876), (150, 10966), (154, 10993), (161, 11026), (171, 11077), (181, 11116), (193, 11209), (198, 11242), (207, 11278),

Gene: Nebs\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Nebs\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Nebulosus\_18 Start: 11295, Stop: 12245, Start Num: 6

Candidate Starts for Nebulosus\_18:

(Start: 6 @11295 has 512 MA's), (29, 11355), (46, 11451), (61, 11523), (64, 11547), (75, 11592), (84, 11643), (92, 11673), (183, 12051), (203, 12171), (211, 12216),

Gene: Nedarya\_17 Start: 11873, Stop: 12826, Start Num: 6

Candidate Starts for Nedarya\_17:

(Start: 6 @11873 has 512 MA's), (29, 11933), (46, 12029), (61, 12101), (64, 12125), (75, 12170), (84, 12221), (92, 12251), (181, 12608), (183, 12629), (210, 12782),

Gene: Neeharika16\_19 Start: 12230, Stop: 13201, Start Num: 5

Candidate Starts for Neeharika16\_19:

(Start: 5 @12230 has 75 MA's), (29, 12290), (46, 12386), (57, 12428), (61, 12458), (64, 12482), (75, 12527), (84, 12578), (87, 12590), (92, 12608), (122, 12713), (164, 12899), (211, 13172),

Gene: Nemo27\_15 Start: 11478, Stop: 12410, Start Num: 6

Candidate Starts for Nemo27\_15:

(Start: 6 @11478 has 512 MA's), (29, 11538), (46, 11634), (61, 11706), (64, 11730), (84, 11826), (101, 11910), (146, 12054), (154, 12096), (188, 12258), (191, 12291), (196, 12309), (203, 12345), (210, 12378),

Gene: Nerujay\_16 Start: 12052, Stop: 13062, Start Num: 6

Candidate Starts for Nerujay\_16:

(Start: 6 @12052 has 512 MA's), (42, 12196), (51, 12247), (54, 12262), (76, 12382), (80, 12403), (94, 12478), (108, 12538), (121, 12589), (129, 12622), (134, 12640), (154, 12724), (187, 12895), (188, 12901), (197, 12955),

Gene: Neuville\_8 Start: 5499, Stop: 6410, Start Num: 20

Candidate Starts for Neuville\_8:

(Start: 20 @5499 has 2 MA's), (55, 5655), (64, 5721), (68, 5736), (82, 5808), (95, 5868), (132, 5994), (143, 6039), (146, 6048), (185, 6246), (188, 6267), (208, 6366), (211, 6387),

Gene: Newrala\_19 Start: 12230, Stop: 13201, Start Num: 5

Candidate Starts for Newrala\_19:

(Start: 5 @12230 has 75 MA's), (29, 12290), (46, 12386), (57, 12428), (61, 12458), (64, 12482), (75, 12527), (84, 12578), (87, 12590), (92, 12608), (122, 12713), (164, 12899), (211, 13172),

Gene: Nhonho\_15 Start: 11502, Stop: 12521, Start Num: 6

Candidate Starts for Nhonho\_15:

(Start: 6 @11502 has 512 MA's), (51, 11697), (54, 11712), (76, 11832), (80, 11853), (94, 11928), (108, 11988), (154, 12174), (187, 12345), (188, 12351), (197, 12408), (204, 12444),

Gene: Nibbles\_10 Start: 6293, Stop: 7219, Start Num: 18

Candidate Starts for Nibbles\_10:

(Start: 18 @6293 has 9 MA's), (46, 6428), (68, 6539), (77, 6578), (83, 6608), (89, 6632), (96, 6668), (107, 6716), (113, 6743), (130, 6806), (131, 6809), (132, 6812), (156, 6923), (164, 6959), (168, 6977), (170, 6989), (185, 7058), (187, 7073), (202, 7142), (209, 7172),

Gene: NicoleTera\_20 Start: 13919, Stop: 14875, Start Num: 6

Candidate Starts for NicoleTera\_20:

(Start: 6 @13919 has 512 MA's), (29, 13979), (46, 14075), (57, 14117), (61, 14147), (64, 14171), (75, 14216), (84, 14267), (125, 14429), (132, 14456), (143, 14501), (181, 14660), (182, 14678), (188, 14714), (196, 14765),

Gene: Nina\_9 Start: 6414, Stop: 7385, Start Num: 8

Candidate Starts for Nina\_9:

(Start: 8 @6414 has 150 MA's), (12, 6429), (Start: 25 @6465 has 105 MA's), (49, 6594), (89, 6780), (96, 6816), (114, 6894), (121, 6918), (156, 7071), (170, 7137), (203, 7293), (211, 7338),

Gene: Niza\_17 Start: 12668, Stop: 13666, Start Num: 6

Candidate Starts for Niza\_17:

(Start: 6 @12668 has 512 MA's), (42, 12812), (51, 12863), (54, 12878), (76, 12998), (80, 13019), (94, 13094), (108, 13154), (134, 13256), (154, 13340), (180, 13460), (188, 13517), (196, 13556), (197, 13562),

Gene: Nodigi\_10 Start: 6436, Stop: 7365, Start Num: 16

Candidate Starts for Nodigi\_10:

(Start: 16 @6436 has 7 MA's), (33, 6502), (42, 6553), (49, 6589), (53, 6598), (77, 6721), (79, 6730), (80, 6736), (89, 6775), (107, 6859), (125, 6928), (156, 7066), (164, 7102), (165, 7105), (203, 7288), (211, 7333), (212, 7336),

Gene: Noella\_16 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for Noella\_16:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Noelle\_15 Start: 11545, Stop: 12477, Start Num: 6

Candidate Starts for Noelle\_15:

(Start: 6 @11545 has 512 MA's), (29, 11605), (46, 11701), (47, 11716), (61, 11773), (64, 11797), (84, 11893), (92, 11923), (101, 11977), (146, 12121), (154, 12163), (188, 12325), (196, 12376), (210, 12445),

Gene: Norbert\_15 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for Norbert\_15:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: NorthStar\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for NorthStar\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Norz\_17 Start: 12304, Stop: 13302, Start Num: 6

Candidate Starts for Norz\_17:

(Start: 6 @12304 has 512 MA's), (42, 12448), (51, 12499), (54, 12514), (76, 12634), (80, 12655), (94, 12730), (108, 12790), (134, 12892), (154, 12976), (180, 13096), (188, 13153), (196, 13192), (197, 13198),

Gene: NotAPhaseMom\_15 Start: 11483, Stop: 12415, Start Num: 6

Candidate Starts for NotAPhaseMom\_15:

(Start: 6 @11483 has 512 MA's), (29, 11543), (46, 11639), (61, 11711), (64, 11735), (84, 11831), (101, 11915), (146, 12059), (154, 12101), (188, 12263), (191, 12296), (196, 12314), (203, 12350), (210, 12383),

Gene: NothingSpecial\_18 Start: 14179, Stop: 15132, Start Num: 6

Candidate Starts for NothingSpecial\_18:

(Start: 6 @14179 has 512 MA's), (29, 14239), (40, 14308), (46, 14335), (57, 14377), (61, 14407), (64, 14431), (75, 14476), (84, 14527), (92, 14557), (132, 14716), (143, 14761), (182, 14938), (188, 14974),

Gene: Nyxis\_15 Start: 11425, Stop: 12357, Start Num: 6

Candidate Starts for Nyxis\_15:

(Start: 6 @11425 has 512 MA's), (29, 11485), (46, 11581), (61, 11653), (64, 11677), (84, 11773), (101, 11857), (146, 12001), (154, 12043), (183, 12172), (188, 12205), (191, 12238), (196, 12256), (203, 12292), (210, 12325),

Gene: ODay\_7 Start: 4919, Stop: 5860, Start Num: 25

Candidate Starts for ODay\_7:

(Start: 25 @4919 has 105 MA's), (52, 5054), (66, 5135), (71, 5156), (86, 5231), (114, 5357), (162, 5558), (166, 5576), (173, 5609), (184, 5693), (212, 5831),

Gene: OKCentral2016\_15 Start: 10955, Stop: 11890, Start Num: 6

Candidate Starts for OKCentral2016\_15:

(Start: 6 @10955 has 512 MA's), (29, 11015), (46, 11111), (47, 11126), (57, 11153), (61, 11183), (64, 11207), (65, 11213), (75, 11252), (84, 11303), (92, 11333), (117, 11426), (141, 11513), (154, 11567), (158, 11588), (183, 11696), (188, 11729), (196, 11780), (203, 11816),

Gene: OKaNui\_15 Start: 11245, Stop: 12177, Start Num: 6

Candidate Starts for OKaNui\_15:

(Start: 6 @11245 has 512 MA's), (29, 11305), (46, 11401), (47, 11416), (61, 11473), (64, 11497), (84, 11593), (92, 11623), (101, 11677), (146, 11821), (154, 11863), (188, 12025), (191, 12058), (196, 12076), (203, 12112), (210, 12145),

Gene: Obama12\_15 Start: 11459, Stop: 12391, Start Num: 6

Candidate Starts for Obama12\_15:

(Start: 6 @11459 has 512 MA's), (29, 11519), (46, 11615), (47, 11630), (61, 11687), (64, 11711), (84, 11807), (92, 11837), (101, 11891), (146, 12035), (154, 12077), (188, 12239), (191, 12272), (196, 12290), (203, 12326), (210, 12359),

Gene: OctaviousRex\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for OctaviousRex\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Odin\_15 Start: 10976, Stop: 11932, Start Num: 6

Candidate Starts for Odin\_15:

(Start: 6 @10976 has 512 MA's), (29, 11036), (45, 11126), (46, 11132), (57, 11174), (61, 11204), (64, 11228), (75, 11273), (84, 11324), (87, 11336), (92, 11354), (132, 11513), (143, 11558), (161, 11642), (181, 11717),

Gene: Ogotogo\_8 Start: 5135, Stop: 6073, Start Num: 25

Candidate Starts for Ogotogo\_8:

(Start: 25 @5135 has 105 MA's), (28, 5144), (34, 5180), (52, 5270), (66, 5351), (71, 5372), (86, 5447), (113, 5570), (162, 5774), (166, 5792), (173, 5825), (184, 5909), (205, 6008), (212, 6047),

Gene: Ohfah\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Ohfah\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (132, 12001), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Ohno789\_15 Start: 11447, Stop: 12454, Start Num: 6

Candidate Starts for Ohno789\_15:

(Start: 6 @11447 has 512 MA's), (54, 11657), (76, 11777), (80, 11798), (94, 11873), (122, 11987), (129, 12017), (134, 12035), (154, 12119), (188, 12296), (197, 12344),

Gene: OlanP\_17 Start: 11790, Stop: 12788, Start Num: 8

Candidate Starts for OlanP\_17:

(Start: 8 @11790 has 150 MA's), (46, 11931), (70, 12051), (79, 12090), (84, 12123), (132, 12321), (150, 12390), (154, 12417), (170, 12498), (188, 12591), (194, 12636), (195, 12642), (198, 12675), (207, 12711), (211, 12735),

Gene: Olga\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Olga\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Ollie\_17 Start: 11410, Stop: 12402, Start Num: 8

Candidate Starts for Ollie\_17:

(Start: 8 @11410 has 150 MA's), (46, 11551), (70, 11671), (79, 11710), (84, 11743), (108, 11854), (132, 11941), (154, 12037), (170, 12118), (178, 12145), (181, 12157), (188, 12211), (194, 12256), (195, 12262), (198, 12295), (207, 12331), (211, 12355),

Gene: Onglai\_16 Start: 11214, Stop: 12173, Start Num: 6

Candidate Starts for Onglai\_16:

(Start: 6 @11214 has 512 MA's), (29, 11274), (45, 11364), (46, 11370), (57, 11412), (61, 11442), (64, 11466), (75, 11511), (84, 11562), (87, 11574), (92, 11592), (122, 11715), (125, 11727), (181, 11958), (196, 12063),

Gene: Oofda\_19 Start: 11266, Stop: 12216, Start Num: 6

Candidate Starts for Oofda\_19:

(Start: 6 @11266 has 512 MA's), (29, 11326), (46, 11422), (61, 11494), (64, 11518), (75, 11563), (84, 11614), (92, 11644), (183, 12022), (203, 12142), (211, 12187),

Gene: Oogway\_14 Start: 11576, Stop: 12577, Start Num: 6

Candidate Starts for Oogway\_14:

(Start: 6 @11576 has 512 MA's), (42, 11720), (51, 11771), (54, 11786), (76, 11906), (80, 11927), (94, 12002), (108, 12062), (129, 12146), (134, 12164), (154, 12248), (180, 12368), (188, 12425), (196, 12464), (197, 12470),

Gene: Orange\_16 Start: 12699, Stop: 13688, Start Num: 5

Candidate Starts for Orange\_16:

(Start: 5 @12699 has 75 MA's), (29, 12759), (33, 12789), (45, 12849), (46, 12855), (57, 12897), (61, 12927), (64, 12951), (75, 12996), (84, 13047), (87, 13059), (92, 13077), (110, 13161), (122, 13197), (125, 13209), (132, 13236), (188, 13494), (206, 13599),

Gene: Orla\_10 Start: 6434, Stop: 7372, Start Num: 13

Candidate Starts for Orla\_10:

(Start: 13 @6434 has 2 MA's), (17, 6440), (33, 6506), (49, 6593), (53, 6602), (77, 6725), (79, 6734), (80, 6740), (89, 6779), (96, 6815), (107, 6863), (114, 6893), (156, 7070), (164, 7106), (165, 7109), (203, 7292), (211, 7337),

Gene: Ouroboros\_6 Start: 4645, Stop: 5592, Start Num: 24

Candidate Starts for Ouroboros\_6:

(Start: 23 @4642 has 3 MA's), (Start: 24 @4645 has 42 MA's), (33, 4693), (35, 4705), (39, 4732), (53, 4789), (72, 4891), (76, 4906), (79, 4921), (83, 4951), (108, 5065), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (163, 5299), (172, 5341), (197, 5464), (200, 5485), (205, 5503), (206, 5512), (213, 5545),

Gene: P1.1\_6 Start: 4645, Stop: 5592, Start Num: 24

Candidate Starts for P1.1\_6:

(Start: 23 @4642 has 3 MA's), (Start: 24 @4645 has 42 MA's), (33, 4693), (40, 4735), (53, 4789), (72, 4891), (79, 4921), (84, 4954), (106, 5059), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (172, 5341), (200, 5485), (205, 5503), (206, 5512), (213, 5545),

Gene: P100.1\_6 Start: 4638, Stop: 5582, Start Num: 24

Candidate Starts for P100.1\_6:

(Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (72, 4884), (79, 4914), (84, 4947), (90, 4971), (94, 4995), (108, 5058), (133, 5151), (138, 5175), (149, 5211), (153, 5247), (158, 5274), (172, 5334), (197, 5457), (200, 5478), (205, 5496), (212, 5535), (213, 5538),

Gene: P100A\_6 Start: 4656, Stop: 5603, Start Num: 24

Candidate Starts for P100A\_6:

(Start: 24 @4656 has 42 MA's), (33, 4704), (39, 4743), (63, 4863), (72, 4902), (79, 4932), (83, 4962), (94, 5013), (108, 5076), (133, 5169), (152, 5250), (153, 5265), (172, 5352), (200, 5496), (205, 5514), (206, 5523), (213, 5556),

Gene: P100D\_6 Start: 4639, Stop: 5586, Start Num: 24

Candidate Starts for P100D\_6:

(Start: 23 @4636 has 3 MA's), (Start: 24 @4639 has 42 MA's), (33, 4687), (40, 4729), (42, 4738), (53, 4783), (72, 4885), (79, 4915), (84, 4948), (94, 4996), (106, 5053), (133, 5152), (138, 5176), (149, 5212), (153, 5248), (158, 5275), (172, 5335), (181, 5365), (200, 5479), (205, 5497), (206, 5506), (213, 5539),

Gene: P101A\_6 Start: 4638, Stop: 5585, Start Num: 24

Candidate Starts for P101A\_6:

(Start: 23 @4635 has 3 MA's), (Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (72, 4884), (79, 4914), (84, 4947), (90, 4971), (94, 4995), (108, 5058), (133, 5151), (138, 5175), (149, 5211), (153, 5247), (158, 5274), (172, 5334), (197, 5457), (200, 5478), (205, 5496), (213, 5538),

Gene: P104A\_6 Start: 4636, Stop: 5583, Start Num: 24

Candidate Starts for P104A\_6:

(Start: 24 @4636 has 42 MA's), (33, 4684), (40, 4726), (48, 4768), (53, 4780), (72, 4882), (79, 4912), (83, 4942), (94, 4993), (133, 5149), (138, 5173), (149, 5209), (153, 5245), (158, 5272), (172, 5332), (181, 5362), (197, 5455), (200, 5476), (206, 5503), (213, 5536),

Gene: P104B\_6 Start: 4637, Stop: 5587, Start Num: 23

Candidate Starts for P104B\_6:

(Start: 23 @4637 has 3 MA's), (Start: 24 @4640 has 42 MA's), (33, 4688), (40, 4730), (53, 4784), (72, 4886), (79, 4916), (83, 4946), (94, 4997), (106, 5054), (133, 5153), (138, 5177), (149, 5213), (153, 5249), (158, 5276), (163, 5294), (172, 5336), (200, 5480), (205, 5498), (206, 5507), (213, 5540),

Gene: P105\_6 Start: 4630, Stop: 5577, Start Num: 24

Candidate Starts for P105\_6:

(Start: 23 @4627 has 3 MA's), (Start: 24 @4630 has 42 MA's), (33, 4678), (40, 4720), (48, 4762), (53, 4774), (72, 4876), (79, 4906), (84, 4939), (94, 4987), (108, 5050), (133, 5143), (138, 5167), (149, 5203), (153, 5239), (158, 5266), (172, 5326), (181, 5356), (200, 5470), (206, 5497), (213, 5530),

Gene: P106A\_6 Start: 4638, Stop: 5609, Start Num: 24

Candidate Starts for P106A\_6:

(Start: 23 @4635 has 3 MA's), (Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (53, 4782), (72, 4884), (79, 4914), (84, 4947), (90, 4971), (94, 4995), (108, 5058), (133, 5151), (138, 5175), (149, 5211), (153, 5247), (158, 5274), (172, 5334), (197, 5457), (200, 5478), (205, 5496), (213, 5538),

Gene: P106C\_6 Start: 4638, Stop: 5609, Start Num: 24

Candidate Starts for P106C\_6:

(Start: 23 @4635 has 3 MA's), (Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (53, 4782), (72, 4884), (79, 4914), (84, 4947), (90, 4971), (94, 4995), (108, 5058), (133, 5151), (138, 5175), (149, 5211), (153, 5247), (158, 5274), (172, 5334), (197, 5457), (200, 5478), (205, 5496), (213, 5538),

Gene: P106I\_6 Start: 4638, Stop: 5609, Start Num: 24

Candidate Starts for P106I\_6:

(Start: 23 @4635 has 3 MA's), (Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (53, 4782), (72, 4884), (79, 4914), (84, 4947), (90, 4971), (94, 4995), (108, 5058), (133, 5151), (138, 5175), (149, 5211), (153, 5247), (158, 5274), (172, 5334), (197, 5457), (200, 5478), (205, 5496), (213, 5538),

Gene: P106L\_6 Start: 4638, Stop: 5609, Start Num: 24

Candidate Starts for P106L\_6:

(Start: 23 @4635 has 3 MA's), (Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (53, 4782), (72, 4884), (79, 4914), (84, 4947), (90, 4971), (94, 4995), (108, 5058), (133, 5151), (138, 5175), (149, 5211), (153, 5247), (158, 5274), (172, 5334), (197, 5457), (200, 5478), (205, 5496), (213, 5538),

Gene: P106M\_6 Start: 4638, Stop: 5609, Start Num: 24

Candidate Starts for P106M\_6:

(Start: 23 @4635 has 3 MA's), (Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (53, 4782), (72, 4884), (79, 4914), (84, 4947), (90, 4971), (94, 4995), (108, 5058), (133, 5151), (138, 5175), (149, 5211), (153, 5247), (158, 5274), (172, 5334), (197, 5457), (200, 5478), (205, 5496), (213, 5538),

Gene: P107A\_6 Start: 4648, Stop: 5595, Start Num: 24

Candidate Starts for P107A\_6:

(Start: 24 @4648 has 42 MA's), (33, 4696), (39, 4735), (48, 4780), (56, 4804), (63, 4855), (72, 4894), (79, 4924), (83, 4954), (94, 5005), (108, 5068), (133, 5161), (138, 5185), (153, 5257), (172, 5344), (178, 5362), (197, 5467), (200, 5488), (206, 5515),

Gene: P107C\_6 Start: 4644, Stop: 5591, Start Num: 24

Candidate Starts for P107C\_6:

(Start: 24 @4644 has 42 MA's), (33, 4692), (40, 4734), (48, 4776), (53, 4788), (71, 4887), (72, 4890), (79, 4920), (83, 4950), (133, 5157), (138, 5181), (149, 5217), (153, 5253), (158, 5280), (163, 5298), (172, 5340), (200, 5484), (206, 5511), (213, 5544),

Gene: P108C\_6 Start: 4648, Stop: 5595, Start Num: 24

Candidate Starts for P108C\_6:

(Start: 24 @4648 has 42 MA's), (33, 4696), (35, 4708), (39, 4735), (53, 4792), (63, 4855), (72, 4894), (79, 4924), (83, 4954), (94, 5005), (108, 5068), (133, 5161), (138, 5185), (149, 5221), (153, 5257), (163, 5302), (172, 5344), (178, 5362), (200, 5488), (205, 5506), (206, 5515), (213, 5548),

Gene: P14.4\_6 Start: 4638, Stop: 5585, Start Num: 24

Candidate Starts for P14.4\_6:

(Start: 23 @4635 has 3 MA's), (Start: 24 @4638 has 42 MA's), (33, 4686), (40, 4728), (53, 4782), (72, 4884), (79, 4914), (84, 4947), (94, 4995), (108, 5058), (133, 5151), (138, 5175), (149, 5211), (153, 5247), (158, 5274), (163, 5292), (172, 5334), (181, 5364), (200, 5478), (205, 5496), (206, 5505), (213, 5538),

Gene: P28Green\_17 Start: 11538, Stop: 12530, Start Num: 8

Candidate Starts for P28Green\_17:

(Start: 8 @11538 has 150 MA's), (46, 11679), (70, 11799), (79, 11838), (84, 11871), (108, 11982), (132, 12069), (154, 12165), (170, 12246), (178, 12273), (181, 12285), (188, 12339), (194, 12384),

(195, 12390), (198, 12423), (207, 12459), (211, 12483),

Gene: P3MA\_7 Start: 5392, Stop: 6300, Start Num: 25

Candidate Starts for P3MA\_7:

(Start: 25 @5392 has 105 MA's), (30, 5419), (36, 5446), (46, 5500), (59, 5557), (66, 5605), (73, 5632), (74, 5638), (94, 5737), (103, 5785), (114, 5827), (163, 6025), (166, 6037), (217, 6289),

Gene: P9.1\_6 Start: 4630, Stop: 5580, Start Num: 23

Candidate Starts for P9.1\_6:

(Start: 23 @4630 has 3 MA's), (Start: 24 @4633 has 42 MA's), (33, 4681), (40, 4723), (53, 4777), (72, 4879), (79, 4909), (84, 4942), (94, 4990), (106, 5047), (133, 5146), (138, 5170), (149, 5206), (153, 5242), (158, 5269), (163, 5287), (172, 5329), (200, 5473), (205, 5491), (206, 5500), (213, 5533),

Gene: PA6\_6 Start: 4645, Stop: 5592, Start Num: 24

Candidate Starts for PA6\_6:

(Start: 23 @4642 has 3 MA's), (Start: 24 @4645 has 42 MA's), (33, 4693), (40, 4735), (48, 4777), (53, 4789), (72, 4891), (79, 4921), (83, 4951), (94, 5002), (106, 5059), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (172, 5341), (197, 5464), (200, 5485), (213, 5545),

Gene: PAD20\_6 Start: 4645, Stop: 5592, Start Num: 24

Candidate Starts for PAD20\_6:

(Start: 23 @4642 has 3 MA's), (Start: 24 @4645 has 42 MA's), (33, 4693), (40, 4735), (53, 4789), (72, 4891), (79, 4921), (84, 4954), (94, 5002), (106, 5059), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (163, 5299), (172, 5341), (200, 5485), (205, 5503), (206, 5512), (213, 5545),

Gene: PAS50\_6 Start: 4642, Stop: 5589, Start Num: 24

Candidate Starts for PAS50\_6:

(Start: 23 @4639 has 3 MA's), (Start: 24 @4642 has 42 MA's), (33, 4690), (40, 4732), (53, 4786), (72, 4888), (79, 4918), (84, 4951), (94, 4999), (106, 5056), (133, 5155), (138, 5179), (149, 5215), (153, 5251), (158, 5278), (172, 5338), (181, 5368), (200, 5482), (205, 5500), (206, 5509), (213, 5542),

Gene: PGHhamlin\_19 Start: 11531, Stop: 12523, Start Num: 8

Candidate Starts for PGHhamlin\_19:

(Start: 8 @11531 has 150 MA's), (46, 11672), (70, 11792), (79, 11831), (84, 11864), (108, 11975), (132, 12062), (154, 12158), (170, 12239), (178, 12266), (181, 12278), (188, 12332), (194, 12377), (195, 12383), (198, 12416), (207, 12452), (211, 12476),

Gene: PHL010M04\_06 Start: 4637, Stop: 5584, Start Num: 24

Candidate Starts for PHL010M04\_06:

(Start: 24 @4637 has 42 MA's), (33, 4685), (35, 4697), (40, 4727), (48, 4769), (53, 4781), (72, 4883), (79, 4913), (83, 4943), (94, 4994), (108, 5057), (133, 5150), (149, 5210), (153, 5246), (172, 5333), (200, 5477), (205, 5495), (206, 5504), (213, 5537),

Gene: PHL037M02\_06 Start: 4636, Stop: 5586, Start Num: 23

Candidate Starts for PHL037M02\_06:

(Start: 23 @4636 has 3 MA's), (Start: 24 @4639 has 42 MA's), (33, 4687), (40, 4729), (48, 4771), (53, 4783), (72, 4885), (79, 4915), (84, 4948), (106, 5053), (133, 5152), (149, 5212), (153, 5248), (158, 5275), (172, 5335), (178, 5353), (200, 5479), (206, 5506), (213, 5539),

Gene: PHL060L00\_06 Start: 4633, Stop: 5580, Start Num: 24

Candidate Starts for PHL060L00\_06:

(Start: 24 @4633 has 42 MA's), (33, 4681), (40, 4723), (53, 4777), (72, 4879), (79, 4909), (83, 4939), (94, 4990), (108, 5053), (133, 5146), (138, 5170), (149, 5206), (153, 5242), (158, 5269), (172, 5329),



(200, 5473), (206, 5500), (213, 5533),

Gene: PHL067M10\_06 Start: 4632, Stop: 5582, Start Num: 23

Candidate Starts for PHL067M10\_06:

(Start: 23 @4632 has 3 MA's), (Start: 24 @4635 has 42 MA's), (33, 4683), (40, 4725), (53, 4779), (72, 4881), (79, 4911), (84, 4944), (94, 4992), (108, 5055), (133, 5148), (138, 5172), (149, 5208), (153, 5244), (158, 5271), (172, 5331), (200, 5475), (206, 5502), (213, 5535),

Gene: PHL071N05\_06 Start: 4640, Stop: 5587, Start Num: 24

Candidate Starts for PHL071N05\_06:

(Start: 24 @4640 has 42 MA's), (33, 4688), (40, 4730), (48, 4772), (53, 4784), (72, 4886), (79, 4916), (84, 4949), (133, 5153), (138, 5177), (145, 5201), (149, 5213), (153, 5249), (158, 5276), (172, 5336), (178, 5354), (200, 5480), (205, 5498), (206, 5507), (213, 5540),

Gene: PHL111M01\_06 Start: 4642, Stop: 5592, Start Num: 23

Candidate Starts for PHL111M01\_06:

(Start: 23 @4642 has 3 MA's), (Start: 24 @4645 has 42 MA's), (33, 4693), (40, 4735), (53, 4789), (72, 4891), (79, 4921), (84, 4954), (94, 5002), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (163, 5299), (172, 5341), (200, 5485), (205, 5503), (206, 5512), (213, 5545),

Gene: PHL112N00\_06 Start: 4642, Stop: 5592, Start Num: 23

Candidate Starts for PHL112N00\_06:

(Start: 23 @4642 has 3 MA's), (Start: 24 @4645 has 42 MA's), (33, 4693), (40, 4735), (48, 4777), (53, 4789), (72, 4891), (79, 4921), (83, 4951), (108, 5065), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (172, 5341), (200, 5485), (205, 5503), (206, 5512), (213, 5545),

Gene: PHL113M01\_06 Start: 4642, Stop: 5592, Start Num: 23

Candidate Starts for PHL113M01\_06:

(Start: 23 @4642 has 3 MA's), (Start: 24 @4645 has 42 MA's), (33, 4693), (40, 4735), (53, 4789), (72, 4891), (79, 4921), (83, 4951), (94, 5002), (108, 5065), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (172, 5341), (200, 5485), (205, 5503), (206, 5512), (213, 5545),

Gene: PHL114L00\_06 Start: 4641, Stop: 5591, Start Num: 23

Candidate Starts for PHL114L00\_06:

(Start: 23 @4641 has 3 MA's), (Start: 24 @4644 has 42 MA's), (33, 4692), (40, 4734), (48, 4776), (53, 4788), (72, 4890), (79, 4920), (83, 4950), (84, 4953), (130, 5139), (133, 5157), (138, 5181), (149, 5217), (153, 5253), (172, 5340), (200, 5484), (206, 5511), (213, 5544),

Gene: PP\_25 Start: 17295, Stop: 18293, Start Num: 8

Candidate Starts for PP\_25:

(Start: 8 @17295 has 150 MA's), (46, 17436), (62, 17517), (73, 17568), (79, 17595), (84, 17628), (132, 17826), (141, 17868), (161, 17955), (181, 18042), (182, 18060), (198, 18180), (199, 18183), (208, 18219),

Gene: PSullivan\_17 Start: 12065, Stop: 13072, Start Num: 6

Candidate Starts for PSullivan\_17:

(Start: 6 @12065 has 512 MA's), (54, 12275), (76, 12395), (80, 12416), (94, 12491), (111, 12572), (129, 12635), (134, 12653), (154, 12737), (188, 12914), (197, 12962),

Gene: Pace1224\_7 Start: 7210, Stop: 8112, Start Num: 25

Candidate Starts for Pace1224\_7:

(Start: 25 @7210 has 105 MA's), (35, 7267), (36, 7270), (38, 7282), (40, 7297), (59, 7381), (66, 7429), (74, 7462), (102, 7606), (116, 7657), (126, 7684), (132, 7708), (157, 7828), (166, 7864), (181, 7924),

(209, 8071),

Gene: PacerPaul\_15 Start: 11832, Stop: 12842, Start Num: 6

Candidate Starts for PacerPaul\_15:

(Start: 6 @11832 has 512 MA's), (42, 11976), (51, 12027), (54, 12042), (76, 12162), (80, 12183), (94, 12258), (108, 12318), (129, 12402), (134, 12420), (154, 12504), (187, 12675), (188, 12681), (192, 12714), (197, 12735), (214, 12819),

Gene: PackMan\_17 Start: 12848, Stop: 13807, Start Num: 6

Candidate Starts for PackMan\_17:

(Start: 6 @12848 has 512 MA's), (29, 12908), (45, 12998), (46, 13004), (57, 13046), (61, 13076), (64, 13100), (75, 13145), (84, 13196), (87, 13208), (92, 13226), (122, 13349), (125, 13361), (181, 13592), (196, 13697),

Gene: PainterBoy\_17 Start: 12342, Stop: 13298, Start Num: 6

Candidate Starts for PainterBoy\_17:

(Start: 6 @12342 has 512 MA's), (29, 12402), (45, 12492), (46, 12498), (57, 12540), (61, 12570), (64, 12594), (75, 12639), (84, 12690), (92, 12720), (101, 12774), (122, 12840), (206, 13242),

Gene: Paito\_7 Start: 7162, Stop: 8097, Start Num: 25

Candidate Starts for Paito\_7:

(Start: 25 @7162 has 105 MA's), (35, 7219), (36, 7222), (38, 7234), (66, 7381), (74, 7414), (78, 7432), (83, 7465), (88, 7483), (116, 7609), (166, 7825), (168, 7837), (181, 7906),

Gene: Palestino\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Palestino\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Panamaxus\_16 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for Panamaxus\_16:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Papez\_17 Start: 13029, Stop: 14048, Start Num: 6

Candidate Starts for Papez\_17:

(Start: 6 @13029 has 512 MA's), (51, 13224), (54, 13239), (76, 13359), (80, 13380), (94, 13455), (108, 13515), (154, 13701), (187, 13872), (188, 13878), (197, 13935), (204, 13971),

Gene: Paphu\_14 Start: 11021, Stop: 12022, Start Num: 6

Candidate Starts for Paphu\_14:

(Start: 6 @11021 has 512 MA's), (42, 11165), (51, 11216), (54, 11231), (76, 11351), (80, 11372), (94, 11447), (108, 11507), (134, 11609), (154, 11693), (180, 11813), (188, 11870), (196, 11909), (197, 11915), (207, 11966),

Gene: Paraselene\_14 Start: 11334, Stop: 12338, Start Num: 6

Candidate Starts for Paraselene\_14:

(Start: 6 @11334 has 512 MA's), (27, 11391), (42, 11478), (44, 11487), (51, 11529), (54, 11544), (76, 11664), (80, 11685), (94, 11760), (108, 11820), (134, 11922), (154, 12006), (160, 12036), (180, 12126), (187, 12177), (188, 12183), (197, 12231),

Gene: Pari\_16 Start: 11800, Stop: 12813, Start Num: 6

Candidate Starts for Pari\_16:

(Start: 6 @11800 has 512 MA's), (54, 12010), (76, 12130), (80, 12151), (94, 12226), (111, 12307), (129, 12370), (134, 12388), (154, 12472), (187, 12643), (188, 12649), (197, 12706), (204, 12742), (214, 12790),

Gene: Parliament\_14 Start: 11404, Stop: 12420, Start Num: 6

Candidate Starts for Parliament\_14:

(Start: 6 @11404 has 512 MA's), (51, 11599), (54, 11614), (57, 11629), (68, 11701), (76, 11734), (80, 11755), (94, 11830), (108, 11890), (154, 12076), (187, 12247), (188, 12253), (197, 12310), (204, 12346),

Gene: Partridge\_12 Start: 7760, Stop: 8662, Start Num: 21

Candidate Starts for Partridge\_12:

(Start: 21 @7760 has 36 MA's), (46, 7889), (65, 7991), (76, 8033), (79, 8048), (84, 8081), (150, 8336), (161, 8396), (167, 8429),

Gene: PascalRango\_14 Start: 11262, Stop: 12266, Start Num: 6

Candidate Starts for PascalRango\_14:

(Start: 6 @11262 has 512 MA's), (42, 11406), (51, 11457), (54, 11472), (76, 11592), (80, 11613), (94, 11688), (108, 11748), (121, 11799), (122, 11802), (129, 11832), (134, 11850), (154, 11934), (180, 12054), (188, 12111), (197, 12159),

Gene: PattyP\_17 Start: 11858, Stop: 12859, Start Num: 6

Candidate Starts for PattyP\_17:

(Start: 6 @11858 has 512 MA's), (54, 12068), (76, 12188), (80, 12209), (94, 12284), (108, 12344), (134, 12446), (154, 12530), (180, 12650), (188, 12707), (196, 12749), (197, 12755),

Gene: Pawn\_17 Start: 11610, Stop: 12608, Start Num: 8

Candidate Starts for Pawn\_17:

(Start: 8 @11610 has 150 MA's), (46, 11751), (70, 11871), (79, 11910), (84, 11943), (132, 12141), (150, 12210), (154, 12237), (170, 12318), (188, 12411), (194, 12456), (195, 12462), (198, 12495), (207, 12531), (211, 12555),

Gene: Payneful\_15 Start: 11148, Stop: 12152, Start Num: 6

Candidate Starts for Payneful\_15:

(Start: 6 @11148 has 512 MA's), (42, 11292), (44, 11301), (51, 11343), (54, 11358), (76, 11478), (80, 11499), (94, 11574), (108, 11634), (134, 11736), (154, 11820), (160, 11850), (180, 11940), (187, 11991), (188, 11997), (197, 12045),

Gene: PeaceMeal1\_14 Start: 9363, Stop: 10295, Start Num: 6

Candidate Starts for PeaceMeal1\_14:

(Start: 6 @9363 has 512 MA's), (29, 9423), (42, 9501), (46, 9519), (47, 9534), (57, 9561), (61, 9591), (64, 9615), (75, 9660), (84, 9711), (127, 9861), (130, 9876), (141, 9924), (154, 9978), (196, 10191), (203, 10227), (206, 10245), (210, 10260),

Gene: Peaches\_15 Start: 11481, Stop: 12413, Start Num: 6

Candidate Starts for Peaches\_15:

(Start: 6 @11481 has 512 MA's), (29, 11541), (46, 11637), (47, 11652), (61, 11709), (64, 11733), (84, 11829), (92, 11859), (101, 11913), (146, 12057), (154, 12099), (188, 12261), (191, 12294), (196, 12312), (203, 12348), (210, 12381),

Gene: Peeb\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Peeb\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Pelly\_16 Start: 12093, Stop: 13100, Start Num: 6

Candidate Starts for Pelly\_16:

(Start: 6 @12093 has 512 MA's), (54, 12303), (76, 12423), (80, 12444), (94, 12519), (122, 12633), (129, 12663), (134, 12681), (154, 12765), (188, 12942), (197, 12990),

Gene: Pembroke\_17 Start: 11540, Stop: 12532, Start Num: 8

Candidate Starts for Pembroke\_17:

(Start: 8 @11540 has 150 MA's), (46, 11681), (70, 11801), (79, 11840), (84, 11873), (108, 11984), (132, 12071), (154, 12167), (170, 12248), (178, 12275), (181, 12287), (188, 12341), (194, 12386), (195, 12392), (198, 12425), (207, 12461), (211, 12485),

Gene: Penny1\_17 Start: 11539, Stop: 12531, Start Num: 8

Candidate Starts for Penny1\_17:

(Start: 8 @11539 has 150 MA's), (46, 11680), (70, 11800), (79, 11839), (84, 11872), (108, 11983), (132, 12070), (154, 12166), (170, 12247), (178, 12274), (181, 12286), (188, 12340), (194, 12385), (195, 12391), (198, 12424), (207, 12460), (211, 12484),

Gene: Pepe\_16 Start: 12056, Stop: 13063, Start Num: 6

Candidate Starts for Pepe\_16:

(Start: 6 @12056 has 512 MA's), (54, 12266), (76, 12386), (80, 12407), (94, 12482), (111, 12563), (129, 12626), (134, 12644), (154, 12728), (188, 12905), (197, 12953),

Gene: Periodt\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Periodt\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Periwinkle\_7 Start: 4897, Stop: 5835, Start Num: 25

Candidate Starts for Periwinkle\_7:

(Start: 25 @4897 has 105 MA's), (33, 4939), (34, 4942), (52, 5032), (71, 5134), (85, 5206), (86, 5209), (131, 5398), (166, 5551), (168, 5563), (178, 5626), (186, 5680), (209, 5785), (212, 5806),

Gene: Perplexer\_15 Start: 11485, Stop: 12417, Start Num: 6

Candidate Starts for Perplexer\_15:

(Start: 6 @11485 has 512 MA's), (29, 11545), (46, 11641), (47, 11656), (61, 11713), (64, 11737), (84, 11833), (101, 11917), (146, 12061), (154, 12103), (188, 12265), (191, 12298), (203, 12352), (210, 12385),

Gene: Perseus\_16 Start: 11716, Stop: 12714, Start Num: 6

Candidate Starts for Perseus\_16:

(Start: 6 @11716 has 512 MA's), (42, 11860), (51, 11911), (54, 11926), (76, 12046), (80, 12067), (94, 12142), (108, 12202), (134, 12304), (154, 12388), (180, 12508), (188, 12565), (196, 12604), (197, 12610),

Gene: PeterPeter\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for PeterPeter\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Petersenfast\_15 Start: 12702, Stop: 13691, Start Num: 5

Candidate Starts for Petersenfast\_15:

(Start: 5 @12702 has 75 MA's), (29, 12762), (33, 12792), (45, 12852), (46, 12858), (57, 12900), (61, 12930), (64, 12954), (75, 12999), (84, 13050), (87, 13062), (92, 13080), (110, 13164), (122, 13200), (125, 13212), (132, 13239), (188, 13497), (206, 13602),

Gene: Peterson\_18 Start: 13017, Stop: 14030, Start Num: 6

Candidate Starts for Peterson\_18:

(Start: 6 @13017 has 512 MA's), (42, 13161), (51, 13212), (54, 13227), (76, 13347), (80, 13368), (94, 13443), (108, 13503), (134, 13605), (154, 13689), (180, 13809), (187, 13860), (188, 13866), (192, 13899), (197, 13920),

Gene: PetiteSangsue\_15 Start: 11491, Stop: 12423, Start Num: 6

Candidate Starts for PetiteSangsue\_15:

(Start: 6 @11491 has 512 MA's), (29, 11551), (46, 11647), (47, 11662), (61, 11719), (64, 11743), (84, 11839), (101, 11923), (146, 12067), (154, 12109), (188, 12271), (191, 12304), (203, 12358), (210, 12391),

Gene: Petp2012\_17 Start: 12533, Stop: 13534, Start Num: 6

Candidate Starts for Petp2012\_17:

(Start: 6 @12533 has 512 MA's), (54, 12743), (76, 12863), (80, 12884), (94, 12959), (108, 13019), (121, 13070), (122, 13073), (129, 13103), (134, 13121), (154, 13205), (188, 13382), (196, 13421), (197, 13427),

Gene: Petruccio\_15 Start: 11274, Stop: 12281, Start Num: 6

Candidate Starts for Petruccio\_15:

(Start: 6 @11274 has 512 MA's), (42, 11418), (51, 11469), (54, 11484), (76, 11604), (80, 11625), (94, 11700), (108, 11760), (129, 11844), (134, 11862), (154, 11946), (188, 12123), (196, 12162), (197, 12168),

Gene: PetterN\_14 Start: 10599, Stop: 11540, Start Num: 19

Candidate Starts for PetterN\_14:

(Start: 19 @10599 has 50 MA's), (46, 10728), (61, 10800), (79, 10887), (84, 10920), (92, 10950), (125, 11061), (128, 11076), (154, 11184), (159, 11208), (171, 11268), (181, 11307), (183, 11328), (189, 11376), (198, 11433), (207, 11469), (211, 11493),

Gene: Ph8s\_17 Start: 10936, Stop: 11892, Start Num: 6

Candidate Starts for Ph8s\_17:

(Start: 6 @10936 has 512 MA's), (29, 10996), (45, 11086), (46, 11092), (57, 11134), (61, 11164), (64, 11188), (75, 11233), (84, 11284), (87, 11296), (92, 11314), (116, 11419), (132, 11473), (143, 11518), (159, 11593), (161, 11602), (181, 11677),

Gene: Phabuloso\_7 Start: 4901, Stop: 5842, Start Num: 25

Candidate Starts for Phabuloso\_7:

(Start: 25 @4901 has 105 MA's), (52, 5036), (66, 5117), (71, 5138), (86, 5213), (114, 5339), (162, 5540), (166, 5558), (173, 5591), (184, 5675), (212, 5813),

Gene: Phacado\_15 Start: 11478, Stop: 12410, Start Num: 6

Candidate Starts for Phacado\_15:

(Start: 6 @11478 has 512 MA's), (29, 11538), (46, 11634), (61, 11706), (64, 11730), (84, 11826), (101, 11910), (146, 12054), (154, 12096), (188, 12258), (191, 12291), (196, 12309), (203, 12345), (210, 12378),

Gene: Phaded\_19 Start: 14250, Stop: 15206, Start Num: 6

Candidate Starts for Phaded\_19:

(Start: 6 @14250 has 512 MA's), (29, 14310), (40, 14379), (46, 14406), (57, 14448), (61, 14478), (64, 14502), (75, 14547), (84, 14598), (92, 14628), (125, 14760), (139, 14817), (181, 14991), (188, 15045),

Gene: Phaeder\_17 Start: 12848, Stop: 13807, Start Num: 6

Candidate Starts for Phaeder\_17:

(Start: 6 @12848 has 512 MA's), (29, 12908), (45, 12998), (46, 13004), (57, 13046), (61, 13076), (64, 13100), (75, 13145), (84, 13196), (87, 13208), (92, 13226), (122, 13349), (125, 13361), (181, 13592), (196, 13697),

Gene: PhailMary\_11 Start: 7767, Stop: 8669, Start Num: 21

Candidate Starts for PhailMary\_11:

(Start: 21 @7767 has 36 MA's), (46, 7896), (65, 7998), (76, 8040), (79, 8055), (84, 8088), (150, 8343), (161, 8403), (167, 8436),

Gene: Phantastic\_15 Start: 11066, Stop: 12037, Start Num: 8

Candidate Starts for Phantastic\_15:

(Start: 8 @11066 has 150 MA's), (Start: 18 @11075 has 9 MA's), (46, 11207), (70, 11327), (79, 11366), (84, 11399), (99, 11480), (141, 11636), (154, 11690), (170, 11771), (179, 11801), (181, 11810), (188, 11864), (194, 11909), (195, 11915), (198, 11948), (207, 11984),

Gene: Pharaoh\_16 Start: 12627, Stop: 13589, Start Num: 6

Candidate Starts for Pharaoh\_16:

(Start: 6 @12627 has 512 MA's), (29, 12687), (45, 12777), (46, 12783), (57, 12825), (61, 12855), (64, 12879), (75, 12924), (84, 12975), (92, 13005), (122, 13131), (125, 13143), (181, 13374), (196, 13479),

Gene: Phelipe\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Phelipe\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: PherrisBueller\_16 Start: 11485, Stop: 12486, Start Num: 6

Candidate Starts for PherrisBueller\_16:

(Start: 6 @11485 has 512 MA's), (42, 11629), (51, 11680), (54, 11695), (76, 11815), (80, 11836), (94, 11911), (108, 11971), (134, 12073), (154, 12157), (180, 12277), (188, 12334), (196, 12373), (197, 12379), (207, 12430),

Gene: Phighter1804\_15 Start: 11457, Stop: 12389, Start Num: 6

Candidate Starts for Phighter1804\_15:

(Start: 6 @11457 has 512 MA's), (29, 11517), (46, 11613), (47, 11628), (61, 11685), (64, 11709), (84, 11805), (92, 11835), (101, 11889), (154, 12075), (188, 12237), (191, 12270), (196, 12288), (203, 12324), (210, 12357),

Gene: Phillis\_13 Start: 10354, Stop: 11304, Start Num: 19

Candidate Starts for Phillis\_13:

(Start: 19 @10354 has 50 MA's), (46, 10483), (57, 10525), (79, 10642), (84, 10675), (98, 10750), (127, 10834), (150, 10924), (154, 10951), (161, 10984), (171, 11035), (181, 11074), (198, 11200), (207, 11236),

Gene: PhineBark\_15 Start: 12373, Stop: 13377, Start Num: 6

Candidate Starts for PhineBark\_15:

(Start: 6 @12373 has 512 MA's), (42, 12517), (44, 12526), (51, 12568), (54, 12583), (76, 12703), (80, 12724), (94, 12799), (108, 12859), (134, 12961), (154, 13045), (160, 13075), (180, 13165), (187, 13216), (188, 13222), (197, 13270),

Gene: Phish\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Phish\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: PhishRPhriends\_16 Start: 10801, Stop: 11793, Start Num: 8

Candidate Starts for PhishRPhriends\_16:

(Start: 8 @10801 has 150 MA's), (46, 10942), (70, 11062), (79, 11101), (84, 11134), (132, 11332), (150, 11401), (154, 11428), (170, 11509), (188, 11602), (194, 11647), (195, 11653), (198, 11686), (207, 11722), (211, 11746),

Gene: Phistory\_7 Start: 4886, Stop: 5824, Start Num: 25

Candidate Starts for Phistory\_7:

(Start: 25 @4886 has 105 MA's), (33, 4928), (34, 4931), (52, 5021), (71, 5123), (78, 5153), (86, 5198), (131, 5387), (153, 5480), (168, 5552), (178, 5615), (209, 5774), (212, 5795),

Gene: Phlei\_12 Start: 12721, Stop: 13926, Start Num: 8

Candidate Starts for Phlei\_12:

(Start: 8 @12721 has 150 MA's), (29, 12769), (46, 12865), (47, 12880), (61, 12937), (64, 12961), (68, 12976), (84, 13057), (92, 13087), (154, 13339), (181, 13447), (211, 13633), (219, 13660), (222, 13765), (223, 13780), (225, 13813), (227, 13837),

Gene: Phlippers\_14 Start: 12556, Stop: 13557, Start Num: 6

Candidate Starts for Phlippers\_14:

(Start: 6 @12556 has 512 MA's), (42, 12700), (51, 12751), (54, 12766), (76, 12886), (80, 12907), (94, 12982), (108, 13042), (129, 13126), (134, 13144), (154, 13228), (180, 13348), (188, 13405), (196, 13444), (197, 13450),

Gene: Phlorence\_13 Start: 10907, Stop: 11839, Start Num: 19

Candidate Starts for Phlorence\_13:

(Start: 19 @10907 has 50 MA's), (46, 11036), (57, 11078), (61, 11108), (79, 11195), (84, 11228), (125, 11369), (154, 11492), (159, 11516), (171, 11576), (181, 11615), (183, 11636), (189, 11684), (198, 11741), (207, 11777), (211, 11801),

Gene: Phoebe\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for Phoebe\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: Phonnegut\_17 Start: 12881, Stop: 13840, Start Num: 6

Candidate Starts for Phonnegut\_17:

(Start: 6 @12881 has 512 MA's), (29, 12941), (45, 13031), (46, 13037), (57, 13079), (61, 13109), (64, 13133), (75, 13178), (84, 13229), (87, 13241), (92, 13259), (122, 13382), (125, 13394), (181, 13625), (196, 13730),

Gene: Phontbonne\_15 Start: 11426, Stop: 12358, Start Num: 6

Candidate Starts for Phontbonne\_15:

(Start: 6 @11426 has 512 MA's), (29, 11486), (46, 11582), (47, 11597), (61, 11654), (64, 11678), (84, 11774), (92, 11804), (101, 11858), (146, 12002), (154, 12044), (188, 12206), (191, 12239), (196, 12257), (203, 12293), (210, 12326),

Gene: PhorbesPhlower\_6 Start: 4456, Stop: 5358, Start Num: 25

Candidate Starts for PhorbesPhlower\_6:

(Start: 25 @4456 has 105 MA's), (35, 4513), (46, 4570), (66, 4675), (74, 4708), (114, 4897), (116, 4903), (157, 5074), (177, 5155), (209, 5314),

Gene: Phoxy\_17 Start: 11623, Stop: 12615, Start Num: 8

Candidate Starts for Phoxy\_17:

(Start: 8 @11623 has 150 MA's), (46, 11764), (70, 11884), (79, 11923), (84, 11956), (108, 12067), (132, 12154), (154, 12250), (170, 12331), (178, 12358), (181, 12370), (188, 12424), (194, 12469), (195, 12475), (198, 12508), (207, 12544), (211, 12568),

Gene: Phrankenstein\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Phrankenstein\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Phranny\_18 Start: 11608, Stop: 12600, Start Num: 8

Candidate Starts for Phranny\_18:

(Start: 8 @11608 has 150 MA's), (46, 11749), (70, 11869), (79, 11908), (84, 11941), (132, 12139), (150, 12208), (154, 12235), (170, 12316), (188, 12409), (194, 12454), (195, 12460), (198, 12493), (207, 12529), (211, 12553),

Gene: Phreak\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Phreak\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: PhrostyMug\_15 Start: 11630, Stop: 12628, Start Num: 6

Candidate Starts for PhrostyMug\_15:

(Start: 6 @11630 has 512 MA's), (42, 11774), (51, 11825), (54, 11840), (76, 11960), (80, 11981), (94, 12056), (108, 12116), (134, 12218), (154, 12302), (180, 12422), (188, 12479), (196, 12518), (197, 12524),

Gene: PickleBack\_13 Start: 10621, Stop: 11553, Start Num: 19

Candidate Starts for PickleBack\_13:

(Start: 19 @10621 has 50 MA's), (46, 10750), (61, 10822), (79, 10909), (84, 10942), (125, 11083), (154, 11206), (159, 11230), (171, 11290), (181, 11329), (183, 11350), (189, 11398), (198, 11455), (207, 11491), (211, 11515),

Gene: PinkPlastic\_14 Start: 11399, Stop: 12400, Start Num: 6

Candidate Starts for PinkPlastic\_14:

(Start: 6 @11399 has 512 MA's), (42, 11543), (51, 11594), (54, 11609), (76, 11729), (80, 11750), (94, 11825), (108, 11885), (134, 11987), (154, 12071), (180, 12191), (188, 12248), (196, 12287), (197, 12293), (207, 12344),

Gene: PinkYoshi\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for PinkYoshi\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),



Gene: Pinnie\_8 Start: 7661, Stop: 8563, Start Num: 25

Candidate Starts for Pinnie\_8:

(Start: 25 @7661 has 105 MA's), (28, 7670), (36, 7718), (66, 7877), (69, 7886), (74, 7910), (83, 7961), (84, 7964), (131, 8150), (136, 8171), (159, 8273), (166, 8303), (184, 8402),

Gene: Pinto\_17 Start: 11707, Stop: 12717, Start Num: 6

Candidate Starts for Pinto\_17:

(Start: 6 @11707 has 512 MA's), (42, 11851), (51, 11902), (54, 11917), (76, 12037), (80, 12058), (94, 12133), (108, 12193), (121, 12244), (122, 12247), (129, 12277), (134, 12295), (154, 12379), (187, 12550), (188, 12556), (192, 12589), (197, 12610), (214, 12694),

Gene: Pioneer\_17 Start: 12881, Stop: 13840, Start Num: 6

Candidate Starts for Pioneer\_17:

(Start: 6 @12881 has 512 MA's), (29, 12941), (45, 13031), (46, 13037), (57, 13079), (61, 13109), (64, 13133), (75, 13178), (84, 13229), (87, 13241), (92, 13259), (122, 13382), (125, 13394), (181, 13625), (196, 13730),

Gene: Pipcraft\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Pipcraft\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Pippin\_17 Start: 11968, Stop: 12978, Start Num: 6

Candidate Starts for Pippin\_17:

(Start: 6 @11968 has 512 MA's), (42, 12112), (51, 12163), (54, 12178), (76, 12298), (80, 12319), (94, 12394), (108, 12454), (129, 12538), (134, 12556), (154, 12640), (187, 12811), (188, 12817), (197, 12871),

Gene: Pirate\_6 Start: 4637, Stop: 5584, Start Num: 24

Candidate Starts for Pirate\_6:

(Start: 24 @4637 has 42 MA's), (33, 4685), (39, 4724), (48, 4769), (63, 4844), (76, 4898), (79, 4913), (82, 4937), (83, 4943), (108, 5057), (114, 5084), (130, 5132), (133, 5150), (138, 5174), (149, 5210), (153, 5246), (158, 5273), (172, 5333), (200, 5477), (205, 5495), (206, 5504), (213, 5537),

Gene: Piro94\_17 Start: 12671, Stop: 13627, Start Num: 6

Candidate Starts for Piro94\_17:

(Start: 6 @12671 has 512 MA's), (15, 12686), (29, 12731), (46, 12827), (57, 12869), (61, 12899), (64, 12923), (75, 12968), (84, 13019), (92, 13049), (118, 13154), (125, 13181), (132, 13208), (143, 13253), (181, 13412), (182, 13430), (188, 13466), (196, 13517),

Gene: Pistachio\_16 Start: 10650, Stop: 11624, Start Num: 8

Candidate Starts for Pistachio\_16:

(Start: 8 @10650 has 150 MA's), (46, 10791), (70, 10911), (79, 10950), (84, 10983), (141, 11220), (150, 11247), (154, 11274), (171, 11358), (188, 11448), (194, 11493), (195, 11499), (198, 11532), (207, 11568),

Gene: Pita2\_17 Start: 12065, Stop: 13072, Start Num: 6

Candidate Starts for Pita2\_17:

(Start: 6 @12065 has 512 MA's), (54, 12275), (76, 12395), (80, 12416), (94, 12491), (111, 12572), (129, 12635), (134, 12653), (154, 12737), (188, 12914), (197, 12962),

Gene: Pitbull\_6 Start: 4478, Stop: 5374, Start Num: 25

Candidate Starts for Pitbull\_6:

(Start: 25 @4478 has 105 MA's), (46, 4589), (96, 4835), (106, 4880), (114, 4913), (124, 4943), (135, 4988), (166, 5126), (184, 5216), (199, 5294),

Gene: Plagueis\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Plagueis\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Pmask\_19 Start: 12230, Stop: 13201, Start Num: 5

Candidate Starts for Pmask\_19:

(Start: 5 @12230 has 75 MA's), (29, 12290), (46, 12386), (57, 12428), (61, 12458), (64, 12482), (75, 12527), (84, 12578), (87, 12590), (92, 12608), (122, 12713), (164, 12899), (211, 13172),

Gene: Pocahontas\_16 Start: 11631, Stop: 12623, Start Num: 8

Candidate Starts for Pocahontas\_16:

(Start: 8 @11631 has 150 MA's), (46, 11772), (79, 11931), (84, 11964), (130, 12156), (141, 12204), (150, 12231), (154, 12258), (170, 12339), (175, 12354), (181, 12378), (188, 12432), (194, 12477), (195, 12483), (198, 12516), (207, 12552), (216, 12594),

Gene: Polymorphads\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Polymorphads\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Polyphemus\_18 Start: 12232, Stop: 13203, Start Num: 5

Candidate Starts for Polyphemus\_18:

(Start: 5 @12232 has 75 MA's), (29, 12292), (46, 12388), (57, 12430), (61, 12460), (64, 12484), (75, 12529), (84, 12580), (87, 12592), (92, 12610), (122, 12715), (164, 12901), (211, 13174),

Gene: Pomar16\_19 Start: 12128, Stop: 13084, Start Num: 5

Candidate Starts for Pomar16\_19:

(Start: 5 @12128 has 75 MA's), (29, 12188), (45, 12278), (46, 12284), (57, 12326), (61, 12356), (64, 12380), (75, 12425), (84, 12476), (87, 12488), (92, 12506), (95, 12527), (122, 12614), (125, 12626), (127, 12632), (132, 12653), (171, 12833), (181, 12857), (188, 12911), (215, 13058),

Gene: Pons\_8 Start: 5091, Stop: 6050, Start Num: 8

Candidate Starts for Pons\_8:

(Start: 8 @5091 has 150 MA's), (Start: 25 @5142 has 105 MA's), (33, 5181), (67, 5358), (77, 5400), (79, 5409), (89, 5454), (107, 5538), (132, 5634), (144, 5691), (156, 5745), (164, 5781), (209, 5994), (211, 6012),

Gene: Poompha\_14 Start: 9361, Stop: 10293, Start Num: 6

Candidate Starts for Poompha\_14:

(Start: 6 @9361 has 512 MA's), (29, 9421), (42, 9499), (46, 9517), (47, 9532), (57, 9559), (61, 9589), (64, 9613), (75, 9658), (84, 9709), (127, 9859), (130, 9874), (141, 9922), (154, 9976), (196, 10189), (203, 10225), (206, 10243), (210, 10258),

Gene: Popcicle\_16 Start: 11631, Stop: 12623, Start Num: 8

Candidate Starts for Popcicle\_16:

(Start: 8 @11631 has 150 MA's), (46, 11772), (79, 11931), (84, 11964), (130, 12156), (141, 12204), (150, 12231), (154, 12258), (170, 12339), (175, 12354), (181, 12378), (188, 12432), (194, 12477), (195, 12483), (198, 12516), (207, 12552), (216, 12594),

Gene: PotPie\_8 Start: 5954, Stop: 6913, Start Num: 8

Candidate Starts for PotPie\_8:

(Start: 8 @5954 has 150 MA's), (Start: 25 @6005 has 105 MA's), (50, 6134), (67, 6221), (77, 6263), (79, 6272), (89, 6317), (107, 6401), (132, 6497), (144, 6554), (156, 6608), (164, 6644), (209, 6857), (211, 6875), (221, 6905),

Gene: PotatoSplit\_18 Start: 11539, Stop: 12531, Start Num: 8

Candidate Starts for PotatoSplit\_18:

(Start: 8 @11539 has 150 MA's), (46, 11680), (70, 11800), (79, 11839), (84, 11872), (108, 11983), (132, 12070), (154, 12166), (170, 12247), (178, 12274), (181, 12286), (188, 12340), (194, 12385), (195, 12391), (198, 12424), (207, 12460), (211, 12484),

Gene: Power\_16 Start: 12107, Stop: 13063, Start Num: 6

Candidate Starts for Power\_16:

(Start: 6 @12107 has 512 MA's), (29, 12167), (40, 12236), (46, 12263), (57, 12305), (61, 12335), (75, 12404), (84, 12455), (92, 12485), (118, 12590), (132, 12644), (181, 12848), (182, 12866), (188, 12902), (196, 12953),

Gene: Priamo\_19 Start: 12258, Stop: 13229, Start Num: 5

Candidate Starts for Priamo\_19:

(Start: 5 @12258 has 75 MA's), (29, 12318), (46, 12414), (57, 12456), (61, 12486), (64, 12510), (75, 12555), (84, 12606), (87, 12618), (92, 12636), (122, 12741), (164, 12927), (211, 13200),

Gene: Prin Ashe11\_14 Start: 10767, Stop: 11699, Start Num: 19

Candidate Starts for Prin Ashe11\_14:

(Start: 19 @10767 has 50 MA's), (46, 10896), (57, 10938), (61, 10968), (79, 11055), (84, 11088), (154, 11352), (171, 11436), (181, 11475), (183, 11496), (189, 11544), (198, 11601), (207, 11637), (211, 11661),

Gene: Priya\_17 Start: 12879, Stop: 13838, Start Num: 6

Candidate Starts for Priya\_17:

(Start: 6 @12879 has 512 MA's), (29, 12939), (45, 13029), (46, 13035), (57, 13077), (61, 13107), (64, 13131), (75, 13176), (84, 13227), (87, 13239), (92, 13257), (122, 13380), (125, 13392), (181, 13623), (196, 13728),

Gene: ProMouse\_14 Start: 12028, Stop: 13035, Start Num: 6

Candidate Starts for ProMouse\_14:

(Start: 6 @12028 has 512 MA's), (42, 12172), (51, 12223), (54, 12238), (76, 12358), (80, 12379), (94, 12454), (108, 12514), (129, 12598), (134, 12616), (154, 12700), (187, 12871), (188, 12877), (197, 12931),

Gene: ProCrass1\_6 Start: 4640, Stop: 5587, Start Num: 24

Candidate Starts for ProCrass1\_6:

(Start: 23 @4637 has 3 MA's), (Start: 24 @4640 has 42 MA's), (33, 4688), (40, 4730), (53, 4784), (72, 4886), (79, 4916), (83, 4946), (130, 5135), (133, 5153), (138, 5177), (149, 5213), (153, 5249), (158, 5276), (163, 5294), (172, 5336), (181, 5366), (200, 5480), (205, 5498), (206, 5507), (213, 5540),

Gene: PsychoKiller\_8 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for PsychoKiller\_8:

(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (89, 5746), (96, 5782), (114, 5860), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: Pukovnik\_18 Start: 13817, Stop: 14773, Start Num: 6

Candidate Starts for Pukovnik\_18:

(Start: 6 @13817 has 512 MA's), (29, 13877), (46, 13973), (57, 14015), (61, 14045), (64, 14069), (75, 14114), (84, 14165), (92, 14195), (118, 14300), (125, 14327), (132, 14354), (182, 14576), (188, 14612),

Gene: Pumbaa\_15 Start: 11454, Stop: 12386, Start Num: 6

Candidate Starts for Pumbaa\_15:

(Start: 6 @11454 has 512 MA's), (29, 11514), (46, 11610), (61, 11682), (64, 11706), (84, 11802), (92, 11832), (101, 11886), (146, 12030), (154, 12072), (188, 12234), (191, 12267), (196, 12285), (203, 12321), (210, 12354),

Gene: Puppy\_16 Start: 10722, Stop: 11696, Start Num: 8

Candidate Starts for Puppy\_16:

(Start: 8 @10722 has 150 MA's), (46, 10863), (70, 10983), (79, 11022), (84, 11055), (141, 11292), (150, 11319), (154, 11346), (171, 11430), (188, 11520), (194, 11565), (195, 11571), (198, 11604), (207, 11640),

Gene: PurpleHaze\_17 Start: 11609, Stop: 12607, Start Num: 8

Candidate Starts for PurpleHaze\_17:

(Start: 8 @11609 has 150 MA's), (46, 11750), (70, 11870), (79, 11909), (84, 11942), (132, 12140), (150, 12209), (154, 12236), (170, 12317), (188, 12410), (194, 12455), (195, 12461), (198, 12494), (207, 12530), (211, 12554),

Gene: QTRlifeCrisis\_15 Start: 12033, Stop: 13043, Start Num: 6

Candidate Starts for QTRlifeCrisis\_15:

(Start: 6 @12033 has 512 MA's), (42, 12177), (51, 12228), (54, 12243), (76, 12363), (80, 12384), (94, 12459), (108, 12519), (121, 12570), (129, 12603), (134, 12621), (154, 12705), (187, 12876), (188, 12882), (197, 12936), (214, 13020),

Gene: Qobbit\_17 Start: 12878, Stop: 13837, Start Num: 6

Candidate Starts for Qobbit\_17:

(Start: 6 @12878 has 512 MA's), (29, 12938), (45, 13028), (46, 13034), (57, 13076), (61, 13106), (64, 13130), (75, 13175), (84, 13226), (87, 13238), (92, 13256), (122, 13379), (125, 13391), (181, 13622), (196, 13727),

Gene: Quasar\_8 Start: 6001, Stop: 6966, Start Num: 8

Candidate Starts for Quasar\_8:

(Start: 8 @6001 has 150 MA's), (12, 6016), (Start: 25 @6052 has 105 MA's), (49, 6181), (89, 6367), (96, 6403), (121, 6505), (156, 6658), (170, 6724), (187, 6808), (203, 6880), (211, 6925),

Gene: QueenB2\_16 Start: 12175, Stop: 13140, Start Num: 6

Candidate Starts for QueenB2\_16:

(Start: 6 @12175 has 512 MA's), (29, 12235), (40, 12304), (46, 12331), (57, 12373), (61, 12403), (64, 12427), (75, 12472), (84, 12523), (110, 12637), (125, 12694), (132, 12721), (143, 12766), (181, 12925), (182, 12943), (188, 12979), (196, 13030),

Gene: QueenBeesly\_16 Start: 12107, Stop: 13063, Start Num: 6

Candidate Starts for QueenBeesly\_16:

(Start: 6 @12107 has 512 MA's), (29, 12167), (40, 12236), (46, 12263), (57, 12305), (61, 12335), (75, 12404), (84, 12455), (92, 12485), (118, 12590), (132, 12644), (181, 12848), (182, 12866), (188, 12902), (196, 12953),

Gene: QueenBey\_6 Start: 4638, Stop: 5585, Start Num: 24

Candidate Starts for QueenBey\_6:

(Start: 24 @4638 has 42 MA's), (33, 4686), (39, 4725), (48, 4770), (72, 4884), (76, 4899), (79, 4914), (83, 4944), (108, 5058), (133, 5151), (153, 5247), (172, 5334), (200, 5478), (206, 5505), (213, 5538),

Gene: QuinnKiro\_15 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for QuinnKiro\_15:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Quokka\_14 Start: 11078, Stop: 12034, Start Num: 6

Candidate Starts for Quokka\_14:

(Start: 6 @11078 has 512 MA's), (29, 11138), (40, 11207), (46, 11234), (57, 11276), (61, 11306), (64, 11330), (75, 11375), (84, 11426), (118, 11561), (125, 11588), (132, 11615), (143, 11660), (181, 11819), (182, 11837), (188, 11873), (196, 11924),

Gene: RER2\_5 Start: 4588, Stop: 5508, Start Num: 21

Candidate Starts for RER2\_5:

(Start: 21 @4588 has 36 MA's), (46, 4717), (65, 4819), (76, 4861), (79, 4876), (84, 4909), (140, 5113), (161, 5209), (210, 5464),

Gene: RGL3\_5 Start: 4576, Stop: 5496, Start Num: 21

Candidate Starts for RGL3\_5:

(Start: 21 @4576 has 36 MA's), (46, 4705), (65, 4807), (76, 4849), (79, 4864), (84, 4897), (161, 5197), (167, 5230), (188, 5344), (211, 5464),

Gene: Rabbs\_7 Start: 7099, Stop: 8034, Start Num: 25

Candidate Starts for Rabbs\_7:

(Start: 25 @7099 has 105 MA's), (35, 7156), (38, 7171), (66, 7318), (74, 7351), (93, 7438), (168, 7774), (181, 7843),

Gene: Rachaly\_19 Start: 13848, Stop: 14795, Start Num: 11

Candidate Starts for Rachaly\_19:

(10, 13842), (Start: 11 @13848 has 9 MA's), (29, 13899), (37, 13947), (46, 13995), (47, 14010), (57, 14037), (61, 14067), (68, 14106), (84, 14187), (107, 14289), (131, 14373), (154, 14472), (159, 14496), (179, 14571), (181, 14580), (188, 14634),

Gene: Rahalelujah\_15 Start: 10914, Stop: 11882, Start Num: 6

Candidate Starts for Rahalelujah\_15:

(Start: 6 @10914 has 512 MA's), (29, 10974), (46, 11070), (61, 11142), (64, 11166), (75, 11211), (84, 11262), (92, 11292), (118, 11397), (127, 11430), (132, 11451), (201, 11802),

Gene: Raid\_16 Start: 11324, Stop: 12331, Start Num: 6

Candidate Starts for Raid\_16:

(Start: 6 @11324 has 512 MA's), (42, 11468), (51, 11519), (54, 11534), (76, 11654), (80, 11675), (94, 11750), (108, 11810), (121, 11861), (129, 11894), (134, 11912), (154, 11996), (187, 12167), (188, 12173), (197, 12227),

Gene: Rajelicia\_15 Start: 11541, Stop: 12557, Start Num: 6

Candidate Starts for Rajelicia\_15:

(Start: 6 @11541 has 512 MA's), (51, 11736), (54, 11751), (76, 11871), (80, 11892), (94, 11967), (108, 12027), (154, 12213), (187, 12384), (188, 12390), (197, 12447), (204, 12483),

Gene: RanchParmCat\_11 Start: 6145, Stop: 7074, Start Num: 16

Candidate Starts for RanchParmCat\_11:

(Start: 16 @6145 has 7 MA's), (33, 6211), (53, 6307), (58, 6334), (77, 6430), (79, 6439), (80, 6445), (89, 6484), (96, 6520), (107, 6568), (156, 6775), (164, 6811), (203, 6997),

Gene: Raqqa\_7 Start: 5349, Stop: 6236, Start Num: 25

Candidate Starts for Raqqa\_7:

(Start: 25 @5349 has 105 MA's), (40, 5436), (46, 5463), (59, 5520), (66, 5568), (73, 5595), (74, 5601), (78, 5619), (132, 5841), (155, 5943), (184, 6081),

Gene: Rasputin\_12 Start: 7701, Stop: 8603, Start Num: 21

Candidate Starts for Rasputin\_12:

(Start: 21 @7701 has 36 MA's), (46, 7830), (65, 7932), (76, 7974), (79, 7989), (84, 8022), (150, 8277), (161, 8337), (167, 8370),

Gene: ReMo\_18 Start: 11295, Stop: 12245, Start Num: 6

Candidate Starts for ReMo\_18:

(Start: 6 @11295 has 512 MA's), (29, 11355), (46, 11451), (61, 11523), (64, 11547), (75, 11592), (84, 11643), (92, 11673), (183, 12051), (203, 12171), (211, 12216),

Gene: Reba\_18 Start: 11281, Stop: 12273, Start Num: 8

Candidate Starts for Reba\_18:

(Start: 8 @11281 has 150 MA's), (46, 11422), (70, 11542), (79, 11581), (84, 11614), (132, 11812), (150, 11881), (154, 11908), (170, 11989), (188, 12082), (194, 12127), (195, 12133), (198, 12166), (207, 12202), (211, 12226),

Gene: Rebeuca\_16 Start: 11434, Stop: 12372, Start Num: 6

Candidate Starts for Rebeuca\_16:

(Start: 6 @11434 has 512 MA's), (29, 11494), (42, 11572), (46, 11590), (47, 11605), (57, 11632), (61, 11662), (64, 11686), (84, 11782), (87, 11794), (92, 11812), (108, 11887), (117, 11908), (154, 12049), (158, 12070), (183, 12178), (188, 12211), (196, 12262), (203, 12298),

Gene: RedBaron\_9 Start: 5425, Stop: 6396, Start Num: 8

Candidate Starts for RedBaron\_9:

(Start: 8 @5425 has 150 MA's), (12, 5440), (Start: 25 @5476 has 105 MA's), (49, 5605), (89, 5791), (96, 5827), (114, 5905), (121, 5929), (156, 6082), (170, 6148), (203, 6304), (211, 6349),

Gene: RedRock\_19 Start: 14092, Stop: 15048, Start Num: 6

Candidate Starts for RedRock\_19:

(Start: 6 @14092 has 512 MA's), (29, 14152), (40, 14221), (46, 14248), (57, 14290), (61, 14320), (64, 14344), (75, 14389), (84, 14440), (92, 14470), (96, 14500), (132, 14629), (143, 14674), (164, 14776), (182, 14851), (188, 14887), (196, 14938),

Gene: Refuge\_19 Start: 14461, Stop: 15420, Start Num: 6

Candidate Starts for Refuge\_19:

(Start: 6 @14461 has 512 MA's), (29, 14521), (40, 14590), (45, 14611), (46, 14617), (57, 14659), (61, 14689), (64, 14713), (75, 14758), (84, 14809), (92, 14839), (122, 14962), (125, 14974), (181, 15205), (196, 15310),

Gene: Relief\_15 Start: 11480, Stop: 12412, Start Num: 6

Candidate Starts for Relief\_15:

(Start: 6 @11480 has 512 MA's), (29, 11540), (46, 11636), (61, 11708), (64, 11732), (84, 11828), (101, 11912), (146, 12056), (154, 12098), (188, 12260), (191, 12293), (196, 12311), (203, 12347), (210, 12380),

Gene: Remus\_18 Start: 11256, Stop: 12206, Start Num: 6

Candidate Starts for Remus\_18:

(Start: 6 @11256 has 512 MA's), (29, 11316), (46, 11412), (61, 11484), (64, 11508), (75, 11553), (84, 11604), (92, 11634), (183, 12012), (203, 12132), (211, 12177),

Gene: Remy19\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Remy19\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Renaissance\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Renaissance\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: ResDef\_16 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for ResDef\_16:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Retro23\_16 Start: 12258, Stop: 13214, Start Num: 6

Candidate Starts for Retro23\_16:

(Start: 6 @12258 has 512 MA's), (29, 12318), (40, 12387), (46, 12414), (57, 12456), (61, 12486), (64, 12510), (75, 12555), (84, 12606), (92, 12636), (118, 12741), (132, 12795), (181, 12999), (182, 13017), (188, 13053), (196, 13104),

Gene: RexFury\_12 Start: 7747, Stop: 8667, Start Num: 21

Candidate Starts for RexFury\_12:

(Start: 21 @7747 has 36 MA's), (46, 7876), (65, 7978), (76, 8020), (79, 8035), (84, 8068), (140, 8272), (161, 8368), (210, 8623),

Gene: Rhodalysa\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Rhodalysa\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: RhynO\_16 Start: 11413, Stop: 12348, Start Num: 6

Candidate Starts for RhynO\_16:

(Start: 6 @11413 has 512 MA's), (29, 11473), (42, 11551), (46, 11569), (47, 11584), (57, 11611), (61, 11641), (64, 11665), (84, 11761), (92, 11791), (117, 11884), (154, 12025), (158, 12046), (183, 12154), (188, 12187), (196, 12238), (203, 12274),

Gene: Rhynn\_15 Start: 11635, Stop: 12642, Start Num: 6

Candidate Starts for Rhynn\_15:

(Start: 6 @11635 has 512 MA's), (42, 11779), (44, 11788), (51, 11830), (54, 11845), (76, 11965), (80, 11986), (108, 12121), (134, 12223), (154, 12307), (160, 12337), (187, 12478), (188, 12484), (197, 12532),

Gene: RidgeCB\_15 Start: 11162, Stop: 12181, Start Num: 6

Candidate Starts for RidgeCB\_15:

(Start: 6 @11162 has 512 MA's), (51, 11357), (54, 11372), (76, 11492), (80, 11513), (94, 11588), (108, 11648), (154, 11834), (187, 12005), (188, 12011), (197, 12068), (204, 12104),

Gene: Rifter\_19 Start: 12208, Stop: 13179, Start Num: 5

Candidate Starts for Rifter\_19:

(Start: 5 @12208 has 75 MA's), (29, 12268), (46, 12364), (57, 12406), (61, 12436), (64, 12460), (75, 12505), (84, 12556), (87, 12568), (92, 12586), (122, 12691),

Gene: Rileysaurus\_6 Start: 4632, Stop: 5579, Start Num: 24

Candidate Starts for Rileysaurus\_6:

(Start: 23 @4629 has 3 MA's), (Start: 24 @4632 has 42 MA's), (33, 4680), (40, 4722), (53, 4776), (72, 4878), (79, 4908), (83, 4938), (94, 4989), (108, 5052), (133, 5145), (149, 5205), (153, 5241), (158, 5268), (163, 5286), (172, 5328), (200, 5472), (205, 5490), (206, 5499), (213, 5532),

Gene: Ringer\_15 Start: 11892, Stop: 12902, Start Num: 6

Candidate Starts for Ringer\_15:

(Start: 6 @11892 has 512 MA's), (42, 12036), (51, 12087), (54, 12102), (76, 12222), (80, 12243), (94, 12318), (108, 12378), (121, 12429), (129, 12462), (134, 12480), (154, 12564), (187, 12735), (188, 12741), (197, 12795),

Gene: Roary\_13 Start: 10345, Stop: 11295, Start Num: 19

Candidate Starts for Roary\_13:

(Start: 19 @10345 has 50 MA's), (46, 10474), (57, 10516), (79, 10633), (84, 10666), (98, 10741), (127, 10825), (150, 10915), (154, 10942), (161, 10975), (171, 11026), (181, 11065), (198, 11191), (207, 11227),

Gene: Rockstar\_15 Start: 10980, Stop: 11978, Start Num: 8

Candidate Starts for Rockstar\_15:

(Start: 8 @10980 has 150 MA's), (Start: 18 @10989 has 9 MA's), (46, 11121), (70, 11241), (79, 11280), (84, 11313), (108, 11424), (110, 11433), (141, 11550), (154, 11604), (170, 11685), (171, 11688), (188, 11778), (195, 11829), (198, 11862), (207, 11898),

Gene: Rohr\_16 Start: 11840, Stop: 12841, Start Num: 6

Candidate Starts for Rohr\_16:

(Start: 6 @11840 has 512 MA's), (54, 12050), (76, 12170), (80, 12191), (94, 12266), (108, 12326), (134, 12428), (154, 12512), (180, 12632), (188, 12689), (196, 12728), (197, 12734),

Gene: Roksolana\_19 Start: 12235, Stop: 13206, Start Num: 5

Candidate Starts for Roksolana\_19:

(Start: 5 @12235 has 75 MA's), (29, 12295), (46, 12391), (57, 12433), (61, 12463), (64, 12487), (75, 12532), (84, 12583), (87, 12595), (92, 12613), (122, 12718), (164, 12904), (211, 13177),

Gene: Romney\_15 Start: 11478, Stop: 12410, Start Num: 6

Candidate Starts for Romney\_15:

(Start: 6 @11478 has 512 MA's), (29, 11538), (46, 11634), (61, 11706), (64, 11730), (84, 11826), (101, 11910), (146, 12054), (154, 12096), (188, 12258), (191, 12291), (196, 12309), (203, 12345), (210, 12378),



Gene: Roosevelt\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Roosevelt\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Rosa24\_14 Start: 11455, Stop: 12387, Start Num: 6

Candidate Starts for Rosa24\_14:

(Start: 6 @11455 has 512 MA's), (29, 11515), (46, 11611), (61, 11683), (64, 11707), (84, 11803), (92, 11833), (101, 11887), (146, 12031), (154, 12073), (188, 12235), (191, 12268), (196, 12286), (203, 12322), (210, 12355),

Gene: Rosalind\_18 Start: 11417, Stop: 12367, Start Num: 6

Candidate Starts for Rosalind\_18:

(Start: 6 @11417 has 512 MA's), (29, 11477), (46, 11573), (61, 11645), (64, 11669), (75, 11714), (84, 11765), (92, 11795), (183, 12173), (203, 12293), (211, 12338),

Gene: Rowdy\_18 Start: 11324, Stop: 12259, Start Num: 6

Candidate Starts for Rowdy\_18:

(Start: 6 @11324 has 512 MA's), (29, 11384), (42, 11462), (46, 11480), (47, 11495), (57, 11522), (61, 11552), (64, 11576), (84, 11672), (92, 11702), (117, 11795), (141, 11882), (154, 11936), (158, 11957), (183, 12065), (188, 12098), (196, 12149), (203, 12185),

Gene: Rubeus\_16 Start: 11666, Stop: 12676, Start Num: 6

Candidate Starts for Rubeus\_16:

(Start: 6 @11666 has 512 MA's), (42, 11810), (51, 11861), (54, 11876), (76, 11996), (80, 12017), (94, 12092), (108, 12152), (121, 12203), (129, 12236), (134, 12254), (154, 12338), (187, 12509), (188, 12515), (197, 12569),

Gene: Rufus\_16 Start: 11723, Stop: 12727, Start Num: 6

Candidate Starts for Rufus\_16:

(Start: 6 @11723 has 512 MA's), (54, 11933), (76, 12053), (80, 12074), (94, 12149), (108, 12209), (121, 12260), (122, 12263), (134, 12311), (154, 12395), (188, 12572), (196, 12611), (197, 12617),

Gene: Ruin\_15 Start: 11478, Stop: 12410, Start Num: 6

Candidate Starts for Ruin\_15:

(Start: 6 @11478 has 512 MA's), (29, 11538), (46, 11634), (61, 11706), (64, 11730), (84, 11826), (101, 11910), (146, 12054), (154, 12096), (188, 12258), (191, 12291), (196, 12309), (203, 12345), (210, 12378),

Gene: Rummer\_17 Start: 11623, Stop: 12615, Start Num: 8

Candidate Starts for Rummer\_17:

(Start: 8 @11623 has 150 MA's), (46, 11764), (70, 11884), (79, 11923), (84, 11956), (108, 12067), (132, 12154), (154, 12250), (170, 12331), (178, 12358), (181, 12370), (188, 12424), (194, 12469), (195, 12475), (198, 12508), (207, 12544), (211, 12568),

Gene: Ruotula\_14 Start: 11843, Stop: 12847, Start Num: 6

Candidate Starts for Ruotula\_14:

(Start: 6 @11843 has 512 MA's), (54, 12053), (76, 12173), (80, 12194), (94, 12269), (108, 12329), (121, 12380), (129, 12413), (134, 12431), (154, 12515), (188, 12692), (196, 12731), (197, 12737),

Gene: Rutherford\_17 Start: 12184, Stop: 13182, Start Num: 6

Candidate Starts for Rutherford\_17:

(Start: 6 @12184 has 512 MA's), (54, 12394), (76, 12514), (80, 12535), (94, 12610), (108, 12670), (134, 12772), (154, 12856), (180, 12976), (188, 13033), (196, 13072), (197, 13078),

Gene: RyeScarlet\_18 Start: 12884, Stop: 13843, Start Num: 6

Candidate Starts for RyeScarlet\_18:

(Start: 6 @12884 has 512 MA's), (29, 12944), (45, 13034), (46, 13040), (57, 13082), (61, 13112), (64, 13136), (75, 13181), (84, 13232), (87, 13244), (92, 13262), (122, 13385), (125, 13397), (181, 13628), (196, 13733),

Gene: SKKY\_6 Start: 4645, Stop: 5616, Start Num: 24

Candidate Starts for SKKY\_6:

(Start: 23 @4642 has 3 MA's), (Start: 24 @4645 has 42 MA's), (33, 4693), (40, 4735), (53, 4789), (72, 4891), (79, 4921), (83, 4951), (94, 5002), (108, 5065), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (163, 5299), (172, 5341), (200, 5485), (205, 5503), (206, 5512), (213, 5545),

Gene: STLscum\_16 Start: 11754, Stop: 12770, Start Num: 6

Candidate Starts for STLscum\_16:

(Start: 6 @11754 has 512 MA's), (51, 11949), (54, 11964), (76, 12084), (80, 12105), (94, 12180), (108, 12240), (154, 12426), (187, 12597), (188, 12603), (197, 12660), (204, 12696),

Gene: Sabertooth\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Sabertooth\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Sabia\_17 Start: 11532, Stop: 12524, Start Num: 8

Candidate Starts for Sabia\_17:

(Start: 8 @11532 has 150 MA's), (46, 11673), (70, 11793), (79, 11832), (84, 11865), (108, 11976), (132, 12063), (154, 12159), (170, 12240), (178, 12267), (181, 12279), (188, 12333), (194, 12378), (195, 12384), (198, 12417), (207, 12453), (211, 12477),

Gene: Sabinator\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for Sabinator\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: Sachima\_15 Start: 12848, Stop: 13807, Start Num: 6

Candidate Starts for Sachima\_15:

(Start: 6 @12848 has 512 MA's), (29, 12908), (45, 12998), (46, 13004), (57, 13046), (61, 13076), (64, 13100), (75, 13145), (84, 13196), (87, 13208), (92, 13226), (122, 13349), (125, 13361), (181, 13592), (196, 13697),

Gene: Sagefire\_16 Start: 12435, Stop: 13442, Start Num: 6

Candidate Starts for Sagefire\_16:

(Start: 6 @12435 has 512 MA's), (42, 12579), (51, 12630), (54, 12645), (76, 12765), (80, 12786), (94, 12861), (108, 12921), (121, 12972), (129, 13005), (134, 13023), (154, 13107), (187, 13278), (188, 13284), (197, 13338),

Gene: Saintus\_13 Start: 10360, Stop: 11310, Start Num: 19

Candidate Starts for Saintus\_13:

(Start: 19 @10360 has 50 MA's), (46, 10489), (57, 10531), (79, 10648), (84, 10681), (98, 10756), (127, 10840), (150, 10930), (154, 10957), (161, 10990), (171, 11041), (181, 11080), (198, 11206), (207, 11242),

Gene: Salz\_16 Start: 12696, Stop: 13685, Start Num: 5

Candidate Starts for Salz\_16:

(Start: 5 @12696 has 75 MA's), (29, 12756), (33, 12786), (45, 12846), (46, 12852), (57, 12894), (61, 12924), (64, 12948), (75, 12993), (84, 13044), (87, 13056), (92, 13074), (110, 13158), (122, 13194), (125, 13206), (132, 13233), (188, 13491), (206, 13596),

Gene: Sandaddy\_14 Start: 11560, Stop: 12564, Start Num: 6

Candidate Starts for Sandaddy\_14:

(Start: 6 @11560 has 512 MA's), (42, 11704), (44, 11713), (51, 11755), (54, 11770), (76, 11890), (80, 11911), (94, 11986), (108, 12046), (134, 12148), (154, 12232), (160, 12262), (180, 12352), (187, 12403), (188, 12409), (197, 12457),

Gene: Sanya\_14 Start: 12221, Stop: 13219, Start Num: 6

Candidate Starts for Sanya\_14:

(Start: 6 @12221 has 512 MA's), (42, 12365), (51, 12416), (54, 12431), (76, 12551), (80, 12572), (94, 12647), (108, 12707), (134, 12809), (154, 12893), (180, 13013), (188, 13070), (196, 13109), (197, 13115),

Gene: SarFire\_15 Start: 11420, Stop: 12436, Start Num: 6

Candidate Starts for SarFire\_15:

(Start: 6 @11420 has 512 MA's), (51, 11615), (54, 11630), (76, 11750), (80, 11771), (94, 11846), (108, 11906), (154, 12092), (187, 12263), (188, 12269), (197, 12326), (204, 12362),

Gene: SaturnRing\_15 Start: 11103, Stop: 12077, Start Num: 8

Candidate Starts for SaturnRing\_15:

(Start: 8 @11103 has 150 MA's), (46, 11244), (70, 11364), (79, 11403), (84, 11436), (141, 11673), (150, 11700), (154, 11727), (171, 11811), (188, 11901), (194, 11946), (195, 11952), (198, 11985), (207, 12021),

Gene: Scamp\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Scamp\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Scherzo\_17 Start: 12881, Stop: 13840, Start Num: 6

Candidate Starts for Scherzo\_17:

(Start: 6 @12881 has 512 MA's), (29, 12941), (45, 13031), (46, 13037), (57, 13079), (61, 13109), (64, 13133), (75, 13178), (84, 13229), (87, 13241), (92, 13259), (122, 13382), (125, 13394), (181, 13625), (196, 13730),

Gene: Schiebel\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Schiebel\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Scorpia\_14 Start: 10600, Stop: 11541, Start Num: 19

Candidate Starts for Scorpia\_14:

(Start: 19 @10600 has 50 MA's), (46, 10729), (61, 10801), (79, 10888), (84, 10921), (92, 10951), (125, 11062), (154, 11185), (159, 11209), (171, 11269), (181, 11308), (183, 11329), (189, 11377), (198, 11434), (207, 11470), (211, 11494),

Gene: Scout\_15 Start: 10403, Stop: 11377, Start Num: 8

Candidate Starts for Scout\_15:

(Start: 8 @10403 has 150 MA's), (Start: 18 @10412 has 9 MA's), (46, 10544), (70, 10664), (79, 10703), (84, 10736), (141, 10973), (150, 11000), (154, 11027), (171, 11111), (188, 11201), (194, 11246), (195, 11252), (198, 11285), (207, 11321),

Gene: Scowl\_16 Start: 12111, Stop: 13115, Start Num: 6

Candidate Starts for Scowl\_16:

(Start: 6 @12111 has 512 MA's), (42, 12255), (51, 12306), (54, 12321), (76, 12441), (80, 12462), (94, 12537), (108, 12597), (134, 12699), (154, 12783), (160, 12813), (180, 12903), (187, 12954), (188, 12960), (197, 13008),

Gene: Seabiscuit\_17 Start: 11640, Stop: 12650, Start Num: 6

Candidate Starts for Seabiscuit\_17:

(Start: 6 @11640 has 512 MA's), (42, 11784), (51, 11835), (54, 11850), (76, 11970), (80, 11991), (94, 12066), (108, 12126), (129, 12210), (134, 12228), (154, 12312), (187, 12483), (188, 12489), (197, 12543),

Gene: Seanderson\_16 Start: 12084, Stop: 13085, Start Num: 6

Candidate Starts for Seanderson\_16:

(Start: 6 @12084 has 512 MA's), (42, 12228), (51, 12279), (54, 12294), (76, 12414), (80, 12435), (94, 12510), (108, 12570), (129, 12654), (134, 12672), (154, 12756), (188, 12933), (196, 12972), (197, 12978), (214, 13062),

Gene: SemperFi\_18 Start: 12535, Stop: 13491, Start Num: 6

Candidate Starts for SemperFi\_18:

(Start: 6 @12535 has 512 MA's), (29, 12595), (37, 12643), (46, 12691), (57, 12733), (61, 12763), (64, 12787), (75, 12832), (84, 12883), (92, 12913), (118, 13018), (125, 13045), (132, 13072), (181, 13276), (182, 13294), (188, 13330), (196, 13381),

Gene: SenorClean\_14 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for SenorClean\_14:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Serenity\_15 Start: 11078, Stop: 12034, Start Num: 6

Candidate Starts for Serenity\_15:

(Start: 6 @11078 has 512 MA's), (29, 11138), (40, 11207), (46, 11234), (57, 11276), (61, 11306), (64, 11330), (75, 11375), (84, 11426), (118, 11561), (125, 11588), (132, 11615), (143, 11660), (181, 11819), (182, 11837), (188, 11873), (196, 11924),

Gene: Severus\_14 Start: 9361, Stop: 10293, Start Num: 6

Candidate Starts for Severus\_14:

(Start: 6 @9361 has 512 MA's), (29, 9421), (42, 9499), (46, 9517), (47, 9532), (57, 9559), (61, 9589), (64, 9613), (75, 9658), (84, 9709), (127, 9859), (130, 9874), (141, 9922), (154, 9976), (196, 10189), (203, 10225), (206, 10243), (210, 10258),

Gene: ShaboiShabazz\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for ShaboiShabazz\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Shaka\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Shaka\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (92, 11857), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Sham4\_16 Start: 12702, Stop: 13691, Start Num: 5

Candidate Starts for Sham4\_16:

(Start: 5 @12702 has 75 MA's), (29, 12762), (33, 12792), (45, 12852), (46, 12858), (57, 12900), (61, 12930), (64, 12954), (75, 12999), (84, 13050), (87, 13062), (92, 13080), (110, 13164), (122, 13200), (125, 13212), (132, 13239), (188, 13497), (206, 13602),

Gene: Shapes\_18 Start: 11324, Stop: 12259, Start Num: 6

Candidate Starts for Shapes\_18:

(Start: 6 @11324 has 512 MA's), (29, 11384), (42, 11462), (46, 11480), (47, 11495), (57, 11522), (61, 11552), (64, 11576), (84, 11672), (92, 11702), (117, 11795), (141, 11882), (154, 11936), (158, 11957), (183, 12065), (188, 12098), (196, 12149), (203, 12185),

Gene: ShawBrad\_7 Start: 4901, Stop: 5842, Start Num: 25

Candidate Starts for ShawBrad\_7:

(Start: 25 @4901 has 105 MA's), (52, 5036), (66, 5117), (71, 5138), (86, 5213), (114, 5339), (162, 5540), (166, 5558), (173, 5591), (184, 5675), (212, 5813),

Gene: ShayRa\_19 Start: 11417, Stop: 12367, Start Num: 6

Candidate Starts for ShayRa\_19:

(Start: 6 @11417 has 512 MA's), (29, 11477), (46, 11573), (61, 11645), (64, 11669), (75, 11714), (84, 11765), (92, 11795), (183, 12173), (203, 12293), (211, 12338),

Gene: SheaKeira\_16 Start: 11082, Stop: 12050, Start Num: 6

Candidate Starts for SheaKeira\_16:

(Start: 6 @11082 has 512 MA's), (29, 11142), (46, 11238), (57, 11280), (61, 11310), (64, 11334), (67, 11346), (75, 11379), (84, 11430), (92, 11460), (132, 11619), (154, 11715),

Gene: SheckWes\_7 Start: 5091, Stop: 6050, Start Num: 8

Candidate Starts for SheckWes\_7:

(Start: 8 @5091 has 150 MA's), (Start: 25 @5142 has 105 MA's), (33, 5181), (67, 5358), (77, 5400), (79, 5409), (89, 5454), (107, 5538), (132, 5634), (144, 5691), (156, 5745), (164, 5781), (209, 5994), (211, 6012),

Gene: Sheen\_17 Start: 13160, Stop: 14149, Start Num: 7

Candidate Starts for Sheen\_17:

(Start: 7 @13160 has 1 MA's), (40, 13277), (46, 13304), (70, 13424), (73, 13436), (79, 13463), (84, 13496), (115, 13634), (123, 13661), (132, 13691), (151, 13766), (170, 13868), (178, 13895), (181, 13907), (182, 13925), (196, 14027), (198, 14048),

Gene: SheldonCooper\_15 Start: 11458, Stop: 12390, Start Num: 6

Candidate Starts for SheldonCooper\_15:

(Start: 6 @11458 has 512 MA's), (29, 11518), (46, 11614), (47, 11629), (61, 11686), (64, 11710), (84, 11806), (92, 11836), (101, 11890), (146, 12034), (154, 12076), (188, 12238), (191, 12271), (196,

12289), (203, 12325), (210, 12358),

Gene: ShortQueendom\_14 Start: 11226, Stop: 12242, Start Num: 6

Candidate Starts for ShortQueendom\_14:

(Start: 6 @11226 has 512 MA's), (51, 11421), (54, 11436), (57, 11451), (68, 11523), (76, 11556), (80, 11577), (94, 11652), (108, 11712), (154, 11898), (187, 12069), (188, 12075), (197, 12132), (204, 12168),

Gene: Shuman\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Shuman\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Shygu2\_15 Start: 11486, Stop: 12418, Start Num: 6

Candidate Starts for Shygu2\_15:

(Start: 6 @11486 has 512 MA's), (29, 11546), (46, 11642), (61, 11714), (64, 11738), (84, 11834), (101, 11918), (146, 12062), (154, 12104), (188, 12266), (191, 12299), (196, 12317), (203, 12353), (210, 12386),

Gene: Sibs6\_17 Start: 11860, Stop: 12879, Start Num: 6

Candidate Starts for Sibs6\_17:

(Start: 6 @11860 has 512 MA's), (54, 12070), (76, 12190), (80, 12211), (94, 12286), (108, 12346), (129, 12430), (134, 12448), (154, 12532), (160, 12562), (180, 12652), (188, 12709), (197, 12766), (204, 12802),

Gene: SilverChicken\_7 Start: 4878, Stop: 5813, Start Num: 25

Candidate Starts for SilverChicken\_7:

(Start: 25 @4878 has 105 MA's), (35, 4932), (43, 4977), (52, 5013), (71, 5115), (86, 5190), (128, 5370), (144, 5436), (166, 5532), (173, 5565), (174, 5583), (178, 5607), (184, 5649), (205, 5748), (209, 5766), (212, 5787),

Gene: Sizemore\_7 Start: 7104, Stop: 8039, Start Num: 25

Candidate Starts for Sizemore\_7:

(Start: 25 @7104 has 105 MA's), (35, 7161), (36, 7164), (38, 7176), (59, 7275), (66, 7323), (74, 7356), (83, 7407), (102, 7500), (168, 7779), (175, 7818), (211, 8013),

Gene: SketchMex\_7 Start: 5369, Stop: 6331, Start Num: 8

Candidate Starts for SketchMex\_7:

(Start: 8 @5369 has 150 MA's), (12, 5384), (Start: 25 @5411 has 105 MA's), (49, 5537), (53, 5546), (66, 5624), (77, 5669), (79, 5678), (89, 5723), (96, 5759), (113, 5834), (156, 6014), (164, 6050), (165, 6053), (170, 6080), (203, 6236), (209, 6263), (211, 6281),

Gene: SkiPole\_17 Start: 11733, Stop: 12731, Start Num: 6

Candidate Starts for SkiPole\_17:

(Start: 6 @11733 has 512 MA's), (42, 11877), (54, 11943), (62, 12000), (76, 12063), (80, 12084), (94, 12159), (108, 12219), (134, 12321), (154, 12405), (180, 12525), (188, 12582), (196, 12621), (197, 12627),

Gene: Skipitt\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Skipitt\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Skitty\_7 Start: 4404, Stop: 5294, Start Num: 25

Candidate Starts for Skitty\_7:

(Start: 25 @4404 has 105 MA's), (46, 4515), (94, 4749), (106, 4806), (110, 4821), (135, 4911), (148, 4962), (168, 5058), (181, 5106), (214, 5280),

Gene: Sknot\_17 Start: 12213, Stop: 13169, Start Num: 6

Candidate Starts for Sknot\_17:

(Start: 6 @12213 has 512 MA's), (29, 12273), (40, 12342), (46, 12369), (57, 12411), (61, 12441), (64, 12465), (75, 12510), (84, 12561), (87, 12573), (118, 12696), (125, 12723), (132, 12750), (143, 12795), (181, 12954), (182, 12972), (188, 13008), (196, 13059),

Gene: Slagathor\_16 Start: 11512, Stop: 12513, Start Num: 6

Candidate Starts for Slagathor\_16:

(Start: 6 @11512 has 512 MA's), (54, 11722), (76, 11842), (80, 11863), (94, 11938), (108, 11998), (121, 12049), (122, 12052), (129, 12082), (134, 12100), (154, 12184), (188, 12361), (196, 12400), (197, 12406),

Gene: Smairt\_16 Start: 12031, Stop: 13050, Start Num: 6

Candidate Starts for Smairt\_16:

(Start: 6 @12031 has 512 MA's), (51, 12226), (54, 12241), (76, 12361), (80, 12382), (94, 12457), (108, 12517), (154, 12703), (187, 12874), (188, 12880), (197, 12937), (204, 12973),

Gene: Smeadley\_13 Start: 10378, Stop: 11328, Start Num: 19

Candidate Starts for Smeadley\_13:

(Start: 19 @10378 has 50 MA's), (46, 10507), (57, 10549), (79, 10666), (84, 10699), (98, 10774), (127, 10858), (150, 10948), (154, 10975), (161, 11008), (171, 11059), (181, 11098), (198, 11224), (207, 11260),

Gene: Smeagan\_18 Start: 12620, Stop: 13576, Start Num: 6

Candidate Starts for Smeagan\_18:

(Start: 6 @12620 has 512 MA's), (29, 12680), (37, 12728), (40, 12749), (46, 12776), (57, 12818), (61, 12848), (64, 12872), (84, 12968), (87, 12980), (118, 13103), (125, 13130), (132, 13157), (143, 13202), (181, 13361), (182, 13379), (188, 13415), (196, 13466),

Gene: Smeagol\_16 Start: 12447, Stop: 13466, Start Num: 6

Candidate Starts for Smeagol\_16:

(Start: 6 @12447 has 512 MA's), (42, 12591), (51, 12642), (54, 12657), (76, 12777), (80, 12798), (94, 12873), (108, 12933), (129, 13017), (134, 13035), (154, 13119), (187, 13290), (188, 13296), (197, 13353), (204, 13389),

Gene: SmellyB\_19 Start: 12240, Stop: 13211, Start Num: 5

Candidate Starts for SmellyB\_19:

(Start: 5 @12240 has 75 MA's), (29, 12300), (46, 12396), (57, 12438), (61, 12468), (64, 12492), (75, 12537), (84, 12588), (87, 12600), (92, 12618), (122, 12723), (164, 12909), (211, 13182),

Gene: SnapTap\_16 Start: 12107, Stop: 13063, Start Num: 6

Candidate Starts for SnapTap\_16:

(Start: 6 @12107 has 512 MA's), (29, 12167), (40, 12236), (46, 12263), (57, 12305), (61, 12335), (64, 12359), (75, 12404), (84, 12455), (92, 12485), (118, 12590), (132, 12644), (181, 12848), (182, 12866), (188, 12902), (196, 12953),

Gene: Snape\_16 Start: 12702, Stop: 13691, Start Num: 5

Candidate Starts for Snape\_16:

(Start: 5 @12702 has 75 MA's), (29, 12762), (33, 12792), (45, 12852), (46, 12858), (57, 12900), (61, 12930), (64, 12954), (75, 12999), (84, 13050), (87, 13062), (92, 13080), (110, 13164), (122, 13200), (125, 13212), (132, 13239), (188, 13497), (206, 13602),

Gene: Snazzy\_13 Start: 11040, Stop: 12038, Start Num: 6

Candidate Starts for Snazzy\_13:

(Start: 6 @11040 has 512 MA's), (42, 11184), (51, 11235), (54, 11250), (76, 11370), (80, 11391), (94, 11466), (108, 11526), (129, 11610), (134, 11628), (154, 11712), (188, 11889), (196, 11928), (197, 11934),

Gene: Sneeze\_7 Start: 7098, Stop: 8033, Start Num: 25

Candidate Starts for Sneeze\_7:

(Start: 25 @7098 has 105 MA's), (35, 7155), (38, 7170), (66, 7317), (74, 7350), (93, 7437), (168, 7773), (181, 7842),

Gene: Snickers\_17 Start: 11513, Stop: 12505, Start Num: 8

Candidate Starts for Snickers\_17:

(Start: 8 @11513 has 150 MA's), (46, 11654), (70, 11774), (79, 11813), (84, 11846), (108, 11957), (132, 12044), (154, 12140), (170, 12221), (178, 12248), (181, 12260), (188, 12314), (194, 12359), (195, 12365), (198, 12398), (207, 12434), (211, 12458),

Gene: SoYo\_17 Start: 11450, Stop: 12442, Start Num: 8

Candidate Starts for SoYo\_17:

(Start: 8 @11450 has 150 MA's), (46, 11591), (70, 11711), (79, 11750), (84, 11783), (108, 11894), (132, 11981), (154, 12077), (170, 12158), (178, 12185), (181, 12197), (188, 12251), (194, 12296), (195, 12302), (198, 12335), (207, 12371), (211, 12395),

Gene: Socotra\_9 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for Socotra\_9:

(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (89, 5746), (96, 5782), (114, 5860), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: SoilDragon\_17 Start: 11224, Stop: 12216, Start Num: 8

Candidate Starts for SoilDragon\_17:

(Start: 8 @11224 has 150 MA's), (46, 11365), (70, 11485), (79, 11524), (84, 11557), (108, 11668), (132, 11755), (154, 11851), (170, 11932), (178, 11959), (181, 11971), (188, 12025), (194, 12070), (195, 12076), (198, 12109), (207, 12145), (211, 12169),

Gene: Solid\_6 Start: 4644, Stop: 5591, Start Num: 24

Candidate Starts for Solid\_6:

(Start: 24 @4644 has 42 MA's), (33, 4692), (40, 4734), (53, 4788), (72, 4890), (79, 4920), (84, 4953), (108, 5064), (130, 5139), (133, 5157), (138, 5181), (149, 5217), (153, 5253), (158, 5280), (163, 5298), (172, 5340), (200, 5484), (205, 5502), (206, 5511), (213, 5544),

Gene: Solon\_15 Start: 12191, Stop: 13189, Start Num: 6

Candidate Starts for Solon\_15:

(Start: 6 @12191 has 512 MA's), (42, 12335), (51, 12386), (54, 12401), (76, 12521), (80, 12542), (94, 12617), (108, 12677), (134, 12779), (154, 12863), (180, 12983), (188, 13040), (196, 13079), (197, 13085),

Gene: Sopespian\_8 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for Sopespian\_8:



(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (89, 5746), (96, 5782), (114, 5860), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: SororFago\_15 Start: 11241, Stop: 12188, Start Num: 11

Candidate Starts for SororFago\_15:

(Start: 11 @11241 has 9 MA's), (29, 11292), (46, 11388), (47, 11403), (57, 11430), (61, 11460), (68, 11499), (75, 11529), (84, 11580), (118, 11715), (181, 11973), (188, 12027), (196, 12078),

Gene: Sorpresa\_15 Start: 11560, Stop: 12564, Start Num: 6

Candidate Starts for Sorpresa\_15:

(Start: 6 @11560 has 512 MA's), (42, 11704), (44, 11713), (51, 11755), (54, 11770), (76, 11890), (80, 11911), (94, 11986), (108, 12046), (134, 12148), (154, 12232), (160, 12262), (180, 12352), (187, 12403), (188, 12409), (197, 12457),

Gene: Soshari\_19 Start: 11622, Stop: 12614, Start Num: 8

Candidate Starts for Soshari\_19:

(Start: 8 @11622 has 150 MA's), (46, 11763), (70, 11883), (79, 11922), (84, 11955), (108, 12066), (132, 12153), (154, 12249), (170, 12330), (178, 12357), (181, 12369), (188, 12423), (194, 12468), (195, 12474), (198, 12507), (207, 12543), (211, 12567),

Gene: Soul22\_7 Start: 4877, Stop: 5812, Start Num: 25

Candidate Starts for Soul22\_7:

(Start: 25 @4877 has 105 MA's), (34, 4922), (35, 4931), (43, 4976), (52, 5012), (71, 5114), (86, 5189), (128, 5369), (144, 5435), (166, 5531), (173, 5564), (174, 5582), (178, 5606), (184, 5648), (205, 5747), (209, 5765), (212, 5786),

Gene: Soups\_18 Start: 11417, Stop: 12367, Start Num: 6

Candidate Starts for Soups\_18:

(Start: 6 @11417 has 512 MA's), (29, 11477), (46, 11573), (61, 11645), (64, 11669), (75, 11714), (84, 11765), (92, 11795), (183, 12173), (203, 12293), (211, 12338),

Gene: Spartoi\_6 Start: 4700, Stop: 5608, Start Num: 20

Candidate Starts for Spartoi\_6:

(Start: 20 @4700 has 2 MA's), (40, 4799), (53, 4853), (64, 4922), (82, 5009), (108, 5129), (146, 5255), (147, 5258), (150, 5270), (201, 5540),

Gene: Sparxx\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Sparxx\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Spike509\_17 Start: 11623, Stop: 12615, Start Num: 8

Candidate Starts for Spike509\_17:

(Start: 8 @11623 has 150 MA's), (46, 11764), (70, 11884), (79, 11923), (84, 11956), (108, 12067), (132, 12154), (154, 12250), (170, 12331), (178, 12358), (181, 12370), (188, 12424), (194, 12469), (195, 12475), (198, 12508), (207, 12544), (211, 12568),

Gene: SpikeBT\_17 Start: 12496, Stop: 13500, Start Num: 6

Candidate Starts for SpikeBT\_17:

(Start: 6 @12496 has 512 MA's), (42, 12640), (44, 12649), (51, 12691), (54, 12706), (76, 12826), (80, 12847), (94, 12922), (108, 12982), (134, 13084), (154, 13168), (180, 13288), (187, 13339), (188, 13345), (197, 13393),

Gene: Spino\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Spino\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Spooky\_7 Start: 4889, Stop: 5827, Start Num: 25

Candidate Starts for Spooky\_7:

(Start: 25 @4889 has 105 MA's), (33, 4931), (34, 4934), (52, 5024), (71, 5126), (85, 5198), (86, 5201), (91, 5219), (131, 5390), (155, 5495), (163, 5531), (166, 5543), (168, 5555), (178, 5618), (209, 5777), (212, 5798),

Gene: Spouty\_17 Start: 12878, Stop: 13837, Start Num: 6

Candidate Starts for Spouty\_17:

(Start: 6 @12878 has 512 MA's), (29, 12938), (45, 13028), (46, 13034), (57, 13076), (61, 13106), (64, 13130), (75, 13175), (84, 13226), (87, 13238), (92, 13256), (122, 13379), (125, 13391), (181, 13622), (196, 13727),

Gene: Squee\_16 Start: 12036, Stop: 13052, Start Num: 6

Candidate Starts for Squee\_16:

(Start: 6 @12036 has 512 MA's), (51, 12231), (54, 12246), (57, 12261), (68, 12333), (76, 12366), (80, 12387), (94, 12462), (108, 12522), (154, 12708), (187, 12879), (188, 12885), (197, 12942), (204, 12978),

Gene: Squiddly\_8 Start: 5582, Stop: 6520, Start Num: 25

Candidate Starts for Squiddly\_8:

(Start: 25 @5582 has 105 MA's), (33, 5624), (34, 5627), (52, 5717), (71, 5819), (78, 5849), (86, 5894), (131, 6083), (168, 6248), (178, 6311), (209, 6470), (212, 6491),

Gene: StCroix\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for StCroix\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Stagni\_17 Start: 11541, Stop: 12533, Start Num: 8

Candidate Starts for Stagni\_17:

(Start: 8 @11541 has 150 MA's), (46, 11682), (70, 11802), (79, 11841), (84, 11874), (108, 11985), (132, 12072), (154, 12168), (170, 12249), (178, 12276), (181, 12288), (188, 12342), (194, 12387), (195, 12393), (198, 12426), (207, 12462), (211, 12486),

Gene: StarStuff\_19 Start: 12087, Stop: 13043, Start Num: 5

Candidate Starts for StarStuff\_19:

(Start: 5 @12087 has 75 MA's), (29, 12147), (45, 12237), (46, 12243), (57, 12285), (61, 12315), (64, 12339), (75, 12384), (84, 12435), (87, 12447), (92, 12465), (95, 12486), (122, 12573), (125, 12585), (127, 12591), (132, 12612), (171, 12792), (181, 12816), (188, 12870), (215, 13017),

Gene: Starburst\_9 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for Starburst\_9:

(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (89, 5746), (96, 5782), (114, 5860), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: Stargaze\_7 Start: 7256, Stop: 8182, Start Num: 25

Candidate Starts for Stargaze\_7:

(Start: 25 @7256 has 105 MA's), (35, 7313), (40, 7343), (66, 7475), (74, 7508), (83, 7559), (130, 7757), (166, 7919), (181, 7991), (211, 8156),

Gene: Stasia\_16 Start: 11927, Stop: 12865, Start Num: 6

Candidate Starts for Stasia\_16:

(Start: 6 @11927 has 512 MA's), (29, 11987), (46, 12083), (61, 12155), (64, 12179), (84, 12275), (92, 12305), (103, 12365), (108, 12380), (154, 12542), (188, 12704), (203, 12791),

Gene: SteamedHams\_10 Start: 5412, Stop: 6368, Start Num: 8

Candidate Starts for SteamedHams\_10:

(Start: 8 @5412 has 150 MA's), (Start: 25 @5454 has 105 MA's), (66, 5667), (77, 5712), (79, 5721), (89, 5766), (113, 5877), (144, 6003), (156, 6057), (164, 6093), (165, 6096), (170, 6123), (203, 6279), (211, 6324), (212, 6327),

Gene: Steamy\_17 Start: 12661, Stop: 13617, Start Num: 6

Candidate Starts for Steamy\_17:

(Start: 6 @12661 has 512 MA's), (29, 12721), (46, 12817), (57, 12859), (61, 12889), (64, 12913), (84, 13009), (87, 13021), (92, 13039), (122, 13159), (125, 13171), (181, 13402), (196, 13507), (210, 13576),

Gene: StepMih\_17 Start: 11532, Stop: 12524, Start Num: 8

Candidate Starts for StepMih\_17:

(Start: 8 @11532 has 150 MA's), (46, 11673), (70, 11793), (79, 11832), (84, 11865), (108, 11976), (132, 12063), (154, 12159), (170, 12240), (178, 12267), (181, 12279), (188, 12333), (194, 12378), (195, 12384), (198, 12417), (207, 12453), (211, 12477),

Gene: Stephig9\_13 Start: 10359, Stop: 11309, Start Num: 19

Candidate Starts for Stephig9\_13:

(Start: 19 @10359 has 50 MA's), (46, 10488), (57, 10530), (79, 10647), (84, 10680), (98, 10755), (127, 10839), (150, 10929), (154, 10956), (161, 10989), (171, 11040), (181, 11079), (198, 11205), (207, 11241),

Gene: StewieG\_14 Start: 11407, Stop: 12408, Start Num: 6

Candidate Starts for StewieG\_14:

(Start: 6 @11407 has 512 MA's), (42, 11551), (51, 11602), (54, 11617), (76, 11737), (80, 11758), (94, 11833), (108, 11893), (122, 11947), (129, 11977), (134, 11995), (154, 12079), (188, 12256), (196, 12295), (197, 12301), (214, 12385),

Gene: Stink\_15 Start: 11448, Stop: 12380, Start Num: 6

Candidate Starts for Stink\_15:

(Start: 6 @11448 has 512 MA's), (29, 11508), (46, 11604), (47, 11619), (61, 11676), (64, 11700), (84, 11796), (92, 11826), (101, 11880), (154, 12066), (188, 12228), (191, 12261), (196, 12279), (210, 12348),

Gene: Stormborn\_6 Start: 4641, Stop: 5588, Start Num: 24

Candidate Starts for Stormborn\_6:

(Start: 23 @4638 has 3 MA's), (Start: 24 @4641 has 42 MA's), (33, 4689), (40, 4731), (48, 4773), (53, 4785), (63, 4848), (72, 4887), (79, 4917), (83, 4947), (94, 4998), (106, 5055), (135, 5160), (138, 5178), (153, 5250), (158, 5277), (172, 5337), (200, 5481), (206, 5508), (213, 5541),

Gene: StrongArm\_14 Start: 12284, Stop: 13303, Start Num: 6

Candidate Starts for StrongArm\_14:

(Start: 6 @12284 has 512 MA's), (51, 12479), (54, 12494), (76, 12614), (80, 12635), (94, 12710), (108, 12770), (154, 12956), (187, 13127), (188, 13133), (197, 13190), (204, 13226),

Gene: Strosahl\_18 Start: 11256, Stop: 12206, Start Num: 6

Candidate Starts for Strosahl\_18:

(Start: 6 @11256 has 512 MA's), (29, 11316), (46, 11412), (61, 11484), (64, 11508), (75, 11553), (84, 11604), (92, 11634), (183, 12012), (203, 12132), (211, 12177),

Gene: SummitAcademy\_7 Start: 5169, Stop: 6128, Start Num: 8

Candidate Starts for SummitAcademy\_7:

(Start: 8 @5169 has 150 MA's), (Start: 25 @5220 has 105 MA's), (50, 5349), (67, 5436), (77, 5478), (79, 5487), (89, 5532), (107, 5616), (132, 5712), (144, 5769), (156, 5823), (164, 5859), (209, 6072), (211, 6090), (221, 6120),

Gene: Sumter\_14 Start: 11150, Stop: 12148, Start Num: 6

Candidate Starts for Sumter\_14:

(Start: 6 @11150 has 512 MA's), (42, 11294), (51, 11345), (54, 11360), (76, 11480), (80, 11501), (94, 11576), (108, 11636), (134, 11738), (154, 11822), (180, 11942), (188, 11999), (196, 12038), (197, 12044),

Gene: Sunhee\_14 Start: 11252, Stop: 12199, Start Num: 11

Candidate Starts for Sunhee\_14:

(Start: 11 @11252 has 9 MA's), (29, 11303), (46, 11399), (57, 11441), (61, 11471), (68, 11510), (75, 11540), (84, 11591), (118, 11726), (127, 11759), (181, 11984), (188, 12038),

Gene: Sunshine924\_14 Start: 11134, Stop: 12132, Start Num: 6

Candidate Starts for Sunshine924\_14:

(Start: 6 @11134 has 512 MA's), (42, 11278), (51, 11329), (54, 11344), (76, 11464), (80, 11485), (94, 11560), (108, 11620), (129, 11704), (134, 11722), (154, 11806), (180, 11926), (188, 11983), (196, 12022), (197, 12028),

Gene: SuperAwesome\_19 Start: 12230, Stop: 13201, Start Num: 5

Candidate Starts for SuperAwesome\_19:

(Start: 5 @12230 has 75 MA's), (29, 12290), (46, 12386), (57, 12428), (61, 12458), (64, 12482), (75, 12527), (84, 12578), (87, 12590), (92, 12608), (122, 12713), (164, 12899), (211, 13172),

Gene: SuperCallie99\_19 Start: 12231, Stop: 13202, Start Num: 5

Candidate Starts for SuperCallie99\_19:

(Start: 5 @12231 has 75 MA's), (29, 12291), (46, 12387), (57, 12429), (61, 12459), (64, 12483), (75, 12528), (84, 12579), (87, 12591), (92, 12609), (122, 12714), (164, 12900),

Gene: Superchunk\_15 Start: 10834, Stop: 11790, Start Num: 6

Candidate Starts for Superchunk\_15:

(Start: 6 @10834 has 512 MA's), (29, 10894), (45, 10984), (46, 10990), (57, 11032), (61, 11062), (64, 11086), (75, 11131), (84, 11182), (87, 11194), (92, 11212), (132, 11371), (143, 11416), (161, 11500), (181, 11575),

Gene: Supernova\_6 Start: 4640, Stop: 5584, Start Num: 24

Candidate Starts for Supernova\_6:

(Start: 23 @4637 has 3 MA's), (Start: 24 @4640 has 42 MA's), (33, 4688), (40, 4730), (48, 4772), (53, 4784), (72, 4886), (79, 4916), (83, 4946), (90, 4973), (94, 4997), (108, 5060), (138, 5177), (149, 5213), (153, 5249), (158, 5276), (172, 5336), (197, 5459), (200, 5480), (205, 5498), (206, 5507), (213, 5540),

Gene: Survivors\_10 Start: 6147, Stop: 7073, Start Num: 18

Candidate Starts for Survivors\_10:

(Start: 18 @6147 has 9 MA's), (46, 6282), (68, 6393), (73, 6414), (77, 6432), (83, 6462), (89, 6486), (96, 6522), (107, 6570), (113, 6597), (130, 6660), (131, 6663), (132, 6666), (156, 6777), (164, 6813), (168, 6831), (170, 6843), (185, 6912), (187, 6927), (202, 6996), (209, 7026),

Gene: Swann\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for Swann\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: SweatNTears\_10 Start: 5896, Stop: 6852, Start Num: 8

Candidate Starts for SweatNTears\_10:

(Start: 8 @5896 has 150 MA's), (12, 5911), (Start: 25 @5938 has 105 MA's), (49, 6064), (53, 6073), (66, 6151), (77, 6196), (79, 6205), (89, 6250), (96, 6286), (113, 6361), (156, 6541), (164, 6577), (165, 6580), (170, 6607), (203, 6763), (209, 6790), (211, 6808),

Gene: SweetiePie\_16 Start: 12107, Stop: 13063, Start Num: 6

Candidate Starts for SweetiePie\_16:

(Start: 6 @12107 has 512 MA's), (29, 12167), (40, 12236), (46, 12263), (57, 12305), (61, 12335), (64, 12359), (75, 12404), (84, 12455), (92, 12485), (118, 12590), (132, 12644), (181, 12848), (182, 12866), (188, 12902), (196, 12953),

Gene: Sweets\_7 Start: 7104, Stop: 8039, Start Num: 25

Candidate Starts for Sweets\_7:

(Start: 25 @7104 has 105 MA's), (35, 7161), (36, 7164), (38, 7176), (41, 7197), (66, 7323), (74, 7356), (130, 7605), (138, 7650), (159, 7737), (168, 7779), (181, 7848), (211, 8013),

Gene: SwirlSquare\_18 Start: 10998, Stop: 11969, Start Num: 6

Candidate Starts for SwirlSquare\_18:

(Start: 6 @10998 has 512 MA's), (29, 11073), (40, 11142), (45, 11163), (46, 11169), (57, 11211), (61, 11241), (64, 11265), (75, 11310), (84, 11361), (92, 11391), (132, 11550), (161, 11679),

Gene: Swirley\_13 Start: 10769, Stop: 11701, Start Num: 19

Candidate Starts for Swirley\_13:

(Start: 19 @10769 has 50 MA's), (46, 10898), (57, 10940), (61, 10970), (79, 11057), (84, 11090), (154, 11354), (159, 11378), (171, 11438), (181, 11477), (183, 11498), (189, 11546), (198, 11603), (207, 11639), (211, 11663),

Gene: SwissCheese\_15 Start: 11595, Stop: 12593, Start Num: 6

Candidate Starts for SwissCheese\_15:

(Start: 6 @11595 has 512 MA's), (42, 11739), (51, 11790), (54, 11805), (76, 11925), (80, 11946), (94, 12021), (108, 12081), (134, 12183), (154, 12267), (180, 12387), (188, 12444), (196, 12483), (197, 12489),

Gene: Switzer\_16 Start: 11518, Stop: 12531, Start Num: 6

Candidate Starts for Switzer\_16:

(Start: 6 @11518 has 512 MA's), (42, 11662), (51, 11713), (54, 11728), (76, 11848), (80, 11869), (94, 11944), (108, 12004), (121, 12055), (122, 12058), (129, 12088), (134, 12106), (154, 12190), (187, 12361), (188, 12367), (197, 12421),

Gene: Switzerland\_18 Start: 11410, Stop: 12360, Start Num: 6

Candidate Starts for Switzerland\_18:

(Start: 6 @11410 has 512 MA's), (29, 11470), (46, 11566), (61, 11638), (64, 11662), (75, 11707), (84, 11758), (92, 11788), (183, 12166), (203, 12286), (211, 12331),

Gene: Swole\_17 Start: 12065, Stop: 13072, Start Num: 6

Candidate Starts for Swole\_17:

(Start: 6 @12065 has 512 MA's), (54, 12275), (76, 12395), (80, 12416), (94, 12491), (111, 12572), (129, 12635), (134, 12653), (154, 12737), (188, 12914), (197, 12962),

Gene: SydNat\_13 Start: 10876, Stop: 11808, Start Num: 19

Candidate Starts for SydNat\_13:

(Start: 19 @10876 has 50 MA's), (46, 11005), (57, 11047), (61, 11077), (79, 11164), (84, 11197), (125, 11338), (154, 11461), (159, 11485), (171, 11545), (181, 11584), (183, 11605), (189, 11653), (198, 11710), (207, 11746), (211, 11770),

Gene: TMaxx\_8 Start: 5463, Stop: 6365, Start Num: 20

Candidate Starts for TMaxx\_8:

(Start: 20 @5463 has 2 MA's), (64, 5685), (68, 5700), (82, 5772), (132, 5958), (146, 6012), (208, 6321),

Gene: TNguyen7\_15 Start: 11073, Stop: 12047, Start Num: 8

Candidate Starts for TNguyen7\_15:

(Start: 8 @11073 has 150 MA's), (46, 11214), (70, 11334), (79, 11373), (84, 11406), (141, 11643), (150, 11670), (154, 11697), (171, 11781), (188, 11871), (194, 11916), (195, 11922), (198, 11955), (207, 11991),

Gene: TWAMP\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for TWAMP\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Taheera\_7 Start: 7108, Stop: 8043, Start Num: 25

Candidate Starts for Taheera\_7:

(Start: 25 @7108 has 105 MA's), (35, 7165), (36, 7168), (38, 7180), (66, 7327), (74, 7360), (93, 7447), (168, 7783), (181, 7852),

Gene: Takoda\_12 Start: 7693, Stop: 8595, Start Num: 21

Candidate Starts for Takoda\_12:

(Start: 21 @7693 has 36 MA's), (46, 7822), (65, 7924), (76, 7966), (79, 7981), (84, 8014), (150, 8269), (161, 8329), (167, 8362),

Gene: Taquarus\_15 Start: 11482, Stop: 12414, Start Num: 6

Candidate Starts for Taquarus\_15:

(Start: 6 @11482 has 512 MA's), (29, 11542), (46, 11638), (61, 11710), (64, 11734), (84, 11830), (101, 11914), (146, 12058), (154, 12100), (188, 12262), (191, 12295), (196, 12313), (203, 12349), (210, 12382),

Gene: Target\_17 Start: 12395, Stop: 13588, Start Num: 14

Candidate Starts for Target\_17:

(Start: 14 @12395 has 5 MA's), (29, 12443), (31, 12467), (46, 12539), (61, 12611), (64, 12635), (68, 12650), (84, 12731), (92, 12761), (128, 12887), (150, 12968), (154, 12995), (179, 13094), (210, 13277), (211, 13289), (222, 13421), (224, 13454), (226, 13475), (228, 13508),

Gene: TarsusIV\_16 Start: 12206, Stop: 13162, Start Num: 6

Candidate Starts for TarsusIV\_16:

(Start: 6 @12206 has 512 MA's), (29, 12266), (37, 12314), (46, 12362), (57, 12404), (61, 12434), (64, 12458), (84, 12554), (87, 12566), (118, 12689), (125, 12716), (132, 12743), (143, 12788), (181, 12947), (182, 12965), (196, 13052),

Gene: Tarynearal\_12 Start: 10796, Stop: 11728, Start Num: 19

Candidate Starts for Tarynearal\_12:

(Start: 19 @10796 has 50 MA's), (46, 10925), (57, 10967), (61, 10997), (79, 11084), (84, 11117), (154, 11381), (159, 11405), (171, 11465), (181, 11504), (183, 11525), (189, 11573), (198, 11630), (207, 11666), (211, 11690),

Gene: Tasp14\_16 Start: 11835, Stop: 12845, Start Num: 6

Candidate Starts for Tasp14\_16:

(Start: 6 @11835 has 512 MA's), (42, 11979), (51, 12030), (54, 12045), (76, 12165), (80, 12186), (94, 12261), (108, 12321), (121, 12372), (129, 12405), (134, 12423), (154, 12507), (187, 12678), (188, 12684), (197, 12738),

Gene: Taurus\_17 Start: 11537, Stop: 12529, Start Num: 8

Candidate Starts for Taurus\_17:

(Start: 8 @11537 has 150 MA's), (46, 11678), (70, 11798), (79, 11837), (84, 11870), (108, 11981), (132, 12068), (154, 12164), (170, 12245), (178, 12272), (181, 12284), (188, 12338), (194, 12383), (195, 12389), (198, 12422), (207, 12458), (211, 12482),

Gene: Temprado\_20 Start: 12235, Stop: 13206, Start Num: 5

Candidate Starts for Temprado\_20:

(Start: 5 @12235 has 75 MA's), (29, 12295), (46, 12391), (57, 12433), (61, 12463), (64, 12487), (75, 12532), (84, 12583), (87, 12595), (92, 12613), (122, 12718), (164, 12904), (211, 13177),

Gene: Teodoridan\_13 Start: 10968, Stop: 11972, Start Num: 6

Candidate Starts for Teodoridan\_13:

(Start: 6 @10968 has 512 MA's), (42, 11112), (44, 11121), (51, 11163), (54, 11178), (76, 11298), (80, 11319), (94, 11394), (108, 11454), (134, 11556), (154, 11640), (160, 11670), (180, 11760), (187, 11811), (188, 11817), (197, 11865),

Gene: Terrific\_20 Start: 12667, Stop: 13623, Start Num: 6

Candidate Starts for Terrific\_20:

(Start: 6 @12667 has 512 MA's), (29, 12727), (40, 12796), (46, 12823), (57, 12865), (61, 12895), (64, 12919), (75, 12964), (84, 13015), (87, 13027), (118, 13150), (125, 13177), (132, 13204), (143, 13249), (181, 13408), (182, 13426), (188, 13462), (196, 13513),

Gene: Terror\_7 Start: 7108, Stop: 8043, Start Num: 25

Candidate Starts for Terror\_7:

(Start: 25 @7108 has 105 MA's), (35, 7165), (36, 7168), (38, 7180), (66, 7327), (74, 7360), (93, 7447), (168, 7783), (181, 7852),

Gene: Texage\_15 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for Texage\_15:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Thanksgivukkah\_15 Start: 11484, Stop: 12416, Start Num: 6

Candidate Starts for Thanksgivukkah\_15:

(Start: 6 @11484 has 512 MA's), (29, 11544), (46, 11640), (61, 11712), (64, 11736), (84, 11832), (92, 11862), (101, 11916), (146, 12060), (154, 12102), (188, 12264), (191, 12297), (196, 12315), (203, 12351), (210, 12384),

Gene: Theia\_12 Start: 10735, Stop: 11667, Start Num: 19

Candidate Starts for Theia\_12:

(Start: 19 @10735 has 50 MA's), (46, 10864), (57, 10906), (61, 10936), (79, 11023), (84, 11056), (154, 11320), (159, 11344), (171, 11404), (181, 11443), (183, 11464), (189, 11512), (198, 11569), (207, 11605), (211, 11629),

Gene: TheloniousMonk\_17 Start: 12579, Stop: 13598, Start Num: 6

Candidate Starts for TheloniousMonk\_17:

(Start: 6 @12579 has 512 MA's), (51, 12774), (54, 12789), (68, 12876), (76, 12909), (80, 12930), (94, 13005), (108, 13065), (154, 13251), (187, 13422), (188, 13428), (197, 13485), (204, 13521),

Gene: Thor\_15 Start: 11420, Stop: 12436, Start Num: 6

Candidate Starts for Thor\_15:

(Start: 6 @11420 has 512 MA's), (51, 11615), (54, 11630), (76, 11750), (80, 11771), (94, 11846), (108, 11906), (154, 12092), (187, 12263), (188, 12269), (197, 12326), (204, 12362),

Gene: Tiffany\_17 Start: 11433, Stop: 12425, Start Num: 8

Candidate Starts for Tiffany\_17:

(Start: 8 @11433 has 150 MA's), (46, 11574), (70, 11694), (79, 11733), (84, 11766), (108, 11877), (132, 11964), (154, 12060), (170, 12141), (178, 12168), (181, 12180), (188, 12234), (194, 12279), (195, 12285), (198, 12318), (207, 12354), (211, 12378),

Gene: Tiger\_13 Start: 10616, Stop: 11554, Start Num: 19

Candidate Starts for Tiger\_13:

(Start: 19 @10616 has 50 MA's), (46, 10745), (57, 10787), (61, 10817), (79, 10904), (84, 10937), (154, 11201), (159, 11225), (171, 11285), (181, 11324), (183, 11345), (189, 11393), (198, 11450), (207, 11486), (211, 11510),

Gene: Timothy\_16 Start: 12699, Stop: 13688, Start Num: 5

Candidate Starts for Timothy\_16:

(Start: 5 @12699 has 75 MA's), (29, 12759), (33, 12789), (45, 12849), (46, 12855), (57, 12897), (61, 12927), (64, 12951), (75, 12996), (84, 13047), (87, 13059), (92, 13077), (110, 13161), (122, 13197), (125, 13209), (132, 13236), (188, 13494), (206, 13599),

Gene: Timshel\_16 Start: 13055, Stop: 14014, Start Num: 6

Candidate Starts for Timshel\_16:

(Start: 6 @13055 has 512 MA's), (29, 13115), (40, 13184), (46, 13211), (47, 13226), (61, 13283), (65, 13313), (84, 13403), (130, 13589), (154, 13691), (188, 13865), (196, 13916), (203, 13952),

Gene: TinaBug\_7 Start: 7104, Stop: 8039, Start Num: 25

Candidate Starts for TinaBug\_7:

(Start: 25 @7104 has 105 MA's), (35, 7161), (36, 7164), (38, 7176), (41, 7197), (66, 7323), (74, 7356), (130, 7605), (138, 7650), (159, 7737), (168, 7779), (181, 7848), (211, 8013),

Gene: TinaFeyge\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for TinaFeyge\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),



Gene: TinyPebbles\_17 Start: 11622, Stop: 12614, Start Num: 8

Candidate Starts for TinyPebbles\_17:

(Start: 8 @11622 has 150 MA's), (46, 11763), (70, 11883), (79, 11922), (84, 11955), (108, 12066), (132, 12153), (154, 12249), (170, 12330), (178, 12357), (181, 12369), (188, 12423), (194, 12468), (195, 12474), (198, 12507), (207, 12543), (211, 12567),

Gene: TinyTimmy\_16 Start: 12751, Stop: 13731, Start Num: 5

Candidate Starts for TinyTimmy\_16:

(Start: 5 @12751 has 75 MA's), (29, 12811), (33, 12841), (45, 12901), (46, 12907), (57, 12949), (61, 12979), (64, 13003), (75, 13048), (84, 13099), (87, 13111), (92, 13129), (110, 13213), (122, 13249), (125, 13261), (132, 13288), (188, 13546), (206, 13651),

Gene: Tinybot\_14 Start: 11460, Stop: 12392, Start Num: 6

Candidate Starts for Tinybot\_14:

(Start: 6 @11460 has 512 MA's), (29, 11520), (46, 11616), (61, 11688), (64, 11712), (84, 11808), (92, 11838), (101, 11892), (146, 12036), (154, 12078), (176, 12177), (188, 12240), (191, 12273), (196, 12291), (203, 12327), (210, 12360),

Gene: TipsytheTRex\_15 Start: 11216, Stop: 12193, Start Num: 6

Candidate Starts for TipsytheTRex\_15:

(Start: 6 @11216 has 512 MA's), (29, 11276), (32, 11303), (46, 11372), (57, 11414), (61, 11444), (64, 11468), (84, 11564), (92, 11594), (131, 11735), (132, 11738), (154, 11837), (158, 11858), (179, 11972), (181, 11981), (193, 12074), (196, 12086),

Gene: TiroTheta9\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for TiroTheta9\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Toaka\_15 Start: 11211, Stop: 12179, Start Num: 6

Candidate Starts for Toaka\_15:

(Start: 6 @11211 has 512 MA's), (Start: 21 @11235 has 36 MA's), (29, 11271), (40, 11340), (46, 11367), (61, 11439), (64, 11463), (84, 11559), (87, 11571), (92, 11589), (118, 11694), (127, 11727), (132, 11748),

Gene: Todacoro\_16 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for Todacoro\_16:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Tolls\_10 Start: 5415, Stop: 6371, Start Num: 8

Candidate Starts for Tolls\_10:

(Start: 8 @5415 has 150 MA's), (Start: 25 @5457 has 105 MA's), (66, 5670), (77, 5715), (79, 5724), (89, 5769), (113, 5880), (144, 6006), (156, 6060), (164, 6096), (165, 6099), (170, 6126), (203, 6282), (211, 6327), (212, 6330),

Gene: TomBrady\_7 Start: 7104, Stop: 8039, Start Num: 25

Candidate Starts for TomBrady\_7:

(Start: 25 @7104 has 105 MA's), (35, 7161), (36, 7164), (38, 7176), (59, 7275), (66, 7323), (74, 7356), (83, 7407), (102, 7500), (168, 7779), (175, 7818), (211, 8013),

Gene: Tomathan\_19 Start: 12087, Stop: 13043, Start Num: 5

Candidate Starts for Tomathan\_19:

(Start: 5 @12087 has 75 MA's), (29, 12147), (45, 12237), (46, 12243), (57, 12285), (61, 12315), (64, 12339), (75, 12384), (84, 12435), (87, 12447), (92, 12465), (95, 12486), (122, 12573), (125, 12585), (127, 12591), (132, 12612), (171, 12792), (181, 12816), (188, 12870), (215, 13017),

Gene: ToneTone\_18 Start: 12148, Stop: 13119, Start Num: 5

Candidate Starts for ToneTone\_18:

(Start: 5 @12148 has 75 MA's), (29, 12208), (46, 12304), (57, 12346), (61, 12376), (64, 12400), (75, 12445), (84, 12496), (87, 12508), (92, 12526), (122, 12631), (164, 12817), (211, 13090),

Gene: Topanga\_15 Start: 11384, Stop: 12325, Start Num: 6

Candidate Starts for Topanga\_15:

(Start: 6 @11384 has 512 MA's), (29, 11444), (42, 11522), (46, 11540), (47, 11555), (57, 11582), (61, 11612), (64, 11636), (84, 11732), (87, 11744), (92, 11762), (108, 11837), (117, 11858), (141, 11945), (154, 11999), (183, 12128), (188, 12161), (196, 12212), (203, 12248),

Gene: Topgun\_15 Start: 11325, Stop: 12329, Start Num: 6

Candidate Starts for Topgun\_15:

(Start: 6 @11325 has 512 MA's), (42, 11469), (44, 11478), (51, 11520), (54, 11535), (76, 11655), (80, 11676), (94, 11751), (108, 11811), (134, 11913), (154, 11997), (160, 12027), (180, 12117), (187, 12168), (188, 12174), (197, 12222),

Gene: Toro\_18 Start: 13102, Stop: 14091, Start Num: 7

Candidate Starts for Toro\_18:

(Start: 7 @13102 has 1 MA's), (40, 13219), (46, 13246), (70, 13366), (73, 13378), (79, 13405), (84, 13438), (115, 13576), (123, 13603), (132, 13633), (151, 13708), (170, 13810), (178, 13837), (181, 13849), (182, 13867), (196, 13969), (198, 13990),

Gene: Tote\_17 Start: 12065, Stop: 13072, Start Num: 6

Candidate Starts for Tote\_17:

(Start: 6 @12065 has 512 MA's), (54, 12275), (76, 12395), (80, 12416), (94, 12491), (111, 12572), (129, 12635), (134, 12653), (154, 12737), (188, 12914), (197, 12962),

Gene: Traft412\_17 Start: 12246, Stop: 13253, Start Num: 6

Candidate Starts for Traft412\_17:

(Start: 6 @12246 has 512 MA's), (42, 12390), (51, 12441), (54, 12456), (76, 12576), (80, 12597), (94, 12672), (108, 12732), (129, 12816), (134, 12834), (154, 12918), (188, 13095), (196, 13134), (197, 13140),

Gene: Travvers\_19 Start: 12087, Stop: 13043, Start Num: 5

Candidate Starts for Travvers\_19:

(Start: 5 @12087 has 75 MA's), (29, 12147), (45, 12237), (46, 12243), (57, 12285), (61, 12315), (64, 12339), (75, 12384), (84, 12435), (87, 12447), (92, 12465), (95, 12486), (122, 12573), (125, 12585), (127, 12591), (132, 12612), (171, 12792), (181, 12816), (188, 12870), (215, 13017),

Gene: Treddle\_17 Start: 12562, Stop: 13578, Start Num: 6

Candidate Starts for Treddle\_17:

(Start: 6 @12562 has 512 MA's), (51, 12757), (54, 12772), (76, 12892), (80, 12913), (94, 12988), (108, 13048), (154, 13234), (187, 13405), (188, 13411), (197, 13468), (204, 13504),

Gene: Trike\_13 Start: 9357, Stop: 10295, Start Num: 6

Candidate Starts for Trike\_13:

(Start: 6 @9357 has 512 MA's), (29, 9417), (46, 9513), (47, 9528), (57, 9555), (61, 9585), (64, 9609), (75, 9654), (84, 9705), (92, 9735), (122, 9837), (141, 9918), (154, 9972), (196, 10185), (203, 10221), (210, 10254),

Gene: Tripl3t\_16 Start: 12247, Stop: 13263, Start Num: 6

Candidate Starts for Tripl3t\_16:

(Start: 6 @12247 has 512 MA's), (51, 12442), (54, 12457), (76, 12577), (80, 12598), (94, 12673), (108, 12733), (154, 12919), (187, 13090), (188, 13096), (197, 13153), (204, 13189),

Gene: Tristan\_17 Start: 13922, Stop: 14878, Start Num: 6

Candidate Starts for Tristan\_17:

(Start: 6 @13922 has 512 MA's), (29, 13982), (40, 14051), (46, 14078), (57, 14120), (61, 14150), (64, 14174), (75, 14219), (84, 14270), (92, 14300), (125, 14432), (181, 14663), (188, 14717),

Gene: Trixie\_19 Start: 13819, Stop: 14775, Start Num: 6

Candidate Starts for Trixie\_19:

(Start: 6 @13819 has 512 MA's), (29, 13879), (40, 13948), (46, 13975), (57, 14017), (61, 14047), (64, 14071), (75, 14116), (84, 14167), (92, 14197), (118, 14302), (125, 14329), (143, 14401), (164, 14503), (181, 14560), (182, 14578), (188, 14614), (196, 14665),

Gene: Troje\_8 Start: 5370, Stop: 6326, Start Num: 8

Candidate Starts for Troje\_8:

(Start: 8 @5370 has 150 MA's), (12, 5385), (Start: 25 @5412 has 105 MA's), (49, 5538), (53, 5547), (66, 5625), (77, 5670), (79, 5679), (89, 5724), (96, 5760), (113, 5835), (156, 6015), (164, 6051), (165, 6054), (170, 6081), (203, 6237), (209, 6264), (211, 6282),

Gene: Trooper\_16 Start: 11994, Stop: 12953, Start Num: 6

Candidate Starts for Trooper\_16:

(Start: 6 @11994 has 512 MA's), (29, 12057), (40, 12126), (46, 12153), (57, 12195), (61, 12225), (64, 12249), (75, 12294), (84, 12345), (87, 12357), (92, 12375), (118, 12480), (125, 12507), (132, 12534), (181, 12738), (182, 12756),

Gene: Trouble\_15 Start: 11897, Stop: 12904, Start Num: 6

Candidate Starts for Trouble\_15:

(Start: 6 @11897 has 512 MA's), (42, 12041), (44, 12050), (51, 12092), (54, 12107), (76, 12227), (80, 12248), (108, 12383), (134, 12485), (154, 12569), (160, 12599), (187, 12740), (188, 12746), (197, 12794),

Gene: TroyPia\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for TroyPia\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Tubs\_17 Start: 12848, Stop: 13807, Start Num: 6

Candidate Starts for Tubs\_17:

(Start: 6 @12848 has 512 MA's), (29, 12908), (45, 12998), (46, 13004), (57, 13046), (61, 13076), (64, 13100), (75, 13145), (84, 13196), (87, 13208), (92, 13226), (122, 13349), (125, 13361), (181, 13592), (196, 13697),

Gene: Tucker\_19 Start: 12235, Stop: 13206, Start Num: 5

Candidate Starts for Tucker\_19:

(Start: 5 @12235 has 75 MA's), (29, 12295), (46, 12391), (57, 12433), (61, 12463), (64, 12487), (75, 12532), (84, 12583), (87, 12595), (92, 12613), (122, 12718), (164, 12904),

Gene: Turbido\_18 Start: 12647, Stop: 13603, Start Num: 6

Candidate Starts for Turbido\_18:

(Start: 6 @12647 has 512 MA's), (29, 12707), (37, 12755), (40, 12776), (46, 12803), (57, 12845), (61, 12875), (64, 12899), (84, 12995), (87, 13007), (118, 13130), (125, 13157), (132, 13184), (143, 13229), (181, 13388), (182, 13406), (188, 13442), (196, 13493),

Gene: Turj99\_14 Start: 11339, Stop: 12337, Start Num: 6

Candidate Starts for Turj99\_14:

(Start: 6 @11339 has 512 MA's), (42, 11483), (51, 11534), (54, 11549), (76, 11669), (80, 11690), (94, 11765), (108, 11825), (134, 11927), (154, 12011), (180, 12131), (188, 12188), (196, 12227), (197, 12233),

Gene: Twigg\_13 Start: 10768, Stop: 11700, Start Num: 19

Candidate Starts for Twigg\_13:

(Start: 19 @10768 has 50 MA's), (46, 10897), (57, 10939), (61, 10969), (79, 11056), (84, 11089), (154, 11353), (159, 11377), (171, 11437), (181, 11476), (183, 11497), (189, 11545), (198, 11602), (207, 11638), (211, 11662),

Gene: Twister\_15 Start: 11283, Stop: 12224, Start Num: 6

Candidate Starts for Twister\_15:

(Start: 6 @11283 has 512 MA's), (29, 11343), (42, 11421), (46, 11439), (47, 11454), (57, 11481), (61, 11511), (64, 11535), (84, 11631), (87, 11643), (92, 11661), (108, 11736), (117, 11757), (141, 11844), (154, 11898), (183, 12027), (188, 12060), (196, 12111), (203, 12147),

Gene: TwoPeat\_16 Start: 11858, Stop: 12859, Start Num: 6

Candidate Starts for TwoPeat\_16:

(Start: 6 @11858 has 512 MA's), (54, 12068), (76, 12188), (80, 12209), (94, 12284), (108, 12344), (129, 12428), (134, 12446), (154, 12530), (188, 12707), (196, 12746), (197, 12752), (214, 12836),

Gene: TygerBlood\_15 Start: 11481, Stop: 12413, Start Num: 6

Candidate Starts for TygerBlood\_15:

(Start: 6 @11481 has 512 MA's), (29, 11541), (46, 11637), (61, 11709), (64, 11733), (84, 11829), (101, 11913), (146, 12057), (154, 12099), (188, 12261), (191, 12294), (196, 12312), (203, 12348), (210, 12381),

Gene: Typhonomachy\_9 Start: 5380, Stop: 6351, Start Num: 8

Candidate Starts for Typhonomachy\_9:

(Start: 8 @5380 has 150 MA's), (12, 5395), (Start: 25 @5431 has 105 MA's), (49, 5560), (89, 5746), (96, 5782), (121, 5884), (156, 6037), (170, 6103), (203, 6259), (211, 6304),

Gene: U2\_15 Start: 11521, Stop: 12537, Start Num: 6

Candidate Starts for U2\_15:

(Start: 6 @11521 has 512 MA's), (51, 11716), (54, 11731), (57, 11746), (68, 11818), (76, 11851), (80, 11872), (94, 11947), (108, 12007), (154, 12193), (187, 12364), (188, 12370), (197, 12427), (204, 12463), (207, 12478),

Gene: Ugenie5\_14 Start: 12881, Stop: 13840, Start Num: 6

Candidate Starts for Ugenie5\_14:

(Start: 6 @12881 has 512 MA's), (29, 12941), (45, 13031), (46, 13037), (57, 13079), (61, 13109), (64, 13133), (75, 13178), (84, 13229), (87, 13241), (92, 13259), (122, 13382), (125, 13394), (181, 13625),

(196, 13730),

Gene: UhSalsa\_12 Start: 7716, Stop: 8636, Start Num: 21

Candidate Starts for UhSalsa\_12:

(Start: 21 @7716 has 36 MA's), (46, 7845), (65, 7947), (76, 7989), (79, 8004), (84, 8037), (140, 8241), (161, 8337), (210, 8592),

Gene: Ulysses\_14 Start: 11200, Stop: 12132, Start Num: 6

Candidate Starts for Ulysses\_14:

(Start: 6 @11200 has 512 MA's), (29, 11260), (46, 11356), (61, 11428), (64, 11452), (84, 11548), (92, 11578), (101, 11632), (146, 11776), (154, 11818), (188, 11980), (191, 12013), (196, 12031), (203, 12067), (210, 12100),

Gene: UnionJack\_13 Start: 10339, Stop: 11280, Start Num: 19

Candidate Starts for UnionJack\_13:

(Start: 19 @10339 has 50 MA's), (46, 10468), (61, 10540), (79, 10627), (84, 10660), (125, 10801), (154, 10924), (159, 10948), (171, 11008), (181, 11047), (183, 11068), (189, 11116), (198, 11173), (207, 11209), (211, 11233),

Gene: Updawg\_18 Start: 12655, Stop: 13611, Start Num: 6

Candidate Starts for Updawg\_18:

(Start: 6 @12655 has 512 MA's), (29, 12715), (40, 12784), (46, 12811), (57, 12853), (61, 12883), (64, 12907), (75, 12952), (84, 13003), (87, 13015), (118, 13138), (125, 13165), (132, 13192), (143, 13237), (181, 13396), (182, 13414), (188, 13450), (196, 13501),

Gene: VA6\_16 Start: 12170, Stop: 13126, Start Num: 6

Candidate Starts for VA6\_16:

(Start: 6 @12170 has 512 MA's), (Start: 21 @12194 has 36 MA's), (29, 12230), (46, 12326), (57, 12368), (61, 12398), (64, 12422), (75, 12467), (84, 12518), (87, 12530), (96, 12578), (125, 12680), (139, 12737), (188, 12965), (196, 13016),

Gene: VC3\_19 Start: 12128, Stop: 13129, Start Num: 6

Candidate Starts for VC3\_19:

(Start: 6 @12128 has 512 MA's), (29, 12188), (45, 12278), (46, 12284), (57, 12326), (61, 12356), (64, 12380), (75, 12425), (84, 12476), (87, 12488), (92, 12506), (128, 12656), (188, 12956), (196, 13007), (210, 13076), (211, 13088),

Gene: Vanisoa\_15 Start: 10928, Stop: 11896, Start Num: 6

Candidate Starts for Vanisoa\_15:

(Start: 6 @10928 has 512 MA's), (29, 10988), (46, 11084), (61, 11156), (64, 11180), (75, 11225), (84, 11276), (92, 11306), (118, 11411), (132, 11465),

Gene: Veracruz\_15 Start: 11634, Stop: 12626, Start Num: 8

Candidate Starts for Veracruz\_15:

(Start: 8 @11634 has 150 MA's), (46, 11775), (79, 11934), (84, 11967), (130, 12159), (141, 12207), (150, 12234), (154, 12261), (170, 12342), (175, 12357), (181, 12381), (188, 12435), (194, 12480), (195, 12486), (198, 12519), (207, 12555), (216, 12597),

Gene: Vine\_9 Start: 6093, Stop: 7052, Start Num: 8

Candidate Starts for Vine\_9:

(Start: 8 @6093 has 150 MA's), (Start: 25 @6144 has 105 MA's), (50, 6273), (67, 6360), (77, 6402), (79, 6411), (89, 6456), (107, 6540), (132, 6636), (144, 6693), (156, 6747), (164, 6783), (204, 6975), (209, 6996), (211, 7014), (221, 7044),

Gene: Violet\_14 Start: 12156, Stop: 13160, Start Num: 6

Candidate Starts for Violet\_14:

(Start: 6 @12156 has 512 MA's), (42, 12300), (44, 12309), (51, 12351), (54, 12366), (76, 12486), (80, 12507), (94, 12582), (108, 12642), (134, 12744), (154, 12828), (160, 12858), (180, 12948), (187, 12999), (188, 13005), (197, 13053),

Gene: Vix\_17 Start: 11621, Stop: 12613, Start Num: 8

Candidate Starts for Vix\_17:

(Start: 8 @11621 has 150 MA's), (46, 11762), (70, 11882), (79, 11921), (84, 11954), (108, 12065), (132, 12152), (154, 12248), (170, 12329), (178, 12356), (181, 12368), (188, 12422), (194, 12467), (195, 12473), (198, 12506), (207, 12542), (211, 12566),

Gene: VohminGhazi\_19 Start: 12240, Stop: 13211, Start Num: 5

Candidate Starts for VohminGhazi\_19:

(Start: 5 @12240 has 75 MA's), (29, 12300), (46, 12396), (57, 12438), (61, 12468), (64, 12492), (75, 12537), (84, 12588), (87, 12600), (92, 12618), (122, 12723), (164, 12909), (211, 13182),

Gene: Waits\_18 Start: 11262, Stop: 12212, Start Num: 6

Candidate Starts for Waits\_18:

(Start: 6 @11262 has 512 MA's), (29, 11322), (46, 11418), (61, 11490), (64, 11514), (75, 11559), (84, 11610), (92, 11640), (183, 12018), (203, 12138), (211, 12183),

Gene: WalterMcMickey\_15 Start: 11283, Stop: 12224, Start Num: 6

Candidate Starts for WalterMcMickey\_15:

(Start: 6 @11283 has 512 MA's), (29, 11343), (42, 11421), (46, 11439), (47, 11454), (57, 11481), (61, 11511), (64, 11535), (84, 11631), (87, 11643), (92, 11661), (108, 11736), (117, 11757), (141, 11844), (154, 11898), (183, 12027), (188, 12060), (196, 12111), (203, 12147),

Gene: Wander\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for Wander\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Warrior24\_19 Start: 11266, Stop: 12216, Start Num: 6

Candidate Starts for Warrior24\_19:

(Start: 6 @11266 has 512 MA's), (29, 11326), (46, 11422), (61, 11494), (64, 11518), (75, 11563), (84, 11614), (92, 11644), (183, 12022), (203, 12142), (211, 12187),

Gene: Watermelon\_17 Start: 12447, Stop: 13457, Start Num: 6

Candidate Starts for Watermelon\_17:

(Start: 6 @12447 has 512 MA's), (42, 12591), (51, 12642), (54, 12657), (76, 12777), (80, 12798), (94, 12873), (108, 12933), (121, 12984), (129, 13017), (134, 13035), (154, 13119), (187, 13290), (188, 13296), (197, 13350), (214, 13434),

Gene: Watson\_17 Start: 11531, Stop: 12523, Start Num: 8

Candidate Starts for Watson\_17:

(Start: 8 @11531 has 150 MA's), (46, 11672), (70, 11792), (79, 11831), (84, 11864), (108, 11975), (132, 12062), (154, 12158), (170, 12239), (178, 12266), (181, 12278), (188, 12332), (194, 12377), (195, 12383), (198, 12416), (207, 12452), (211, 12476),

Gene: WeiHuaDA\_22 Start: 14421, Stop: 15377, Start Num: 6

Candidate Starts for WeiHuaDA\_22:

(Start: 6 @14421 has 512 MA's), (29, 14481), (40, 14550), (46, 14577), (57, 14619), (61, 14649), (64, 14673), (75, 14718), (84, 14769), (87, 14781), (92, 14799), (118, 14904), (125, 14931), (132, 14958), (181, 15162), (182, 15180), (188, 15216), (193, 15255),

Gene: Wendigo\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Wendigo\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Whabigail7\_18 Start: 12635, Stop: 13591, Start Num: 6

Candidate Starts for Whabigail7\_18:

(Start: 6 @12635 has 512 MA's), (29, 12695), (37, 12743), (40, 12764), (46, 12791), (57, 12833), (61, 12863), (64, 12887), (84, 12983), (87, 12995), (118, 13118), (125, 13145), (132, 13172), (143, 13217), (181, 13376), (182, 13394), (188, 13430), (196, 13481),

Gene: Wheeler\_15 Start: 11614, Stop: 12630, Start Num: 6

Candidate Starts for Wheeler\_15:

(Start: 6 @11614 has 512 MA's), (51, 11809), (54, 11824), (57, 11839), (68, 11911), (76, 11944), (80, 11965), (94, 12040), (108, 12100), (154, 12286), (187, 12457), (188, 12463), (197, 12520), (204, 12556),

Gene: Whitney\_7 Start: 4897, Stop: 5835, Start Num: 25

Candidate Starts for Whitney\_7:

(Start: 25 @4897 has 105 MA's), (33, 4939), (34, 4942), (52, 5032), (71, 5134), (85, 5206), (86, 5209), (131, 5398), (166, 5551), (168, 5563), (178, 5626), (186, 5680), (209, 5785), (212, 5806),

Gene: WideWale\_18 Start: 12655, Stop: 13611, Start Num: 6

Candidate Starts for WideWale\_18:

(Start: 6 @12655 has 512 MA's), (29, 12715), (40, 12784), (46, 12811), (57, 12853), (61, 12883), (64, 12907), (75, 12952), (84, 13003), (87, 13015), (118, 13138), (125, 13165), (132, 13192), (143, 13237), (181, 13396), (182, 13414), (188, 13450), (196, 13501),

Gene: Wiks\_19 Start: 12216, Stop: 13187, Start Num: 5

Candidate Starts for Wiks\_19:

(Start: 5 @12216 has 75 MA's), (29, 12276), (46, 12372), (57, 12414), (61, 12444), (64, 12468), (75, 12513), (84, 12564), (87, 12576), (92, 12594), (122, 12699), (164, 12885), (211, 13158),

Gene: Wilbur\_15 Start: 11478, Stop: 12410, Start Num: 6

Candidate Starts for Wilbur\_15:

(Start: 6 @11478 has 512 MA's), (29, 11538), (46, 11634), (61, 11706), (64, 11730), (84, 11826), (101, 11910), (146, 12054), (154, 12096), (188, 12258), (191, 12291), (196, 12309), (203, 12345), (210, 12378),

Gene: Wile\_15 Start: 11501, Stop: 12433, Start Num: 6

Candidate Starts for Wile\_15:

(Start: 6 @11501 has 512 MA's), (29, 11561), (46, 11657), (47, 11672), (59, 11714), (61, 11729), (64, 11753), (84, 11849), (92, 11879), (101, 11933), (146, 12077), (154, 12119), (188, 12281), (196, 12332), (203, 12368), (210, 12401),

Gene: Wilkins\_15 Start: 11325, Stop: 12329, Start Num: 6

Candidate Starts for Wilkins\_15:

(Start: 6 @11325 has 512 MA's), (42, 11469), (44, 11478), (51, 11520), (54, 11535), (76, 11655), (80, 11676), (94, 11751), (108, 11811), (134, 11913), (154, 11997), (160, 12027), (180, 12117), (187, 12168), (188, 12174), (197, 12222),

Gene: Wizard007\_15 Start: 11481, Stop: 12413, Start Num: 6

Candidate Starts for Wizard007\_15:

(Start: 6 @11481 has 512 MA's), (29, 11541), (46, 11637), (61, 11709), (64, 11733), (84, 11829), (101, 11913), (146, 12057), (154, 12099), (188, 12261), (191, 12294), (196, 12312), (203, 12348), (210, 12381),

Gene: Wizzo\_6 Start: 4645, Stop: 5592, Start Num: 24

Candidate Starts for Wizzo\_6:

(Start: 23 @4642 has 3 MA's), (Start: 24 @4645 has 42 MA's), (33, 4693), (40, 4735), (53, 4789), (72, 4891), (79, 4921), (84, 4954), (94, 5002), (106, 5059), (133, 5158), (138, 5182), (149, 5218), (153, 5254), (158, 5281), (172, 5341), (200, 5485), (205, 5503), (206, 5512), (213, 5545),

Gene: Wooldri\_19 Start: 11450, Stop: 12442, Start Num: 8

Candidate Starts for Wooldri\_19:

(Start: 8 @11450 has 150 MA's), (46, 11591), (70, 11711), (79, 11750), (84, 11783), (108, 11894), (132, 11981), (154, 12077), (170, 12158), (178, 12185), (181, 12197), (188, 12251), (194, 12296), (195, 12302), (198, 12335), (207, 12371), (211, 12395),

Gene: WunderPhul\_19 Start: 12216, Stop: 13187, Start Num: 5

Candidate Starts for WunderPhul\_19:

(Start: 5 @12216 has 75 MA's), (29, 12276), (46, 12372), (57, 12414), (61, 12444), (64, 12468), (75, 12513), (84, 12564), (87, 12576), (92, 12594), (122, 12699), (164, 12885), (211, 13158),

Gene: Xena\_15 Start: 11488, Stop: 12420, Start Num: 6

Candidate Starts for Xena\_15:

(Start: 6 @11488 has 512 MA's), (29, 11548), (46, 11644), (47, 11659), (61, 11716), (64, 11740), (84, 11836), (101, 11920), (146, 12064), (154, 12106), (188, 12268), (196, 12319), (203, 12355), (210, 12388),

Gene: XianYue\_16 Start: 12113, Stop: 13081, Start Num: 4

Candidate Starts for XianYue\_16:

(Start: 4 @12113 has 1 MA's), (29, 12188), (32, 12215), (40, 12257), (46, 12284), (57, 12326), (61, 12356), (84, 12476), (92, 12506), (125, 12638), (132, 12665), (181, 12869), (193, 12962), (196, 12974),

Gene: Yakult\_9 Start: 5335, Stop: 6264, Start Num: 16

Candidate Starts for Yakult\_9:

(Start: 16 @5335 has 7 MA's), (33, 5401), (53, 5497), (58, 5524), (77, 5620), (79, 5629), (80, 5635), (85, 5659), (89, 5674), (96, 5710), (107, 5758), (131, 5851), (156, 5965), (164, 6001), (165, 6004), (203, 6187),

Gene: Yarn\_7 Start: 5405, Stop: 6361, Start Num: 8

Candidate Starts for Yarn\_7:

(Start: 8 @5405 has 150 MA's), (Start: 25 @5447 has 105 MA's), (66, 5660), (77, 5705), (79, 5714), (89, 5759), (113, 5870), (144, 5996), (156, 6050), (164, 6086), (165, 6089), (170, 6116), (203, 6272), (211, 6317), (212, 6320),

Gene: Yecey3\_16 Start: 11004, Stop: 11972, Start Num: 6

Candidate Starts for Yecey3\_16:



(Start: 6 @11004 has 512 MA's), (29, 11064), (46, 11160), (61, 11232), (64, 11256), (75, 11301), (84, 11352), (87, 11364), (92, 11382), (118, 11487), (127, 11520), (132, 11541),

Gene: YoSam321\_15 Start: 11479, Stop: 12411, Start Num: 6

Candidate Starts for YoSam321\_15:

(Start: 6 @11479 has 512 MA's), (29, 11539), (46, 11635), (61, 11707), (64, 11731), (84, 11827), (101, 11911), (146, 12055), (154, 12097), (188, 12259), (191, 12292), (196, 12310), (203, 12346), (210, 12379),

Gene: Yogi\_12 Start: 7701, Stop: 8603, Start Num: 21

Candidate Starts for Yogi\_12:

(Start: 21 @7701 has 36 MA's), (46, 7830), (65, 7932), (76, 7974), (79, 7989), (84, 8022), (112, 8145), (150, 8277), (161, 8337), (167, 8370),

Gene: Yokurt\_19 Start: 12216, Stop: 13187, Start Num: 5

Candidate Starts for Yokurt\_19:

(Start: 5 @12216 has 75 MA's), (29, 12276), (46, 12372), (57, 12414), (61, 12444), (64, 12468), (75, 12513), (84, 12564), (87, 12576), (92, 12594), (122, 12699), (164, 12885), (211, 13158),

Gene: Yoncess\_12 Start: 7701, Stop: 8603, Start Num: 21

Candidate Starts for Yoncess\_12:

(Start: 21 @7701 has 36 MA's), (46, 7830), (65, 7932), (76, 7974), (79, 7989), (84, 8022), (150, 8277), (161, 8337), (167, 8370),

Gene: Yoshi\_7 Start: 4877, Stop: 5812, Start Num: 25

Candidate Starts for Yoshi\_7:

(Start: 25 @4877 has 105 MA's), (34, 4922), (35, 4931), (43, 4976), (52, 5012), (71, 5114), (86, 5189), (128, 5369), (144, 5435), (166, 5531), (173, 5564), (174, 5582), (178, 5606), (184, 5648), (205, 5747), (209, 5765), (212, 5786),

Gene: Yucky\_10 Start: 5954, Stop: 6913, Start Num: 8

Candidate Starts for Yucky\_10:

(Start: 8 @5954 has 150 MA's), (Start: 25 @6005 has 105 MA's), (50, 6134), (67, 6221), (77, 6263), (79, 6272), (89, 6317), (107, 6401), (132, 6497), (144, 6554), (156, 6608), (164, 6644), (209, 6857), (211, 6875), (221, 6905),

Gene: Yummy\_9 Start: 5276, Stop: 6229, Start Num: 8

Candidate Starts for Yummy\_9:

(Start: 8 @5276 has 150 MA's), (12, 5291), (Start: 25 @5318 has 105 MA's), (49, 5444), (53, 5453), (66, 5531), (77, 5576), (79, 5585), (89, 5630), (96, 5666), (113, 5741), (156, 5921), (164, 5957), (165, 5960), (170, 5987), (203, 6143), (209, 6170), (211, 6188),

Gene: Zaka\_19 Start: 12216, Stop: 13187, Start Num: 5

Candidate Starts for Zaka\_19:

(Start: 5 @12216 has 75 MA's), (29, 12276), (46, 12372), (57, 12414), (61, 12444), (64, 12468), (75, 12513), (84, 12564), (87, 12576), (92, 12594), (122, 12699), (164, 12885), (211, 13158),

Gene: Zapner\_8 Start: 5402, Stop: 6337, Start Num: 25

Candidate Starts for Zapner\_8:

(Start: 25 @5402 has 105 MA's), (34, 5447), (35, 5456), (43, 5501), (52, 5537), (71, 5639), (86, 5714), (128, 5894), (144, 5960), (166, 6056), (173, 6089), (174, 6107), (178, 6131), (184, 6173), (205, 6272), (209, 6290), (212, 6311),

Gene: Zareef\_12 Start: 6294, Stop: 7220, Start Num: 18

Candidate Starts for Zareef\_12:

(Start: 18 @6294 has 9 MA's), (46, 6429), (68, 6540), (77, 6579), (83, 6609), (89, 6633), (96, 6669), (107, 6717), (113, 6744), (130, 6807), (131, 6810), (132, 6813), (156, 6924), (164, 6960), (168, 6978), (170, 6990), (185, 7059), (187, 7074), (202, 7143), (209, 7173),

Gene: Zeeculate\_14 Start: 11309, Stop: 12316, Start Num: 6

Candidate Starts for Zeeculate\_14:

(Start: 6 @11309 has 512 MA's), (42, 11453), (51, 11504), (54, 11519), (76, 11639), (80, 11660), (94, 11735), (108, 11795), (129, 11879), (134, 11897), (154, 11981), (188, 12158), (196, 12197), (197, 12203),

Gene: Zephyr\_15 Start: 11449, Stop: 12465, Start Num: 6

Candidate Starts for Zephyr\_15:

(Start: 6 @11449 has 512 MA's), (51, 11644), (54, 11659), (57, 11674), (68, 11746), (76, 11779), (80, 11800), (94, 11875), (108, 11935), (154, 12121), (187, 12292), (188, 12298), (197, 12355), (204, 12391), (207, 12406),

Gene: Zetzy\_16 Start: 11091, Stop: 12065, Start Num: 8

Candidate Starts for Zetzy\_16:

(Start: 8 @11091 has 150 MA's), (46, 11235), (70, 11355), (79, 11394), (84, 11427), (154, 11718), (159, 11742), (160, 11748), (170, 11799), (179, 11829), (188, 11892), (198, 11976), (207, 12012), (211, 12036),

Gene: Zeuska\_16 Start: 12127, Stop: 13125, Start Num: 6

Candidate Starts for Zeuska\_16:

(Start: 6 @12127 has 512 MA's), (42, 12271), (51, 12322), (54, 12337), (76, 12457), (80, 12478), (94, 12553), (108, 12613), (129, 12697), (134, 12715), (154, 12799), (180, 12919), (188, 12976), (196, 13015), (197, 13021),

Gene: Zimmer\_18 Start: 13717, Stop: 14679, Start Num: 6

Candidate Starts for Zimmer\_18:

(Start: 6 @13717 has 512 MA's), (29, 13777), (31, 13801), (45, 13867), (46, 13873), (61, 13945), (64, 13969), (75, 14014), (84, 14065), (92, 14095), (122, 14221), (125, 14233), (181, 14464), (196, 14569),

Gene: ZoMa\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for ZoMa\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Zolita\_12 Start: 10877, Stop: 11809, Start Num: 19

Candidate Starts for Zolita\_12:

(Start: 19 @10877 has 50 MA's), (46, 11006), (57, 11048), (61, 11078), (79, 11165), (84, 11198), (125, 11339), (154, 11462), (159, 11486), (171, 11546), (181, 11585), (183, 11606), (189, 11654), (198, 11711), (207, 11747), (211, 11771),

Gene: Zombie\_7 Start: 7103, Stop: 8038, Start Num: 25

Candidate Starts for Zombie\_7:

(Start: 25 @7103 has 105 MA's), (35, 7160), (36, 7163), (38, 7175), (59, 7274), (66, 7322), (74, 7355), (83, 7406), (102, 7499), (168, 7778), (175, 7817), (211, 8012),

Gene: Zulu\_19 Start: 12215, Stop: 13186, Start Num: 5

Candidate Starts for Zulu\_19:

(Start: 5 @12215 has 75 MA's), (29, 12275), (46, 12371), (57, 12413), (61, 12443), (64, 12467), (75, 12512), (84, 12563), (87, 12575), (92, 12593), (122, 12698), (164, 12884), (211, 13157),