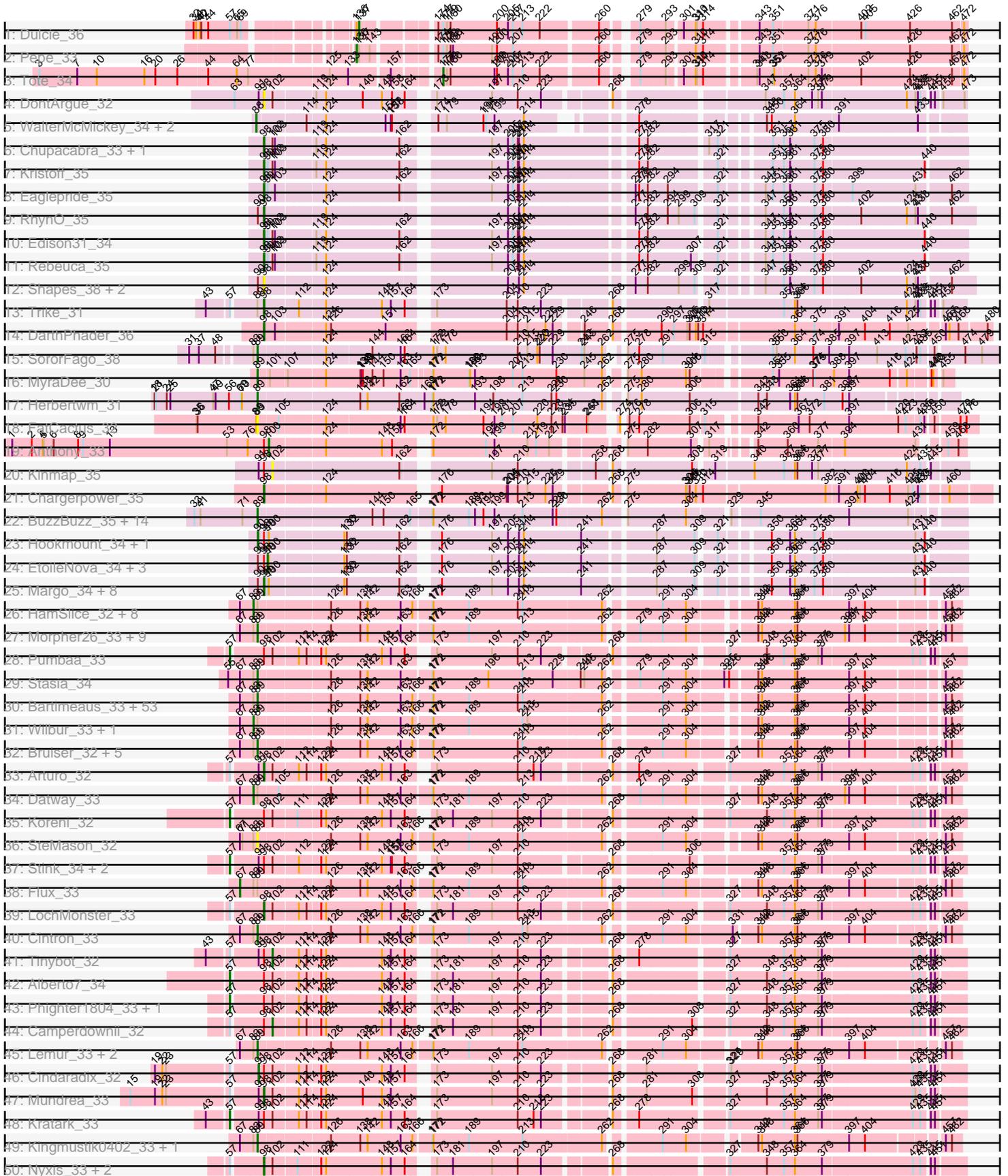


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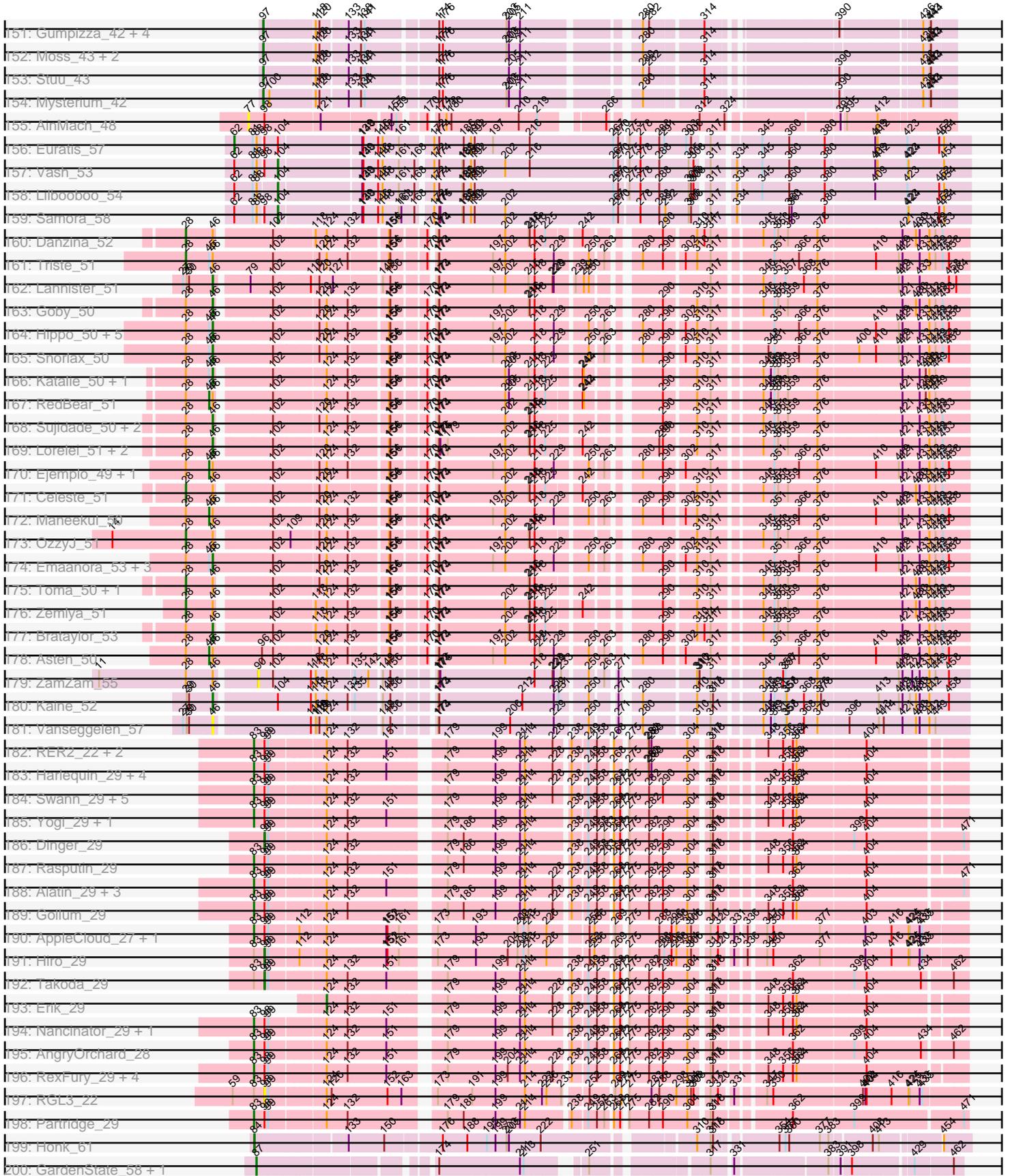
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51: Noelle_33			71	88		110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
52: Jaykayeloweil_33			61	88		110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
53: Perplexer_33		43	51	88	02	114	124	142	158	174	189	191	210	223		262	280					321	344	351	364	424	452	
54: Rosa24_32			61	88		110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
55: Scamp_33			61	88		110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
56: Backyardigan_33			51	88	02	114	124	142	158	174	189	191	210	223		262	280					321	344	351	364	424	452	
57: Kremtemulon_33			61	88	02	114	124	142	158	174	189	191	210	223		262	280					321	344	351	364	424	452	
58: Ulysses_32			61	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
59: Snygu2_33			61	88		110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
60: Shaka_33			51	88	02	114	124	142	158	174	189	191	210	223		262	280					321	344	351	364	424	452	
61: ICleared_33			61	88		110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
62: Suitana_33			51	88	02	114	124	142	158	174	189	191	210	223		262	280					321	344	351	364	424	452	
63: Iracema64_34			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
64: Mircasa_30			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
65: Zoita_29 + 1			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
66: Florence4_31 + 4			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
67: AgentM_30 + 8			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
68: Miscery_30 + 7			75	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
69: Archetta_30			75	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
70: Airmid_31			75	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
71: ElTiger69_31 + 1			75	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
72: Scorpio_32			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
73: BlueIacon_29			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
74: PickleBack_30			75	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
75: Benedict_31			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
76: Ghoulboy_30			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
77: Dublin_29 + 1			75	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
78: Pelten_32			75	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
79: Chadwick_32			75	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
80: Naca_31			75	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452		
81: UnionJack_31			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
82: MarysWeil_29			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
83: Coog_30			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
84: Sheen_34_2		11	38	51	60	74	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304	321	344	351	364	424	452
85: Timsnel_34			51	60	74	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304	321	344	351	364	424	452	
86: HINDER_33		38	51	60	74	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304	321	344	351	364	424	452	
87: DroogsArmy_34			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			
88: PP_41			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
89: Smeadley_30 + 1			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
90: Expellarmus_29			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
91: Dixon_30			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
92: Pmlis_30			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
93: Stephig9_30			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
94: Groundhog_29			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
95: Roary_30			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
96: Astro_30			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
97: NearlyHeadless_30			51	61	88		114	124	144	160	174	189	191	210	223		262	280				321	344	351	364	424	452	
98: Danforth_29		18	38	51	60	74	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304	321	344	351	364	424	452
99: Kiodith_34		38	51	60	74	88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304	321	344	351	364	424	452	
100: Sheakerra_35			88	10	110	126	142	158	174	189	196	213	229	246	262	279	291	304		346	364	388	404	424	452			

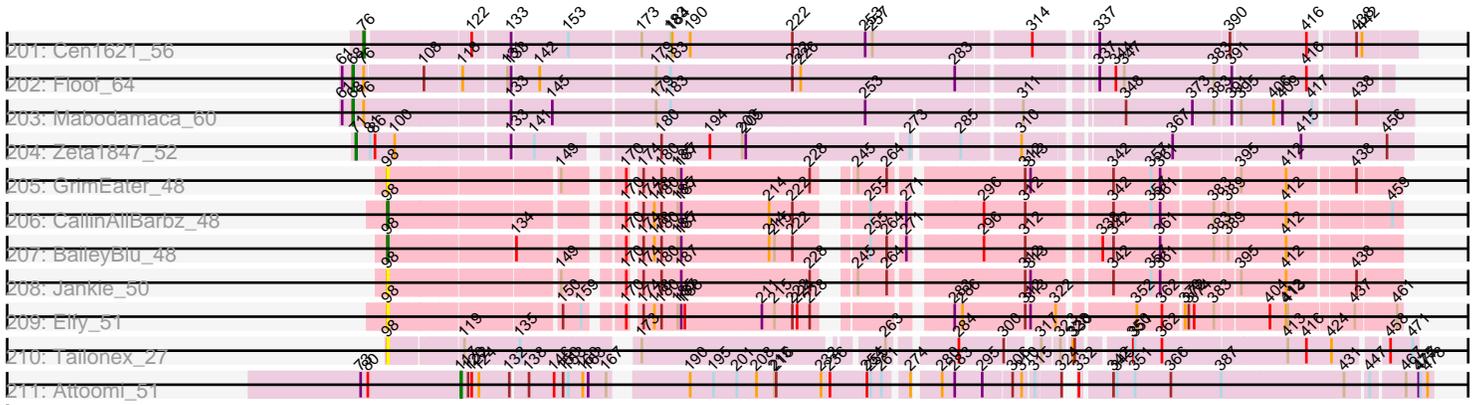
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r01: MegTheThird_33 + 1	10	69	88	115	124	144	150	163	178	184	194	215	226	234	245	262	275	278	306	315	346	364	372	385	391	406	410	423	436	459	474
r02: Charm_33	10	69	88	115	121	141	150	161	173	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	416	421	431	451	474
r03: DreamTeam1_33	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r04: Futur_49	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r05: Community_53 + 1	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r06: Mudpuppy_46	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r07: Bernie_51	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r08: Niobe_48 + 3	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r09: Amyev_51 + 1	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r10: FlorTroy_50	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r11: Janeemi_52	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r12: Ascela_51	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r13: ObriToo_54 + 1	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r14: JohnDoe_50	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r15: Pixelle_52	58	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r16: Simpson_52 + 2	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r17: Elezi_48 + 3	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r18: Adoin_53	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r19: Tbone_50	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r20: Amplonia_48	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r21: DrSierra_48	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r22: Powerpuff_52 + 2	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r23: Iter_51	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r24: Lego_49	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r25: IttyBittyPiggy_50	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r26: MissSwiss_52	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r27: VResidence_50	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r28: Nitro_51	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r29: JuneStar_51 + 1	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r30: Warda_50	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r31: KeAIII_47	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r32: Cyan_50	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r33: Yang_49	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r34: Turab_47	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r35: AGrandiflora_52	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r36: DrMannhattan_52	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r37: Lizalica_49	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r38: Adumb2U43_47	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r39: Phives_54	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r40: AEgle_46	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r41: TaiBot_49	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r42: Reedo_49	66	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r43: Schafner_49	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r44: Wildwest_49	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r45: Pumpkins_48	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r46: MaGuCo_47	10	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276	301	313	342	361	371	381	391	411	412	421	431	451	474
r47: Liebe_51 + 2	66	69	88	119	121	141	150	161	171	181	191	213	221	231	245	261	271	276													

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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 283381 Report

This analysis was run 02/23/26 on database version 636.

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

Pham number 283381 has 416 members, 43 are drafts.

Phages represented in each track:

- Track 1 : Dulcie\_36
- Track 2 : Pepe\_33
- Track 3 : Tote\_34
- Track 4 : DontArgue\_32
- Track 5 : WalterMcMickey\_34, Twister\_34, Topanga\_34
- Track 6 : Chupacabra\_33, OKCentral2016\_33
- Track 7 : Kristoff\_35
- Track 8 : Eaglepride\_35
- Track 9 : RhynO\_35
- Track 10 : Edison31\_34
- Track 11 : Rebeuca\_35
- Track 12 : Shapes\_38, Rowdy\_38, DustyMartin\_38
- Track 13 : Trike\_31
- Track 14 : DARTHPhader\_36
- Track 15 : SororFago\_38
- Track 16 : MyraDee\_30
- Track 17 : Herbertwm\_31
- Track 18 : FatCactus\_32
- Track 19 : Anthony\_33
- Track 20 : Kinmap\_35
- Track 21 : Chargerpower\_35
- Track 22 : BuzzBuzz\_35, Louie6\_36, Daishi\_35, Soshari\_38, Phoxy\_36, Bxz2\_34, LarryKay\_36, Rummer\_36, Spike509\_36, Methuselah\_35, HashRod\_37, TinyPebbles\_36, Misomonster\_38, KADY\_37, AgronaGT15\_36
- Track 23 : Hookmount\_34, Lambert1\_34
- Track 24 : EtoileNova\_34, Texage\_33, Todacoro\_34, Veracruz\_33
- Track 25 : Margo\_34, QuinnKiro\_33, Noella\_34, ResDef\_34, Norbert\_33, Popcicle\_34, Caviar\_34, Panamaxus\_33, Pocahontas\_34
- Track 26 : HamSlice\_32, Bombshell\_33, Caelakin\_33, Holli\_33, Pipcraft\_33, Maverick\_33, Peaches\_33, Eros\_33, Burger\_32
- Track 27 : Morpher26\_33, Katalie136\_33, Wile\_33, Bumblebee11\_33, AbbysRanger\_33, Achebe\_32, PetiteSangsue\_33, Badger\_33, Xena\_33, Cici\_33
- Track 28 : Pumbaa\_33

- Track 29 : Stasia\_34
- Track 30 : Bartimeaus\_33, Ruin\_33, TygerBlood\_33, Albee\_33, RockieBear\_32, Annyong\_33, TiroTheta9\_33, Sabertooth\_33, KekoraPapaka\_32, JoongJeon\_33, OKaNui\_34, Millski\_32, Broseidon\_33, Lorenzo\_33, Eapen\_33, Relief\_33, CentreCat\_33, Thanksgivukkah\_33, Nemo27\_33, LappelDuVide\_33, Eris\_32, Druantia\_33, Florean\_33, Skipitt\_33, BubbleTrouble\_33, Huxley\_33, Spino\_33, Roosevelt\_33, Cocoaberry\_33, Taquarus\_33, Kyee\_33, Baby16\_33, Chaph\_33, Phacado\_33, NorthStar\_33, Koan\_33, Gadost\_33, Deano\_33, Mayonnaise\_33, Connomayer\_33, JetBlade\_33, SenorClean\_33, Funston\_33, Citius\_33, Wizard007\_33, NotAPhaseMom\_33, MeeZee\_33, Blackmoor\_33, Houdini22\_33, Happiness\_33, Clarenza\_33, YoSam321\_33, Palestino\_32, Dhanush\_33
- Track 31 : Wilbur\_33, Romney\_33
- Track 32 : Bruiser\_32, Mazhar510\_33, PeterPeter\_33, Avle17\_33, Wander\_33, Lunsford\_34
- Track 33 : Arturo\_32
- Track 34 : Datway\_33
- Track 35 : Koreni\_32
- Track 36 : SteMason\_32
- Track 37 : Stink\_34, AvatarAhPeg\_34, Miramae\_33
- Track 38 : Flux\_33
- Track 39 : LochMonster\_33
- Track 40 : Cintron\_33
- Track 41 : Tinybot\_32
- Track 42 : Alberto7\_34
- Track 43 : Phighter1804\_33, DirtyDunning\_33
- Track 44 : Camperdownii\_32
- Track 45 : Lemur\_33, LittleB\_33, KFPoly\_33
- Track 46 : Cindaradix\_32
- Track 47 : Mundrea\_33
- Track 48 : Kratak\_33
- Track 49 : Kingmustik0402\_33, Iceman\_34
- Track 50 : Nyxis\_33, Phontbonne\_33, LittleGuy\_33
- Track 51 : Noelle\_33
- Track 52 : Jaykayelowell\_33
- Track 53 : Perplexer\_33
- Track 54 : Rosa24\_32
- Track 55 : Scamp\_33
- Track 56 : Backyardigan\_33
- Track 57 : Kremtemulon\_33
- Track 58 : Ulysses\_32
- Track 59 : Shygu2\_33
- Track 60 : Shaka\_33
- Track 61 : ICleared\_33
- Track 62 : Sultana\_33
- Track 63 : Iracema64\_34
- Track 64 : Micasa\_30
- Track 65 : Zolita\_29, SydNat\_30
- Track 66 : Florence4\_31, Prinash11\_31, Florence1\_30, Twigg\_30, HuhtaEnerson15\_30
- Track 67 : AgentM\_30, Lev2\_30, ForGetIt\_30, Phlorence\_30, Jovo\_30, Aragog\_30, Conspiracy\_30, Discoknowium\_30, Tiger\_30
- Track 68 : Milcery\_30, Tarynearl\_29, LittleCherry\_30, Theia\_28, Swirley\_30, George\_29, Bonamassa\_30, Cuco\_30

- Track 69 : Archetta\_30
- Track 70 : Airmid\_31
- Track 71 : EITiger69\_31, Jabiru\_31
- Track 72 : Scorpia\_32
- Track 73 : Bluefalcon\_29
- Track 74 : PickleBack\_30
- Track 75 : Benedict\_31
- Track 76 : Ghouboy\_30
- Track 77 : Dublin\_29, Midas2\_30
- Track 78 : PetterN\_32
- Track 79 : Chadwick\_32
- Track 80 : Naca\_31
- Track 81 : UnionJack\_31
- Track 82 : MarysWell\_29
- Track 83 : Coog\_30
- Track 84 : Sheen\_34, Toro\_35, FlyCatcher\_36
- Track 85 : Timshel\_34
- Track 86 : HINdeR\_33
- Track 87 : DroogsArmy\_34
- Track 88 : PP\_41
- Track 89 : Smeadley\_30, Caitlin\_29
- Track 90 : Expelliarmus\_29
- Track 91 : Dixon\_30
- Track 92 : Phillis\_30
- Track 93 : Stephig9\_30
- Track 94 : Groundhog\_29
- Track 95 : Roary\_30
- Track 96 : Astro\_30
- Track 97 : NearlyHeadless\_30
- Track 98 : Danforth\_29
- Track 99 : Klodlith\_34
- Track 100 : SheaKeira\_35
- Track 101 : MegTheThird\_33, Celestiallunch\_33
- Track 102 : Charm\_33
- Track 103 : DreamTeam1\_33
- Track 104 : Flutur\_49
- Track 105 : Community\_53, Tuck\_53
- Track 106 : Mudpuppy\_46
- Track 107 : Berrie\_51
- Track 108 : Niobe\_48, Jstan\_50, Skelbel\_49, Asa16\_48
- Track 109 : Amyev\_51, Tian\_50
- Track 110 : TforTroy\_50
- Track 111 : Janeemi\_52
- Track 112 : Ascela\_51
- Track 113 : ObiToo\_54, Crewmate\_55
- Track 114 : JohnDoe\_50
- Track 115 : Pixelle\_52
- Track 116 : Simpson\_52, Joemato\_50, Kaylissa\_51
- Track 117 : Elezi\_48, Eraser\_48, London\_48, Subaru\_49
- Track 118 : Adolin\_53
- Track 119 : Tbone\_50
- Track 120 : Amploria\_48
- Track 121 : DrSierra\_48

- Track 122 : Powerpuff\_52, Tutumahutu\_51, YesChef\_50
- Track 123 : Iter\_51
- Track 124 : Lego\_49
- Track 125 : IttyBittyPiggy\_50
- Track 126 : MissSwiss\_52
- Track 127 : VResidence\_50
- Track 128 : Nitro\_51
- Track 129 : JuneStar\_51, Cassia\_48
- Track 130 : Warda\_50
- Track 131 : KeAlii\_47
- Track 132 : Cyan\_50
- Track 133 : Yang\_49
- Track 134 : Turab\_47
- Track 135 : AGrandiflora\_52
- Track 136 : DrManhattan\_52
- Track 137 : Lizalica\_49
- Track 138 : Adumb2043\_47
- Track 139 : Phives\_54
- Track 140 : AEgle\_46
- Track 141 : Tallboi\_49
- Track 142 : Reedo\_49
- Track 143 : Schaffner\_49
- Track 144 : Wildwest\_49
- Track 145 : Pumpkins\_48
- Track 146 : MaGuCo\_47
- Track 147 : Liebe\_51, IUFootball\_51, Maureen\_51
- Track 148 : Snek\_51
- Track 149 : Tweety19\_52
- Track 150 : Kalimba\_43, Gambol\_44, Sooty\_43, Sabourin\_43, Donkey\_43, Cappuccino\_43
- Track 151 : Gumpizza\_42, RockScotty\_42, Giorgio\_42, Ashes\_43, Beaupre\_42
- Track 152 : Moss\_43, SpecialK\_43, Halsey\_43
- Track 153 : Stuu\_43
- Track 154 : Mysterium\_42
- Track 155 : AinMach\_48
- Track 156 : Euratis\_57
- Track 157 : Vash\_53
- Track 158 : Lilbooboo\_54
- Track 159 : Samora\_58
- Track 160 : Danzina\_52
- Track 161 : Triste\_51
- Track 162 : Lannister\_51
- Track 163 : Goby\_50
- Track 164 : Hippo\_50, Dwayne\_50, Chucky\_50, BarryBee\_53, Whatever\_50, Werner\_50
- Track 165 : Snorlax\_50
- Track 166 : Katalie\_50, South40\_50
- Track 167 : RedBear\_51
- Track 168 : Sujidade\_50, Lika\_49, Godpower\_51
- Track 169 : Lorelei\_51, Nabi\_51, Rana\_51
- Track 170 : Ejemplo\_49, TuanPN\_49
- Track 171 : Celeste\_51
- Track 172 : Maneekul\_50

- Track 173 : OzzyJ\_51
- Track 174 : Emaanora\_53, TagePhighter\_52, SarahRose\_50, Yasdnil\_50
- Track 175 : Toma\_50, Dattran\_52
- Track 176 : Zemlya\_51
- Track 177 : Brataylor\_53
- Track 178 : Asten\_50
- Track 179 : ZamZam\_55
- Track 180 : Kaine\_52
- Track 181 : Vanseggelen\_57
- Track 182 : RER2\_22, PhailMary\_28, Alpacados\_28
- Track 183 : Harlequin\_29, Yoncess\_29, Bryce\_29, Jester\_29, BobbyDazzler\_29
- Track 184 : Swann\_29, TWAMP\_29, Lillie\_29, CosmicSans\_29, Phrankenstein\_29, Rhodalysa\_29
- Track 185 : Yogi\_29, Bonanza\_29
- Track 186 : Dinger\_29
- Track 187 : Rasputin\_29
- Track 188 : Alatin\_29, StCroix\_29, Shuman\_29, Naiad\_29
- Track 189 : Gollum\_29
- Track 190 : AppleCloud\_27, Krishelle\_29
- Track 191 : Hiro\_29
- Track 192 : Takoda\_29
- Track 193 : Erik\_29
- Track 194 : Nancinator\_29, Bradshaw\_29
- Track 195 : AngryOrchard\_28
- Track 196 : RexFury\_29, Espica\_29, Belenaria\_29, UhSalsa\_29, Natosaleda\_29
- Track 197 : RGL3\_22
- Track 198 : Partridge\_29
- Track 199 : Honk\_61
- Track 200 : GardenState\_58, IAmGroot\_57
- Track 201 : Cen1621\_56
- Track 202 : Floof\_64
- Track 203 : Mabodamaca\_60
- Track 204 : Zeta1847\_52
- Track 205 : GrimEater\_48
- Track 206 : CallinAllBarbz\_48
- Track 207 : BaileyBlu\_48
- Track 208 : Jankie\_50
- Track 209 : Elfy\_51
- Track 210 : Tailonex\_27
- Track 211 : Attoomi\_51

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

The start number called the most often in the published annotations is 89, it was called in 107 of the 373 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger\_33, Achebe\_32, AgronaGT15\_36, Albee\_33, Annyong\_33, Astro\_30, Avle17\_33, Baby16\_33, Badger\_33, Bartimeaus\_33, Blackmoor\_33, Broseidon\_33, Bruiser\_32, BubbleTrouble\_33, Bumblebee11\_33, BuzzBuzz\_35, Bxz2\_34,

Caitlin\_29, CentreCat\_33, Chaph\_33, Cici\_33, Cintron\_33, Citius\_33, Clarenza\_33, Cocoaberry\_33, Connomayer\_33, Daishi\_35, Danforth\_29, Deano\_33, Dhanush\_33, Dixon\_30, Druantia\_33, Eapen\_33, Eris\_32, Expelliarmus\_29, FatCactus\_32, Florean\_33, Funston\_33, Gadost\_33, Groundhog\_29, Happiness\_33, HashRod\_37, Herbertwm\_31, Houdini22\_33, Huxley\_33, Iceman\_34, Jaykayelowell\_33, JetBlade\_33, JoongJeon\_33, KADY\_37, KFPoly\_33, Katalie136\_33, KekoraPapaka\_32, Kingmustik0402\_33, Koan\_33, Kyee\_33, LappelDuVide\_33, LarryKay\_36, Lemur\_33, LittleB\_33, Lorenzo\_33, Louie6\_36, Lunsford\_34, Mayonnaise\_33, Mazhar510\_33, MeeZee\_33, Methuselah\_35, Millski\_32, Misomonster\_38, Morpher26\_33, MyraDee\_30, NearlyHeadless\_30, Nemo27\_33, Noelle\_33, NorthStar\_33, NotAPhaseMom\_33, OKaNui\_34, Palestino\_32, PeterPeter\_33, PetiteSangsue\_33, Phacado\_33, Phillis\_30, Phoxy\_36, Relief\_33, Roary\_30, RockieBear\_32, Roosevelt\_33, Ruin\_33, Rummer\_36, Sabertooth\_33, Scamp\_33, SeniorClean\_33, Shygu2\_33, Skipitt\_33, Smeadley\_30, SororFago\_38, Soshari\_38, Spike509\_36, Spino\_33, Stasia\_34, SteMason\_32, Stephig9\_30, Sultana\_33, Taquarus\_33, Thanksgivukkah\_33, TinyPebbles\_36, TiroTheta9\_33, TygerBlood\_33, Wander\_33, Wile\_33, Wizard007\_33, Xena\_33, YoSam321\_33,

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

- Amyev\_51, Backyardigan\_33, Bombshell\_33, Burger\_32, Caelakin\_33, Datway\_33, Eros\_33, Flux\_33, HamSlice\_32, Holli\_33, Maverick\_33, Peaches\_33, Perplexer\_33, Pipcraft\_33, Pixelle\_52, Romney\_33, Shaka\_33, Tian\_50, Trike\_31, Wilbur\_33,

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

- AEgle\_46, AGrandiflora\_52, Adolin\_53, Adumb2043\_47, AgentM\_30, AinMach\_48, Airmid\_31, Alatin\_29, Alberto7\_34, Alpacados\_28, Amploria\_48, AngryOrchard\_28, Anthony\_33, AppleCloud\_27, Aragog\_30, Archetta\_30, Arturo\_32, Asa16\_48, Ascela\_51, Ashes\_43, Asten\_50, Attoomi\_51, AvatarAhPeg\_34, BaileyBlu\_48, BarryBee\_53, Beaupre\_42, Belenaria\_29, Benedict\_31, Berrie\_51, Bluefalcon\_29, BobbyDazzler\_29, Bonamassa\_30, Bonanza\_29, Bradshaw\_29, Brataylor\_53, Bryce\_29, CallinAllBarbz\_48, Camperdownii\_32, Cappuccino\_43, Cassia\_48, Caviar\_34, Celeste\_51, Celestialunch\_33, Cen1621\_56, Chadwick\_32, Chargerpower\_35, Charm\_33, Chucky\_50, Chupacabra\_33, Cindaradix\_32, Community\_53, Conspiracy\_30, Coog\_30, CosmicSans\_29, Crewmate\_55, Cuco\_30, Cyan\_50, Danzina\_52, DarthPhader\_36, Dattran\_52, Dinger\_29, DirtyDunning\_33, Discoknowium\_30, Donkey\_43, DontArgue\_32, DrManhattan\_52, DrSierra\_48, DreamTeam1\_33, DroogsArmy\_34, Dublin\_29, Dulcie\_36, DustyMartin\_38, Dwayne\_50, Eaglepride\_35, Edison31\_34, Ejemplo\_49, EITiger69\_31, Elezi\_48, Ely\_51, Emaanora\_53, Eraser\_48, Erik\_29, Espica\_29, EtoileNova\_34, Euratis\_57, Floof\_64, Florence1\_30, Florence4\_31, Flutur\_49, FlyCatcher\_36, ForGetIt\_30, Gambol\_44, GardenState\_58, George\_29, Ghoulyboy\_30, Giorgio\_42, Goby\_50, Godpower\_51, Gollum\_29, GrimEater\_48, Gumpizza\_42, HINdeR\_33, Halsey\_43, Harlequin\_29, Hippo\_50, Hiro\_29, Honk\_61, Hookmount\_34, HuhtaEnerson15\_30, IAmGroot\_57, ICleared\_33, IUFootball\_51, Iracema64\_34, Iter\_51, IttyBittyPiggy\_50, Jabiru\_31, Janeemi\_52, Jankie\_50, Jester\_29, Joemato\_50, JohnDoe\_50, Jovo\_30, Jstan\_50, JuneStar\_51, Kaine\_52, Kalimba\_43, Katalie\_50, Kaylissa\_51, KeAlii\_47, Kinmap\_35, Klodlith\_34, Koreni\_32, Kratak\_33, Kremtemulon\_33, Krishelle\_29, Kristoff\_35, Lambert1\_34, Lannister\_51, Lego\_49, Lev2\_30, Liebe\_51, Lika\_49, Lilbooboo\_54, Lillie\_29, LittleCherry\_30, LittleGuy\_33, Lizalica\_49, LochMonster\_33, London\_48, Lorelei\_51, MaGuCo\_47, Mabodamaca\_60, Maneekul\_50, Margo\_34, MarysWell\_29, Maureen\_51, MegTheThird\_33, Micasa\_30, Midas2\_30, Milcery\_30, Miramae\_33, MissSwiss\_52, Moss\_43, Mudpuppy\_46, Mundrea\_33, Mysterium\_42, Nabi\_51, Naca\_31, Naiad\_29, Nancinator\_29, Natosaleda\_29, Niobe\_48, Nitro\_51,

Noella\_34, Norbert\_33, Nyxis\_33, OKCentral2016\_33, ObiToo\_54, OzzyJ\_51, PP\_41, Panamaxus\_33, Partridge\_29, Pepe\_33, PetterN\_32, PhailMary\_28, Phighter1804\_33, Phives\_54, Phlorence\_30, Phontbonne\_33, Phrankenstein\_29, PickleBack\_30, Pocahontas\_34, Popcicle\_34, Powerpuff\_52, Prinash11\_31, Pumbaa\_33, Pumpkins\_48, QuinnKiro\_33, RER2\_22, RGL3\_22, Rana\_51, Rasputin\_29, Rebeuca\_35, RedBear\_51, Reedo\_49, ResDef\_34, RexFury\_29, Rhodalysa\_29, RhynO\_35, RockScotty\_42, Rosa24\_32, Rowdy\_38, Sabourin\_43, Samora\_58, SarahRose\_50, Schaffner\_49, Scorpia\_32, Shapes\_38, SheaKeira\_35, Sheen\_34, Shuman\_29, Simpson\_52, Skelbel\_49, Sneak\_51, Snorlax\_50, Sooty\_43, South40\_50, SpecialK\_43, StCroix\_29, Stink\_34, Stuu\_43, Subaru\_49, Sujidade\_50, Swann\_29, Swirley\_30, SydNat\_30, TWAMP\_29, TagePhighter\_52, Tailonex\_27, Takoda\_29, Tallboi\_49, Tarynearl\_29, Tbone\_50, Texage\_33, TforTroy\_50, Theia\_28, Tiger\_30, Timshel\_34, Tinybot\_32, Todacoro\_34, Toma\_50, Topanga\_34, Toro\_35, Tote\_34, Triste\_51, TuanPN\_49, Tuck\_53, Turab\_47, Tutumahutu\_51, Tweety19\_52, Twigg\_30, Twister\_34, UhSalsa\_29, Ulysses\_32, UnionJack\_31, VResidence\_50, Vanseggelen\_57, Vash\_53, Veracruz\_33, WalterMcMickey\_34, Warda\_50, Werner\_50, Whatever\_50, Wildwest\_49, Yang\_49, Yasdnil\_50, YesChef\_50, Yogi\_29, Yoncess\_29, ZamZam\_55, Zemlya\_51, Zeta1847\_52, Zolita\_29,

### Summary by start number:

#### Start 28:

- Found in 34 of 416 ( 8.2% ) of genes in pham
- Manual Annotations of this start: 7 of 373
- Called 20.6% of time when present
- Phage (with cluster) where this start called: Celeste\_51 (BD1), Danzina\_52 (BD1), Dattran\_52 (BD1), OzzyJ\_51 (BD1), Toma\_50 (BD1), Triste\_51 (BD1), Zemlya\_51 (BD1),

#### Start 45:

- Found in 19 of 416 ( 4.6% ) of genes in pham
- Manual Annotations of this start: 5 of 373
- Called 26.3% of time when present
- Phage (with cluster) where this start called: Asten\_50 (BD1), Ejemplo\_49 (BD1), Maneekul\_50 (BD1), RedBear\_51 (BD1), TuanPN\_49 (BD1),

#### Start 46:

- Found in 37 of 416 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 23 of 373
- Called 64.9% of time when present
- Phage (with cluster) where this start called: BarryBee\_53 (BD1), Brataylor\_53 (BD1), Chucky\_50 (BD1), Dwayne\_50 (BD1), Emaanora\_53 (BD1), Goby\_50 (BD1), Godpower\_51 (BD1), Hippo\_50 (BD1), Kaine\_52 (BD3), Katalie\_50 (BD1), Lannister\_51 (BD1), Lika\_49 (BD1), Lorelei\_51 (BD1), Nabi\_51 (BD1), Rana\_51 (BD1), SarahRose\_50 (BD1), Snorlax\_50 (BD1), South40\_50 (BD1), Sujidade\_50 (BD1), TagePhighter\_52 (BD1), Vanseggelen\_57 (BD3), Werner\_50 (BD1), Whatever\_50 (BD1), Yasdnil\_50 (BD1),

#### Start 57:

- Found in 25 of 416 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 10 of 373
- Called 40.0% of time when present

- Phage (with cluster) where this start called: Alberto7\_34 (A4), AvatarAhPeg\_34 (A4), DirtyDunning\_33 (A4), Koreni\_32 (A4), Kratark\_33 (A4), Kremtemulon\_33 (A4), Miramae\_33 (A4), Phighter1804\_33 (A4), Pumbaa\_33 (A4), Stink\_34 (A4),

Start 62:

- Found in 4 of 416 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Euratis\_57 (BB1),

Start 66:

- Found in 4 of 416 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 3 of 373
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Reedo\_49 (AZ1), Snek\_51 (AZ3), Tweety19\_52 (AZ3),

Start 67:

- Found in 109 of 416 ( 26.2% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 0.9% of time when present
- Phage (with cluster) where this start called: Flux\_33 (A4),

Start 68:

- Found in 4 of 416 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 373
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Floop\_64 (EH), Mabodamaca\_60 (EH),

Start 71:

- Found in 29 of 416 ( 7.0% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 3.4% of time when present
- Phage (with cluster) where this start called: Zeta1847\_52 (EH),

Start 76:

- Found in 4 of 416 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Cen1621\_56 (EH),

Start 77:

- Found in 2 of 416 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AinMach\_48 (AZ7),

Start 83:

- Found in 139 of 416 ( 33.4% ) of genes in pham
- Manual Annotations of this start: 47 of 373
- Called 34.5% of time when present
- Phage (with cluster) where this start called: Alatin\_29 (CA), Alpacados\_28 (CA), AngryOrchard\_28 (CA), AppleCloud\_27 (CA), Backyardigan\_33 (A4), Belenaria\_29

(CA), BobbyDazzler\_29 (CA), Bombshell\_33 (A4), Bonanza\_29 (CA), Bradshaw\_29 (CA), Bryce\_29 (CA), Burger\_32 (A4), Caelakin\_33 (A4), CosmicSans\_29 (CA), Datway\_33 (A4), Eros\_33 (A4), Espica\_29 (CA), Gollum\_29 (CA), HamSlice\_32 (A4), Harlequin\_29 (CA), Holli\_33 (A4), Jester\_29 (CA), Krishelle\_29 (CA), Lillie\_29 (CA), Maverick\_33 (A4), Naiad\_29 (CA), Nancinator\_29 (CA), Natosaleda\_29 (CA), Partridge\_29 (CA), Peaches\_33 (A4), Perplexer\_33 (A4), PhailMary\_28 (CA), Phrankenstien\_29 (CA), Pipcraft\_33 (A4), RER2\_22 (CA), Rasputin\_29 (CA), RexFury\_29 (CA), Rhodalysa\_29 (CA), Romney\_33 (A4), Shaka\_33 (A4), Shuman\_29 (CA), StCroix\_29 (CA), Swann\_29 (CA), TWAMP\_29 (CA), UhSalsa\_29 (CA), Wilbur\_33 (A4), Yogi\_29 (CA), Yoncess\_29 (CA),

#### Start 84:

- Found in 1 of 416 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Honk\_61 (EH),

#### Start 85:

- Found in 1 of 416 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: VResidence\_50 (AZ1),

#### Start 86:

- Found in 5 of 416 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 20.0% of time when present
- Phage (with cluster) where this start called: PP\_41 (A7),

#### Start 87:

- Found in 2 of 416 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GardenState\_58 (EH), IAmGroot\_57 (EH),

#### Start 88:

- Found in 15 of 416 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 4 of 373
- Called 46.7% of time when present
- Phage (with cluster) where this start called: Celestiallunch\_33 (A9), Community\_53 (AZ1), MegTheThird\_33 (A9), Topanga\_34 (A10), Tuck\_53 (AZ1), Twister\_34 (A10), WalterMcMickey\_34 (A10),

#### Start 89:

- Found in 133 of 416 ( 32.0% ) of genes in pham
- Manual Annotations of this start: 107 of 373
- Called 85.0% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_33 (A4), Achebe\_32 (A4), AgronaGT15\_36 (A3), Albee\_33 (A4), Annyong\_33 (A4), Astro\_30 (A8), Avle17\_33 (A4), Baby16\_33 (A4), Badger\_33 (A4), Bartimeaus\_33 (A4), Blackmoor\_33 (A4), Broseidon\_33 (A4), Bruiser\_32 (A4), BubbleTrouble\_33 (A4), Bumblebee11\_33 (A4), BuzzBuzz\_35 (A3), Bxz2\_34 (A3), Caitlin\_29 (A8), CentreCat\_33 (A4), Chaph\_33

(A4), Cici\_33 (A4), Cintron\_33 (A4), Citius\_33 (A4), Clarenza\_33 (A4),  
Cocoaberry\_33 (A4), Connomayer\_33 (A4), Daishi\_35 (A3), Danforth\_29 (A8),  
Deano\_33 (A4), Dhanush\_33 (A4), Dixon\_30 (A8), Druantia\_33 (A4), Eapen\_33 (A4),  
Eris\_32 (A4), Expelliarmus\_29 (A8), FatCactus\_32 (A20), Florean\_33 (A4),  
Funston\_33 (A4), Gadost\_33 (A4), Groundhog\_29 (A8), Happiness\_33 (A4),  
HashRod\_37 (A3), Herbertwm\_31 (A2), Houdini22\_33 (A4), Huxley\_33 (A4),  
Iceman\_34 (A4), Jaykayelowell\_33 (A4), JetBlade\_33 (A4), JoongJeon\_33 (A4),  
KADY\_37 (A3), KFPoly\_33 (A4), Katalie136\_33 (A4), KekoraPapaka\_32 (A4),  
Kingmustik0402\_33 (A4), Koan\_33 (A4), Kyee\_33 (A4), LappelDuVide\_33 (A4),  
LarryKay\_36 (A3), Lemur\_33 (A4), LittleB\_33 (A4), Lorenzo\_33 (A4), Louie6\_36 (A3),  
Lunsford\_34 (A4), Mayonnaise\_33 (A4), Mazhar510\_33 (A4), MeeZee\_33 (A4),  
Methuselah\_35 (A3), Millski\_32 (A4), Misomonster\_38 (A3), Morpher26\_33 (A4),  
MyraDee\_30 (A18), NearlyHeadless\_30 (A8), Nemo27\_33 (A4), Noelle\_33 (A4),  
NorthStar\_33 (A4), NotAPhaseMom\_33 (A4), OKaNui\_34 (A4), Palestino\_32 (A4),  
PeterPeter\_33 (A4), PetiteSangsue\_33 (A4), Phacado\_33 (A4), Phillis\_30 (A8),  
Phoxy\_36 (A3), Relief\_33 (A4), Roary\_30 (A8), RockieBear\_32 (A4), Roosevelt\_33  
(A4), Ruin\_33 (A4), Rummer\_36 (A3), Sabertooth\_33 (A4), Scamp\_33 (A4),  
SenorClean\_33 (A4), Shygu2\_33 (A4), Skipitt\_33 (A4), Smeadley\_30 (A8),  
SororFago\_38 (A14), Soshari\_38 (A3), Spike509\_36 (A3), Spino\_33 (A4), Stasia\_34  
(A4), SteMason\_32 (A4), Stephig9\_30 (A8), Sultana\_33 (A4), Taquarus\_33 (A4),  
Thanksgivukkah\_33 (A4), TinyPebbles\_36 (A3), TiroTheta9\_33 (A4), TygerBlood\_33  
(A4), Wander\_33 (A4), Wile\_33 (A4), Wizard007\_33 (A4), Xena\_33 (A4),  
YoSam321\_33 (A4),

Start 90:

- Found in 23 of 416 ( 5.5% ) of genes in pham
- Manual Annotations of this start: 2 of 373
- Called 13.0% of time when present
- Phage (with cluster) where this start called: Hookmount\_34 (A3), Lambert1\_34 (A3), ZamZam\_55 (BD3),

Start 91:

- Found in 11 of 416 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Cindaradix\_32 (A4),

Start 93:

- Found in 2 of 416 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 373
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Charm\_33 (A9), DreamTeam1\_33 (A9),

Start 94:

- Found in 45 of 416 ( 10.8% ) of genes in pham
- Manual Annotations of this start: 34 of 373
- Called 95.6% of time when present
- Phage (with cluster) where this start called: AEgle\_46 (AZ1), AGrandiflora\_52 (AZ1), Adolin\_53 (AZ1), Adumb2043\_47 (AZ1), Amploria\_48 (AZ1), Asa16\_48 (AZ1), Berrie\_51 (AZ1), Cassia\_48 (AZ1), Crewmate\_55 (AZ1), DrManhattan\_52 (AZ1), DrSierra\_48 (AZ1), Elezi\_48 (AZ1), Eraser\_48 (AZ1), Flutur\_49 (AZ), IttyBittyPiggy\_50 (AZ1), Janeemi\_52 (AZ1), Joemato\_50 (AZ1), JohnDoe\_50 (AZ1), Jstan\_50 (AZ1), JuneStar\_51 (AZ1), Kaylissa\_51 (AZ1), KeAlii\_47 (AZ1), London\_48

(AZ1), MissSwiss\_52 (AZ1), Mudpuppy\_46 (AZ1), Niobe\_48 (AZ1), ObiToo\_54 (AZ1), Phives\_54 (AZ1), Powerpuff\_52 (AZ1), Pumpkins\_48 (AZ1), Schaffner\_49 (AZ1), Simpson\_52 (AZ1), Skelbel\_49 (AZ1), Subaru\_49 (AZ1), Tallboi\_49 (AZ1), Tbone\_50 (AZ1), TforTroy\_50 (AZ1), Turab\_47 (AZ1), Tutumahutu\_51 (AZ1), Warda\_50 (AZ1), Wildwest\_49 (AZ1), Yang\_49 (AZ1), YesChef\_50 (AZ1),

Start 97:

- Found in 22 of 416 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 18 of 373
- Called 86.4% of time when present
- Phage (with cluster) where this start called: Amyev\_51 (AZ1), Ashes\_43 (AZ5), Beaupre\_42 (AZ5), Cappuccino\_43 (AZ5), Donkey\_43 (AZ5), Gambol\_44 (AZ5), Giorgio\_42 (AZ5), Gumpizza\_42 (AZ5), Halsey\_43 (AZ5), Kalimba\_43 (AZ5), Moss\_43 (AZ5), Mysterium\_42 (AZ5), Pixelle\_52 (AZ1), RockScotty\_42 (AZ5), Sabourin\_43 (AZ5), Sooty\_43 (AZ5), SpecialK\_43 (AZ5), Stuu\_43 (AZ5), Tian\_50 (AZ1),

Start 98:

- Found in 200 of 416 ( 48.1% ) of genes in pham
- Manual Annotations of this start: 76 of 373
- Called 44.0% of time when present
- Phage (with cluster) where this start called: AgentM\_30 (A5), Airmid\_31 (A5), Aragog\_30 (A5), Archetta\_30 (A5), Arturo\_32 (A4), Ascela\_51 (AZ1), BaileyBlu\_48 (FP), Benedict\_31 (A5), Bonamassa\_30 (A5), CallinAllBarbz\_48 (FP), Caviar\_34 (A3), Chadwick\_32 (A5), Chargerpower\_35 (A22), Chupacabra\_33 (A10), Conspiracy\_30 (A5), Cuco\_30 (A5), Cyan\_50 (AZ1), DARTHPhader\_36 (A12), Dinger\_29 (CA), Discoknowium\_30 (A5), DontArgue\_32 (A10), DroogsArmy\_34 (A7), Dublin\_29 (A5), DustyMartin\_38 (A10), Eaglepride\_35 (A10), Edison31\_34 (A10), EITiger69\_31 (A5), Elfy\_51 (FP), FlyCatcher\_36 (A7), ForGetIt\_30 (A5), George\_29 (A5), GrimEater\_48 (FP), HINdeR\_33 (A7), Hiro\_29 (CA), ICleared\_33 (A4), IUFootball\_51 (AZ2), Iter\_51 (AZ1), Jabiru\_31 (A5), Jankie\_50 (FP), Jovo\_30 (A5), Kristoff\_35 (A10), Lego\_49 (AZ1), Lev2\_30 (A5), Liebe\_51 (AZ2), LittleCherry\_30 (A5), LittleGuy\_33 (A4), Lizalica\_49 (AZ1), LochMonster\_33 (A4), MaGuCo\_47 (AZ2), Margo\_34 (A3), Maureen\_51 (AZ2), Micasa\_30 (A5), Midas2\_30 (A5), Milcery\_30 (A5), Mundrea\_33 (A4), Nitro\_51 (AZ1), Noella\_34 (A3), Norbert\_33 (A3), Nyxis\_33 (A4), OKCentral2016\_33 (A10), Panamaxus\_33 (A3), PetterN\_32 (A5), Phlorence\_30 (A5), Phontbonne\_33 (A4), Pocahontas\_34 (A3), Popcicle\_34 (A3), QuinnKiro\_33 (A3), RGL3\_22 (CA), Rebeuca\_35 (A10), ResDef\_34 (A3), RhynO\_35 (A10), Rowdy\_38 (A10), Scorpia\_32 (A5), Shapes\_38 (A10), SheaKeira\_35 (A9), Sheen\_34 (A7), Swirley\_30 (A5), SydNat\_30 (A5), Tailonex\_27 (singleton), Takoda\_29 (CA), Tarynearl\_29 (A5), Theia\_28 (A5), Tiger\_30 (A5), Timshel\_34 (A7), Toro\_35 (A7), Trike\_31 (A10), Ulysses\_32 (A4), Zolita\_29 (A5),

Start 99:

- Found in 58 of 416 ( 13.9% ) of genes in pham
- Manual Annotations of this start: 3 of 373
- Called 6.9% of time when present
- Phage (with cluster) where this start called: EtoileNova\_34 (A3), Texage\_33 (A3), Todacoro\_34 (A3), Veracruz\_33 (A3),

Start 100:

- Found in 19 of 416 ( 4.6% ) of genes in pham
- Manual Annotations of this start: 1 of 373

- Called 5.3% of time when present
- Phage (with cluster) where this start called: Anthony\_33 (A20),

Start 101:

- Found in 2 of 416 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Klodlith\_34 (A9),

Start 102:

- Found in 73 of 416 ( 17.5% ) of genes in pham
- Manual Annotations of this start: 3 of 373
- Called 5.5% of time when present
- Phage (with cluster) where this start called: Camperdownii\_32 (A4), Iracema64\_34 (A4), Kinmap\_35 (A21), Tinybot\_32 (A4),

Start 104:

- Found in 5 of 416 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 3 of 373
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Lilbooboo\_54 (BB1), Samora\_58 (BB1), Vash\_53 (BB1),

Start 105:

- Found in 35 of 416 ( 8.4% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Bluefalcon\_29 (A5),

Start 106:

- Found in 42 of 416 ( 10.1% ) of genes in pham
- Manual Annotations of this start: 3 of 373
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Coog\_30 (A5), Naca\_31 (A5), UnionJack\_31 (A5),

Start 109:

- Found in 33 of 416 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 4 of 373
- Called 24.2% of time when present
- Phage (with cluster) where this start called: Florence1\_30 (A5), Florence4\_31 (A5), Ghoulboy\_30 (A5), HuhtaEnerson15\_30 (A5), MarysWell\_29 (A5), PickleBack\_30 (A5), Prinashe11\_31 (A5), Twigg\_30 (A5),

Start 112:

- Found in 22 of 416 ( 5.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Rosa24\_32 (A4),

Start 117:

- Found in 1 of 416 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 373

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Attoomi\_51 (singleton),

Start 124:

- Found in 211 of 416 ( 50.7% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 0.5% of time when present
- Phage (with cluster) where this start called: Erik\_29 (CA),

Start 136:

- Found in 2 of 416 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Pepe\_33 (A1),

Start 137:

- Found in 2 of 416 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Dulcie\_36 (A1),

Start 177:

- Found in 3 of 416 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 373
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Tote\_34 (A1),

### **Summary by clusters:**

There are 28 clusters represented in this pham: FP, singleton, A14, A10, A12, A18, A1, A3, A2, BD1, A4, A7, A9, A5, BB1, EH, CA, BD3, A8, AZ, A20, A21, A22, AZ1, AZ2, AZ3, AZ5, AZ7,

Info for manual annotations of cluster A1:

- Start number 136 was manually annotated 1 time for cluster A1.
- Start number 137 was manually annotated 1 time for cluster A1.
- Start number 177 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A10:

- Start number 88 was manually annotated 3 times for cluster A10.
- Start number 98 was manually annotated 8 times for cluster A10.

Info for manual annotations of cluster A12:

- Start number 98 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A14:

- Start number 89 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A18:

- Start number 89 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 89 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A20:

- Start number 100 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A22:

- Start number 98 was manually annotated 1 time for cluster A22.

Info for manual annotations of cluster A3:

- Start number 89 was manually annotated 15 times for cluster A3.
- Start number 90 was manually annotated 2 times for cluster A3.
- Start number 98 was manually annotated 9 times for cluster A3.
- Start number 99 was manually annotated 3 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 57 was manually annotated 10 times for cluster A4.
- Start number 67 was manually annotated 1 time for cluster A4.
- Start number 83 was manually annotated 15 times for cluster A4.
- Start number 89 was manually annotated 79 times for cluster A4.
- Start number 91 was manually annotated 1 time for cluster A4.
- Start number 98 was manually annotated 8 times for cluster A4.
- Start number 102 was manually annotated 3 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 98 was manually annotated 30 times for cluster A5.
- Start number 105 was manually annotated 1 time for cluster A5.
- Start number 106 was manually annotated 3 times for cluster A5.
- Start number 109 was manually annotated 4 times for cluster A5.

Info for manual annotations of cluster A7:

- Start number 86 was manually annotated 1 time for cluster A7.
- Start number 98 was manually annotated 4 times for cluster A7.

Info for manual annotations of cluster A8:

- Start number 89 was manually annotated 10 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 93 was manually annotated 2 times for cluster A9.
- Start number 98 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster AZ1:

- Start number 66 was manually annotated 1 time for cluster AZ1.
- Start number 85 was manually annotated 1 time for cluster AZ1.
- Start number 88 was manually annotated 1 time for cluster AZ1.
- Start number 94 was manually annotated 34 times for cluster AZ1.
- Start number 97 was manually annotated 2 times for cluster AZ1.
- Start number 98 was manually annotated 6 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 98 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 66 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ5:

- Start number 97 was manually annotated 16 times for cluster AZ5.

Info for manual annotations of cluster BB1:

- Start number 62 was manually annotated 1 time for cluster BB1.
- Start number 104 was manually annotated 3 times for cluster BB1.

Info for manual annotations of cluster BD1:

- Start number 28 was manually annotated 7 times for cluster BD1.
- Start number 45 was manually annotated 5 times for cluster BD1.
- Start number 46 was manually annotated 22 times for cluster BD1.

Info for manual annotations of cluster BD3:

- Start number 46 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster CA:

- Start number 83 was manually annotated 32 times for cluster CA.
- Start number 98 was manually annotated 3 times for cluster CA.
- Start number 124 was manually annotated 1 time for cluster CA.

Info for manual annotations of cluster EH:

- Start number 68 was manually annotated 2 times for cluster EH.
- Start number 71 was manually annotated 1 time for cluster EH.
- Start number 76 was manually annotated 1 time for cluster EH.
- Start number 84 was manually annotated 1 time for cluster EH.
- Start number 87 was manually annotated 2 times for cluster EH.

Info for manual annotations of cluster FP:

- Start number 98 was manually annotated 2 times for cluster FP.

### **Gene Information:**

Gene: AEgle\_46 Start: 34374, Stop: 35792, Start Num: 94

Candidate Starts for AEgle\_46:

(82, 34356), (92, 34371), (Start: 94 @34374 has 34 MA's), (Start: 98 @34383 has 76 MA's), (119, 34497), (140, 34605), (149, 34638), (154, 34653), (170, 34716), (174, 34728), (176, 34737), (194, 34836), (213, 34929), (222, 34968), (264, 35073), (356, 35427), (357, 35430), (362, 35448), (365, 35460), (412, 35631),

Gene: AGrandiflora\_52 Start: 35693, Stop: 37111, Start Num: 94

Candidate Starts for AGrandiflora\_52:

(82, 35675), (92, 35690), (Start: 94 @35693 has 34 MA's), (Start: 98 @35702 has 76 MA's), (119, 35816), (Start: 124 @35840 has 1 MA's), (140, 35924), (170, 36035), (174, 36047), (176, 36056), (194, 36155), (213, 36248), (215, 36260), (222, 36287), (264, 36392), (280, 36446), (357, 36749), (362, 36767), (365, 36779), (374, 36812), (412, 36950),

Gene: AbbysRanger\_33 Start: 26661, Stop: 25147, Start Num: 89

Candidate Starts for AbbysRanger\_33:

(Start: 67 @26703 has 1 MA's), (Start: 83 @26670 has 47 MA's), (Start: 89 @26661 has 107 MA's), (126, 26499), (138, 26433), (142, 26415), (163, 26340), (171, 26277), (172, 26274), (189, 26187), (213, 26061), (262, 25878), (279, 25821), (291, 25767), (304, 25716), (342, 25587), (346, 25578), (364, 25503), (366, 25497), (394, 25383), (397, 25374), (404, 25335), (457, 25185), (462, 25170),

Gene: Achebe\_32 Start: 26644, Stop: 25130, Start Num: 89

Candidate Starts for Achebe\_32:

(Start: 67 @26686 has 1 MA's), (Start: 83 @26653 has 47 MA's), (Start: 89 @26644 has 107 MA's), (126, 26482), (138, 26416), (142, 26398), (163, 26323), (171, 26260), (172, 26257), (189, 26170), (213, 26044), (262, 25861), (279, 25804), (291, 25750), (304, 25699), (342, 25570), (346, 25561), (364, 25486), (366, 25480), (394, 25366), (397, 25357), (404, 25318), (457, 25168), (462, 25153),

Gene: Adolin\_53 Start: 34720, Stop: 36138, Start Num: 94

Candidate Starts for Adolin\_53:

(82, 34702), (92, 34717), (Start: 94 @34720 has 34 MA's), (Start: 98 @34729 has 76 MA's), (Start: 102 @34747 has 3 MA's), (Start: 124 @34867 has 1 MA's), (140, 34951), (149, 34984), (154, 34999), (170, 35062), (174, 35074), (194, 35182), (213, 35275), (222, 35314), (283, 35494), (356, 35773), (362, 35794), (412, 35977),

Gene: Adumb2043\_47 Start: 34394, Stop: 35812, Start Num: 94

Candidate Starts for Adumb2043\_47:

(82, 34376), (92, 34391), (Start: 94 @34394 has 34 MA's), (Start: 98 @34403 has 76 MA's), (119, 34517), (140, 34625), (149, 34658), (170, 34736), (174, 34748), (176, 34757), (194, 34856), (201, 34898), (213, 34949), (222, 34988), (264, 35093), (356, 35447), (357, 35450), (362, 35468), (365, 35480), (412, 35651),

Gene: AgentM\_30 Start: 25856, Stop: 24363, Start Num: 98

Candidate Starts for AgentM\_30:

(Start: 98 @25856 has 76 MA's), (Start: 105 @25823 has 1 MA's), (Start: 106 @25820 has 3 MA's), (Start: 109 @25802 has 4 MA's), (Start: 124 @25721 has 1 MA's), (155, 25577), (163, 25550), (174, 25502), (205, 25337), (210, 25313), (211, 25310), (215, 25289), (275, 25100), (317, 24929), (350, 24794), (361, 24752), (364, 24740), (386, 24656), (391, 24641), (394, 24626), (435, 24449), (455, 24419), (466, 24386),

Gene: AgronaGT15\_36 Start: 27130, Stop: 25562, Start Num: 89

Candidate Starts for AgronaGT15\_36:

(33, 27280), (41, 27265), (Start: 71 @27166 has 1 MA's), (Start: 89 @27130 has 107 MA's), (144, 26875), (150, 26851), (165, 26791), (171, 26743), (172, 26740), (189, 26653), (193, 26641), (194, 26620), (199, 26596), (213, 26527), (229, 26458), (230, 26449), (262, 26344), (275, 26299), (304, 26167), (329, 26083), (345, 26026), (397, 25819), (425, 25678),

Gene: AinMach\_48 Start: 34606, Stop: 36066, Start Num: 77

Candidate Starts for AinMach\_48:

(77, 34606), (Start: 98 @34645 has 76 MA's), (121, 34765), (157, 34918), (159, 34930), (170, 34975), (174, 34987), (178, 35005), (180, 35017), (210, 35176), (219, 35218), (266, 35338), (312, 35524), (324, 35578), (391, 35812), (395, 35821), (412, 35893),

Gene: Airmid\_31 Start: 25414, Stop: 23933, Start Num: 98

Candidate Starts for Airmid\_31:

(75, 25441), (Start: 98 @25414 has 76 MA's), (Start: 106 @25378 has 3 MA's), (Start: 124 @25279 has 1 MA's), (129, 25243), (140, 25195), (148, 25153), (158, 25129), (164, 25102), (173, 25063), (179, 25039), (181, 25024), (205, 24895), (284, 24601), (297, 24556), (304, 24526), (310, 24502), (317, 24487), (335, 24427), (348, 24376), (350, 24367), (372, 24280), (391, 24214), (435, 24022), (471,

23944),

Gene: Alatin\_29 Start: 23703, Stop: 22195, Start Num: 83

Candidate Starts for Alatin\_29:

(Start: 83 @23703 has 47 MA's), (Start: 98 @23682 has 76 MA's), (Start: 99 @23676 has 3 MA's), (Start: 124 @23547 has 1 MA's), (132, 23499), (151, 23412), (179, 23307), (199, 23196), (211, 23136), (214, 23124), (228, 23061), (238, 23031), (249, 22998), (258, 22977), (268, 22947), (272, 22932), (275, 22926), (282, 22878), (290, 22845), (304, 22788), (317, 22749), (318, 22743), (362, 22593), (404, 22422), (471, 22206),

Gene: Albee\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Albee\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Alberto7\_34 Start: 26999, Stop: 25437, Start Num: 57

Candidate Starts for Alberto7\_34:

(Start: 57 @26999 has 10 MA's), (Start: 98 @26933 has 76 MA's), (Start: 102 @26915 has 3 MA's), (112, 26858), (114, 26840), (122, 26810), (Start: 124 @26798 has 1 MA's), (148, 26672), (157, 26651), (164, 26621), (173, 26582), (181, 26543), (197, 26453), (210, 26393), (223, 26339), (268, 26201), (327, 25970), (348, 25880), (357, 25844), (364, 25817), (377, 25763), (379, 25754), (429, 25544), (435, 25526), (445, 25514), (451, 25505),

Gene: Alpacados\_28 Start: 23572, Stop: 22076, Start Num: 83

Candidate Starts for Alpacados\_28:

(Start: 83 @23572 has 47 MA's), (Start: 98 @23551 has 76 MA's), (Start: 99 @23545 has 3 MA's), (Start: 124 @23416 has 1 MA's), (132, 23368), (151, 23281), (179, 23176), (199, 23065), (211, 23005), (214, 22993), (228, 22930), (238, 22900), (249, 22867), (258, 22846), (268, 22816), (275, 22795), (281, 22750), (282, 22747), (283, 22741), (304, 22657), (317, 22618), (318, 22612), (348, 22516), (356, 22483), (362, 22462), (364, 22453), (404, 22291),

Gene: Amploria\_48 Start: 34579, Stop: 35997, Start Num: 94

Candidate Starts for Amploria\_48:

(82, 34561), (92, 34576), (Start: 94 @34579 has 34 MA's), (Start: 98 @34588 has 76 MA's), (119, 34702), (140, 34810), (149, 34843), (154, 34858), (170, 34921), (174, 34933), (176, 34942), (194, 35041), (201, 35083), (213, 35134), (222, 35173), (264, 35278), (356, 35632), (357, 35635), (362, 35653), (365, 35665), (412, 35836),

Gene: Amyev\_51 Start: 37772, Stop: 39232, Start Num: 97

Candidate Starts for Amyev\_51:

(Start: 89 @37763 has 107 MA's), (Start: 97 @37772 has 18 MA's), (133, 37958), (141, 37991), (173, 38129), (176, 38141), (194, 38240), (203, 38291), (226, 38384), (316, 38717), (383, 38960), (459, 39218),

Gene: AngryOrchard\_28 Start: 23567, Stop: 22059, Start Num: 83

Candidate Starts for AngryOrchard\_28:

(Start: 83 @23567 has 47 MA's), (Start: 98 @23546 has 76 MA's), (Start: 99 @23540 has 3 MA's), (Start: 124 @23411 has 1 MA's), (132, 23363), (151, 23276), (179, 23171), (199, 23060), (211, 23000), (214, 22988), (238, 22895), (249, 22862), (258, 22841), (268, 22811), (272, 22796), (275, 22790), (282, 22742), (290, 22709), (304, 22652), (317, 22613), (318, 22607), (362, 22457), (399, 22316), (404, 22286), (434, 22160), (462, 22094),

Gene: Annyong\_33 Start: 26638, Stop: 25124, Start Num: 89

Candidate Starts for Annyong\_33:

(Start: 67 @26680 has 1 MA's), (Start: 83 @26647 has 47 MA's), (Start: 89 @26638 has 107 MA's), (126, 26476), (138, 26410), (142, 26392), (163, 26317), (166, 26293), (171, 26254), (172, 26251), (189, 26164), (210, 26050), (213, 26038), (262, 25855), (291, 25744), (304, 25693), (342, 25564), (346, 25555), (364, 25480), (366, 25474), (397, 25351), (404, 25312), (457, 25162), (462, 25147),

Gene: Anthony\_33 Start: 25025, Stop: 23601, Start Num: 100

Candidate Starts for Anthony\_33:

(1, 25649), (2, 25601), (4, 25574), (5, 25571), (6, 25547), (8, 25487), (9, 25475), (13, 25409), (53, 25121), (Start: 76 @25070 has 1 MA's), (Start: 98 @25034 has 76 MA's), (Start: 100 @25025 has 1 MA's), (Start: 124 @24899 has 1 MA's), (148, 24773), (158, 24749), (172, 24692), (195, 24569), (199, 24548), (215, 24470), (219, 24452), (227, 24422), (275, 24281), (282, 24236), (307, 24140), (317, 24113), (342, 24044), (360, 23978), (377, 23906), (394, 23846), (431, 23681), (459, 23645), (468, 23621),

Gene: AppleCloud\_27 Start: 23605, Stop: 22106, Start Num: 83

Candidate Starts for AppleCloud\_27:

(Start: 83 @23605 has 47 MA's), (Start: 98 @23584 has 76 MA's), (Start: 99 @23578 has 3 MA's), (112, 23509), (Start: 124 @23449 has 1 MA's), (151, 23311), (152, 23308), (161, 23281), (173, 23230), (193, 23140), (209, 23044), (213, 23029), (215, 23017), (226, 22978), (252, 22897), (256, 22885), (269, 22846), (275, 22828), (288, 22759), (296, 22732), (298, 22720), (304, 22696), (306, 22687), (317, 22657), (320, 22639), (331, 22618), (336, 22597), (347, 22564), (350, 22552), (377, 22444), (403, 22339), (416, 22279), (424, 22240), (425, 22237), (433, 22213), (435, 22207),

Gene: Aragog\_30 Start: 25886, Stop: 24393, Start Num: 98

Candidate Starts for Aragog\_30:

(Start: 98 @25886 has 76 MA's), (Start: 105 @25853 has 1 MA's), (Start: 106 @25850 has 3 MA's), (Start: 109 @25832 has 4 MA's), (Start: 124 @25751 has 1 MA's), (155, 25607), (163, 25580), (174, 25532), (205, 25367), (210, 25343), (211, 25340), (215, 25319), (275, 25130), (317, 24959), (350, 24824), (361, 24782), (364, 24770), (386, 24686), (391, 24671), (394, 24656), (435, 24479), (455, 24449), (466, 24416),

Gene: Archetta\_30 Start: 25923, Stop: 24442, Start Num: 98

Candidate Starts for Archetta\_30:

(75, 25950), (Start: 98 @25923 has 76 MA's), (Start: 106 @25887 has 3 MA's), (Start: 124 @25788 has 1 MA's), (140, 25704), (148, 25662), (158, 25638), (164, 25611), (173, 25572), (179, 25548), (205, 25404), (284, 25110), (297, 25065), (304, 25035), (310, 25011), (317, 24996), (335, 24936), (348, 24885), (350, 24876), (364, 24822), (372, 24789), (391, 24723), (435, 24531), (471, 24453),

Gene: Arturo\_32 Start: 26750, Stop: 25254, Start Num: 98

Candidate Starts for Arturo\_32:

(Start: 57 @26816 has 10 MA's), (Start: 91 @26759 has 1 MA's), (Start: 98 @26750 has 76 MA's), (Start: 102 @26732 has 3 MA's), (112, 26675), (114, 26657), (122, 26627), (Start: 124 @26615 has 1 MA's), (148, 26489), (157, 26468), (164, 26438), (173, 26399), (210, 26210), (218, 26174), (223, 26156), (268, 26018), (278, 25973), (327, 25787), (357, 25661), (364, 25634), (377, 25580), (379, 25571), (429, 25361), (435, 25343), (445, 25331), (451, 25322),

Gene: Asa16\_48 Start: 35961, Stop: 37382, Start Num: 94

Candidate Starts for Asa16\_48:

(82, 35943), (92, 35958), (Start: 94 @35961 has 34 MA's), (Start: 98 @35970 has 76 MA's), (119, 36084), (Start: 124 @36108 has 1 MA's), (140, 36192), (149, 36225), (154, 36240), (170, 36303), (174,

36315), (176, 36324), (194, 36423), (201, 36465), (213, 36516), (222, 36555), (255, 36633), (264, 36660), (280, 36714), (357, 37020), (360, 37029), (362, 37038), (365, 37050), (412, 37221), (435, 37308),

Gene: Ascela\_51 Start: 36003, Stop: 37418, Start Num: 98

Candidate Starts for Ascela\_51:

(Start: 98 @36003 has 76 MA's), (Start: 102 @36021 has 3 MA's), (Start: 124 @36141 has 1 MA's), (140, 36225), (156, 36276), (170, 36336), (174, 36348), (180, 36378), (194, 36456), (213, 36549), (222, 36588), (362, 37071), (365, 37083), (412, 37254),

Gene: Ashes\_43 Start: 31555, Stop: 32994, Start Num: 97

Candidate Starts for Ashes\_43:

(Start: 97 @31555 has 18 MA's), (118, 31666), (120, 31675), (133, 31738), (138, 31762), (141, 31771), (174, 31921), (176, 31930), (203, 32086), (205, 32092), (211, 32119), (280, 32353), (282, 32368), (314, 32476), (390, 32746), (436, 32923), (443, 32938), (444, 32941),

Gene: Asten\_50 Start: 36160, Stop: 37782, Start Num: 45

Candidate Starts for Asten\_50:

(Start: 28 @36103 has 7 MA's), (Start: 45 @36160 has 5 MA's), (Start: 46 @36169 has 23 MA's), (96, 36289), (Start: 102 @36316 has 3 MA's), (120, 36415), (Start: 124 @36433 has 1 MA's), (132, 36484), (154, 36565), (156, 36568), (170, 36640), (173, 36649), (174, 36652), (197, 36778), (202, 36805), (218, 36874), (221, 36886), (229, 36919), (250, 36988), (263, 37015), (280, 37063), (290, 37111), (302, 37150), (317, 37207), (351, 37330), (366, 37390), (376, 37435), (410, 37564), (419, 37615), (421, 37624), (433, 37663), (442, 37687), (449, 37702), (453, 37717), (458, 37732),

Gene: Astro\_30 Start: 25018, Stop: 23516, Start Num: 89

Candidate Starts for Astro\_30:

(54, 25087), (Start: 67 @25060 has 1 MA's), (Start: 71 @25054 has 1 MA's), (Start: 89 @25018 has 107 MA's), (Start: 124 @24868 has 1 MA's), (144, 24763), (163, 24697), (165, 24679), (171, 24637), (172, 24634), (189, 24547), (210, 24433), (213, 24421), (234, 24328), (245, 24280), (262, 24238), (280, 24178), (304, 24076), (361, 23869), (388, 23764), (397, 23728), (404, 23689), (423, 23605), (448, 23557),

Gene: Attoomi\_51 Start: 39130, Stop: 40542, Start Num: 117

Candidate Starts for Attoomi\_51:

(73, 38968), (80, 38980), (Start: 117 @39130 has 1 MA's), (120, 39142), (122, 39148), (Start: 124 @39160 has 1 MA's), (132, 39208), (138, 39232), (146, 39271), (150, 39283), (153, 39292), (160, 39316), (163, 39325), (167, 39349), (190, 39451), (195, 39484), (201, 39523), (208, 39556), (215, 39586), (216, 39589), (232, 39661), (236, 39676), (254, 39736), (255, 39742), (261, 39760), (274, 39793), (280, 39826), (283, 39847), (295, 39889), (306, 39931), (310, 39946), (315, 39961), (324, 39997), (332, 40000), (342, 40045), (345, 40051), (351, 40078), (366, 40135), (387, 40216), (431, 40414), (447, 40447), (467, 40498), (475, 40519), (477, 40522), (478, 40534),

Gene: AvatarAhPeg\_34 Start: 27306, Stop: 25744, Start Num: 57

Candidate Starts for AvatarAhPeg\_34:

(Start: 57 @27306 has 10 MA's), (Start: 91 @27249 has 1 MA's), (Start: 98 @27240 has 76 MA's), (Start: 102 @27222 has 3 MA's), (112, 27165), (122, 27117), (Start: 124 @27105 has 1 MA's), (148, 26979), (157, 26958), (158, 26955), (164, 26928), (173, 26889), (197, 26760), (210, 26700), (268, 26508), (306, 26346), (357, 26151), (364, 26124), (377, 26070), (379, 26061), (429, 25851), (435, 25833), (445, 25821), (451, 25812), (457, 25794),

Gene: Avle17\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Avle17\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Baby16\_33 Start: 26648, Stop: 25134, Start Num: 89

Candidate Starts for Baby16\_33:

(Start: 67 @26690 has 1 MA's), (Start: 83 @26657 has 47 MA's), (Start: 89 @26648 has 107 MA's), (126, 26486), (138, 26420), (142, 26402), (163, 26327), (166, 26303), (171, 26264), (172, 26261), (189, 26174), (210, 26060), (213, 26048), (262, 25865), (291, 25754), (304, 25703), (342, 25574), (346, 25565), (364, 25490), (366, 25484), (397, 25361), (404, 25322), (457, 25172), (462, 25157),

Gene: Backyardigan\_33 Start: 26665, Stop: 25142, Start Num: 83

Candidate Starts for Backyardigan\_33:

(Start: 67 @26698 has 1 MA's), (Start: 83 @26665 has 47 MA's), (Start: 89 @26656 has 107 MA's), (126, 26494), (138, 26428), (142, 26410), (163, 26335), (171, 26272), (172, 26269), (189, 26182), (213, 26056), (262, 25873), (279, 25816), (291, 25762), (304, 25711), (342, 25582), (346, 25573), (364, 25498), (366, 25492), (394, 25378), (397, 25369), (404, 25330), (457, 25180), (462, 25165),

Gene: Badger\_33 Start: 26645, Stop: 25131, Start Num: 89

Candidate Starts for Badger\_33:

(Start: 67 @26687 has 1 MA's), (Start: 83 @26654 has 47 MA's), (Start: 89 @26645 has 107 MA's), (126, 26483), (138, 26417), (142, 26399), (163, 26324), (171, 26261), (172, 26258), (189, 26171), (213, 26045), (262, 25862), (279, 25805), (291, 25751), (304, 25700), (342, 25571), (346, 25562), (364, 25487), (366, 25481), (394, 25367), (397, 25358), (404, 25319), (457, 25169), (462, 25154),

Gene: BaileyBlu\_48 Start: 34192, Stop: 35604, Start Num: 98

Candidate Starts for BaileyBlu\_48:

(Start: 98 @34192 has 76 MA's), (134, 34384), (170, 34522), (174, 34534), (178, 34552), (180, 34564), (185, 34591), (187, 34597), (214, 34738), (215, 34747), (222, 34774), (255, 34855), (264, 34882), (271, 34903), (296, 35002), (312, 35071), (338, 35164), (342, 35182), (361, 35254), (383, 35335), (389, 35353), (412, 35440),

Gene: BarryBee\_53 Start: 36191, Stop: 37804, Start Num: 46

Candidate Starts for BarryBee\_53:

(Start: 28 @36125 has 7 MA's), (Start: 45 @36182 has 5 MA's), (Start: 46 @36191 has 23 MA's), (Start: 102 @36338 has 3 MA's), (120, 36437), (Start: 124 @36455 has 1 MA's), (132, 36506), (154, 36587), (156, 36590), (170, 36662), (173, 36671), (174, 36674), (197, 36800), (202, 36827), (218, 36896), (229, 36941), (250, 37010), (263, 37037), (280, 37085), (290, 37133), (302, 37172), (310, 37199), (317, 37229), (351, 37352), (366, 37412), (376, 37457), (410, 37586), (419, 37637), (421, 37646), (433, 37685), (442, 37709), (449, 37724), (453, 37739), (458, 37754),

Gene: Bartimeaus\_33 Start: 26639, Stop: 25125, Start Num: 89

Candidate Starts for Bartimeaus\_33:

(Start: 67 @26681 has 1 MA's), (Start: 83 @26648 has 47 MA's), (Start: 89 @26639 has 107 MA's), (126, 26477), (138, 26411), (142, 26393), (163, 26318), (166, 26294), (171, 26255), (172, 26252), (189, 26165), (210, 26051), (213, 26039), (262, 25856), (291, 25745), (304, 25694), (342, 25565), (346, 25556), (364, 25481), (366, 25475), (397, 25352), (404, 25313), (457, 25163), (462, 25148),

Gene: Beaupre\_42 Start: 31365, Stop: 32804, Start Num: 97

Candidate Starts for Beaupre\_42:

(Start: 97 @31365 has 18 MA's), (118, 31476), (120, 31485), (133, 31548), (138, 31572), (141, 31581), (174, 31731), (176, 31740), (203, 31896), (205, 31902), (211, 31929), (280, 32163), (282, 32178),

(314, 32286), (390, 32556), (436, 32733), (443, 32748), (444, 32751),

Gene: Belenaria\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for Belenaria\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (151, 23345), (179, 23240), (199, 23129), (204, 23099), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: Benedict\_31 Start: 25417, Stop: 23936, Start Num: 98

Candidate Starts for Benedict\_31:

(75, 25444), (Start: 98 @25417 has 76 MA's), (Start: 106 @25381 has 3 MA's), (Start: 124 @25282 has 1 MA's), (129, 25246), (140, 25198), (148, 25156), (158, 25132), (164, 25105), (173, 25066), (179, 25042), (181, 25027), (205, 24898), (284, 24604), (297, 24559), (304, 24529), (310, 24505), (317, 24490), (335, 24430), (348, 24379), (350, 24370), (364, 24316), (372, 24283), (391, 24217), (435, 24025), (471, 23947),

Gene: Berrie\_51 Start: 36108, Stop: 37529, Start Num: 94

Candidate Starts for Berrie\_51:

(82, 36090), (92, 36105), (Start: 94 @36108 has 34 MA's), (Start: 98 @36117 has 76 MA's), (119, 36231), (140, 36339), (154, 36387), (170, 36450), (174, 36462), (176, 36471), (194, 36570), (213, 36663), (222, 36702), (333, 37068), (362, 37185), (365, 37197), (393, 37290), (412, 37368), (422, 37416),

Gene: Blackmoor\_33 Start: 26639, Stop: 25125, Start Num: 89

Candidate Starts for Blackmoor\_33:

(Start: 67 @26681 has 1 MA's), (Start: 83 @26648 has 47 MA's), (Start: 89 @26639 has 107 MA's), (126, 26477), (138, 26411), (142, 26393), (163, 26318), (166, 26294), (171, 26255), (172, 26252), (189, 26165), (210, 26051), (213, 26039), (262, 25856), (291, 25745), (304, 25694), (342, 25565), (346, 25556), (364, 25481), (366, 25475), (397, 25352), (404, 25313), (457, 25163), (462, 25148),

Gene: Bluefalcon\_29 Start: 25903, Stop: 24443, Start Num: 105

Candidate Starts for Bluefalcon\_29:

(Start: 98 @25936 has 76 MA's), (Start: 105 @25903 has 1 MA's), (Start: 106 @25900 has 3 MA's), (Start: 109 @25882 has 4 MA's), (Start: 124 @25801 has 1 MA's), (155, 25657), (163, 25630), (174, 25582), (205, 25417), (210, 25393), (211, 25390), (215, 25369), (275, 25180), (306, 25039), (317, 25009), (361, 24832), (364, 24820), (386, 24736), (391, 24721), (394, 24706), (435, 24529), (455, 24499), (466, 24466),

Gene: BobbyDazzler\_29 Start: 23682, Stop: 22186, Start Num: 83

Candidate Starts for BobbyDazzler\_29:

(Start: 83 @23682 has 47 MA's), (Start: 98 @23661 has 76 MA's), (Start: 99 @23655 has 3 MA's), (Start: 124 @23526 has 1 MA's), (132, 23478), (151, 23391), (179, 23286), (199, 23175), (211, 23115), (214, 23103), (228, 23040), (238, 23010), (249, 22977), (258, 22956), (268, 22926), (275, 22905), (281, 22860), (282, 22857), (283, 22851), (304, 22767), (317, 22728), (318, 22722), (356, 22593), (362, 22572), (364, 22563), (404, 22401),

Gene: Bombshell\_33 Start: 26646, Stop: 25123, Start Num: 83

Candidate Starts for Bombshell\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563),

(346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Bonamassa\_30 Start: 25777, Stop: 24284, Start Num: 98

Candidate Starts for Bonamassa\_30:

(Start: 98 @25777 has 76 MA's), (Start: 105 @25744 has 1 MA's), (Start: 106 @25741 has 3 MA's), (Start: 109 @25723 has 4 MA's), (Start: 124 @25642 has 1 MA's), (155, 25498), (163, 25471), (174, 25423), (205, 25258), (210, 25234), (211, 25231), (215, 25210), (275, 25021), (306, 24880), (317, 24850), (361, 24673), (364, 24661), (386, 24577), (391, 24562), (394, 24547), (435, 24370), (455, 24340), (466, 24307),

Gene: Bonanza\_29 Start: 23610, Stop: 22114, Start Num: 83

Candidate Starts for Bonanza\_29:

(Start: 83 @23610 has 47 MA's), (Start: 98 @23589 has 76 MA's), (Start: 99 @23583 has 3 MA's), (Start: 124 @23454 has 1 MA's), (132, 23406), (151, 23319), (179, 23214), (199, 23103), (211, 23043), (214, 23031), (238, 22938), (249, 22905), (258, 22884), (268, 22854), (272, 22839), (275, 22833), (282, 22785), (304, 22695), (317, 22656), (318, 22650), (348, 22554), (356, 22521), (362, 22500), (364, 22491), (404, 22329),

Gene: Bradshaw\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for Bradshaw\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (151, 23345), (179, 23240), (199, 23129), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: Brataylor\_53 Start: 35602, Stop: 37179, Start Num: 46

Candidate Starts for Brataylor\_53:

(Start: 28 @35536 has 7 MA's), (Start: 46 @35602 has 23 MA's), (Start: 102 @35722 has 3 MA's), (118, 35812), (Start: 124 @35839 has 1 MA's), (132, 35890), (154, 35971), (156, 35974), (170, 36046), (173, 36055), (174, 36058), (202, 36211), (215, 36268), (216, 36271), (218, 36280), (225, 36304), (290, 36508), (310, 36574), (314, 36589), (317, 36604), (346, 36703), (351, 36727), (353, 36736), (359, 36760), (376, 36832), (421, 37021), (433, 37060), (442, 37084), (449, 37099), (453, 37114),

Gene: Broseidon\_33 Start: 26639, Stop: 25125, Start Num: 89

Candidate Starts for Broseidon\_33:

(Start: 67 @26681 has 1 MA's), (Start: 83 @26648 has 47 MA's), (Start: 89 @26639 has 107 MA's), (126, 26477), (138, 26411), (142, 26393), (163, 26318), (166, 26294), (171, 26255), (172, 26252), (189, 26165), (210, 26051), (213, 26039), (262, 25856), (291, 25745), (304, 25694), (342, 25565), (346, 25556), (364, 25481), (366, 25475), (397, 25352), (404, 25313), (457, 25163), (462, 25148),

Gene: Bruiser\_32 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Bruiser\_32:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Bryce\_29 Start: 23611, Stop: 22115, Start Num: 83

Candidate Starts for Bryce\_29:

(Start: 83 @23611 has 47 MA's), (Start: 98 @23590 has 76 MA's), (Start: 99 @23584 has 3 MA's), (Start: 124 @23455 has 1 MA's), (132, 23407), (151, 23320), (179, 23215), (199, 23104), (211, 23044), (214, 23032), (228, 22969), (238, 22939), (249, 22906), (258, 22885), (268, 22855), (275, 22834),

(281, 22789), (282, 22786), (283, 22780), (304, 22696), (317, 22657), (318, 22651), (356, 22522), (362, 22501), (364, 22492), (404, 22330),

Gene: BubbleTrouble\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for BubbleTrouble\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Bumblebee11\_33 Start: 26647, Stop: 25133, Start Num: 89

Candidate Starts for Bumblebee11\_33:

(Start: 67 @26689 has 1 MA's), (Start: 83 @26656 has 47 MA's), (Start: 89 @26647 has 107 MA's), (126, 26485), (138, 26419), (142, 26401), (163, 26326), (171, 26263), (172, 26260), (189, 26173), (213, 26047), (262, 25864), (279, 25807), (291, 25753), (304, 25702), (342, 25573), (346, 25564), (364, 25489), (366, 25483), (394, 25369), (397, 25360), (404, 25321), (457, 25171), (462, 25156),

Gene: Burger\_32 Start: 26646, Stop: 25123, Start Num: 83

Candidate Starts for Burger\_32:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: BuzzBuzz\_35 Start: 27309, Stop: 25741, Start Num: 89

Candidate Starts for BuzzBuzz\_35:

(33, 27459), (41, 27444), (Start: 71 @27345 has 1 MA's), (Start: 89 @27309 has 107 MA's), (144, 27054), (150, 27030), (165, 26970), (171, 26922), (172, 26919), (189, 26832), (193, 26820), (194, 26799), (199, 26775), (213, 26706), (229, 26637), (230, 26628), (262, 26523), (275, 26478), (304, 26346), (329, 26262), (345, 26205), (397, 25998), (425, 25857),

Gene: Bxz2\_34 Start: 27316, Stop: 25748, Start Num: 89

Candidate Starts for Bxz2\_34:

(33, 27466), (41, 27451), (Start: 71 @27352 has 1 MA's), (Start: 89 @27316 has 107 MA's), (144, 27061), (150, 27037), (165, 26977), (171, 26929), (172, 26926), (189, 26839), (193, 26827), (194, 26806), (199, 26782), (213, 26713), (229, 26644), (230, 26635), (262, 26530), (275, 26485), (304, 26353), (329, 26269), (345, 26212), (397, 26005), (425, 25864),

Gene: Caelakin\_33 Start: 26646, Stop: 25123, Start Num: 83

Candidate Starts for Caelakin\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Caitlin\_29 Start: 25011, Stop: 23509, Start Num: 89

Candidate Starts for Caitlin\_29:

(54, 25080), (Start: 67 @25053 has 1 MA's), (Start: 71 @25047 has 1 MA's), (Start: 89 @25011 has 107 MA's), (Start: 124 @24861 has 1 MA's), (144, 24756), (163, 24690), (165, 24672), (171, 24630), (172, 24627), (189, 24540), (194, 24507), (213, 24414), (234, 24321), (245, 24273), (262, 24231), (280, 24171), (304, 24069), (361, 23862), (388, 23757), (397, 23721), (404, 23682), (423, 23598), (448, 23550),

Gene: CallinAllBarbz\_48 Start: 34767, Stop: 36179, Start Num: 98

Candidate Starts for CallinAllBarbz\_48:

(Start: 98 @34767 has 76 MA's), (170, 35097), (174, 35109), (178, 35127), (180, 35139), (185, 35166), (187, 35172), (214, 35313), (222, 35349), (255, 35430), (271, 35478), (296, 35577), (312, 35646), (342, 35757), (357, 35814), (361, 35829), (383, 35910), (389, 35928), (412, 36015), (459, 36165),

Gene: Camperdownii\_32 Start: 26250, Stop: 24772, Start Num: 102

Candidate Starts for Camperdownii\_32:

(Start: 57 @26334 has 10 MA's), (Start: 98 @26268 has 76 MA's), (Start: 102 @26250 has 3 MA's), (112, 26193), (114, 26175), (122, 26145), (Start: 124 @26133 has 1 MA's), (148, 26007), (157, 25986), (164, 25956), (173, 25917), (181, 25878), (197, 25788), (210, 25728), (223, 25674), (268, 25536), (308, 25368), (327, 25305), (348, 25215), (357, 25179), (364, 25152), (377, 25098), (379, 25089), (429, 24879), (435, 24861), (445, 24849), (451, 24840),

Gene: Cappuccino\_43 Start: 31421, Stop: 32860, Start Num: 97

Candidate Starts for Cappuccino\_43:

(Start: 97 @31421 has 18 MA's), (118, 31532), (120, 31541), (133, 31604), (138, 31628), (141, 31637), (174, 31787), (176, 31796), (203, 31952), (205, 31958), (211, 31985), (226, 32045), (280, 32219), (282, 32234), (314, 32342), (367, 32525), (436, 32789), (443, 32804), (444, 32807),

Gene: Cassia\_48 Start: 35110, Stop: 36528, Start Num: 94

Candidate Starts for Cassia\_48:

(82, 35092), (92, 35107), (Start: 94 @35110 has 34 MA's), (Start: 98 @35119 has 76 MA's), (Start: 124 @35257 has 1 MA's), (140, 35341), (170, 35452), (174, 35464), (176, 35473), (194, 35572), (201, 35614), (213, 35665), (222, 35704), (342, 36109), (357, 36166), (362, 36184), (365, 36196), (413, 36370),

Gene: Caviar\_34 Start: 27229, Stop: 25721, Start Num: 98

Candidate Starts for Caviar\_34:

(Start: 90 @27244 has 2 MA's), (Start: 98 @27229 has 76 MA's), (Start: 99 @27223 has 3 MA's), (Start: 100 @27220 has 1 MA's), (130, 27052), (132, 27046), (162, 26929), (176, 26869), (197, 26752), (205, 26713), (211, 26686), (214, 26674), (241, 26539), (287, 26386), (309, 26296), (321, 26257), (350, 26167), (361, 26125), (364, 26113), (375, 26068), (380, 26047), (431, 25834), (440, 25813),

Gene: Celeste\_51 Start: 35002, Stop: 36645, Start Num: 28

Candidate Starts for Celeste\_51:

(Start: 28 @35002 has 7 MA's), (Start: 46 @35068 has 23 MA's), (Start: 102 @35188 has 3 MA's), (120, 35287), (Start: 124 @35305 has 1 MA's), (154, 35437), (156, 35440), (170, 35512), (173, 35521), (174, 35524), (202, 35677), (215, 35734), (216, 35737), (218, 35746), (225, 35770), (242, 35839), (290, 35974), (310, 36040), (317, 36070), (346, 36169), (351, 36193), (353, 36202), (359, 36226), (376, 36298), (421, 36487), (430, 36517), (433, 36526), (442, 36550), (449, 36565), (453, 36580),

Gene: Celestiallunch\_33 Start: 26340, Stop: 24784, Start Num: 88

Candidate Starts for Celestiallunch\_33:

(Start: 88 @26340 has 4 MA's), (95, 26328), (115, 26226), (Start: 124 @26187 has 1 MA's), (144, 26082), (150, 26058), (163, 26016), (172, 25944), (173, 25935), (184, 25884), (194, 25824), (215, 25719), (226, 25680), (228, 25665), (229, 25662), (234, 25638), (243, 25596), (253, 25578), (262, 25548), (275, 25530), (278, 25506), (306, 25389), (315, 25359), (342, 25278), (345, 25272), (361, 25206), (364, 25194), (372, 25161), (385, 25113), (392, 25080), (397, 25065), (402, 25035), (404, 25026), (406, 25020), (423, 24933), (432, 24912), (435, 24903), (474, 24816),

Gene: Cen1621\_56 Start: 37861, Stop: 39441, Start Num: 76

Candidate Starts for Cen1621\_56:

(Start: 76 @37861 has 1 MA's), (122, 38014), (133, 38071), (153, 38158), (173, 38272), (183, 38320), (184, 38323), (190, 38353), (222, 38518), (253, 38638), (257, 38650), (314, 38890), (337, 38965), (390, 39169), (416, 39283), (438, 39349), (442, 39358),

Gene: CentreCat\_33 Start: 26640, Stop: 25126, Start Num: 89

Candidate Starts for CentreCat\_33:

(Start: 67 @26682 has 1 MA's), (Start: 83 @26649 has 47 MA's), (Start: 89 @26640 has 107 MA's), (126, 26478), (138, 26412), (142, 26394), (163, 26319), (166, 26295), (171, 26256), (172, 26253), (189, 26166), (210, 26052), (213, 26040), (262, 25857), (291, 25746), (304, 25695), (342, 25566), (346, 25557), (364, 25482), (366, 25476), (397, 25353), (404, 25314), (457, 25164), (462, 25149),

Gene: Chadwick\_32 Start: 25311, Stop: 23830, Start Num: 98

Candidate Starts for Chadwick\_32:

(75, 25338), (Start: 98 @25311 has 76 MA's), (Start: 106 @25275 has 3 MA's), (Start: 124 @25176 has 1 MA's), (140, 25092), (148, 25050), (158, 25026), (164, 24999), (173, 24960), (179, 24936), (205, 24792), (284, 24498), (297, 24453), (304, 24423), (310, 24399), (317, 24384), (335, 24324), (348, 24273), (350, 24264), (364, 24210), (372, 24177), (391, 24111), (394, 24096), (404, 24048), (435, 23919), (471, 23841),

Gene: Chaph\_33 Start: 26648, Stop: 25134, Start Num: 89

Candidate Starts for Chaph\_33:

(Start: 67 @26690 has 1 MA's), (Start: 83 @26657 has 47 MA's), (Start: 89 @26648 has 107 MA's), (126, 26486), (138, 26420), (142, 26402), (163, 26327), (166, 26303), (171, 26264), (172, 26261), (189, 26174), (210, 26060), (213, 26048), (262, 25865), (291, 25754), (304, 25703), (342, 25574), (346, 25565), (364, 25490), (366, 25484), (397, 25361), (404, 25322), (457, 25172), (462, 25157),

Gene: Chargerpower\_35 Start: 26253, Stop: 24691, Start Num: 98

Candidate Starts for Chargerpower\_35:

(Start: 98 @26253 has 76 MA's), (Start: 124 @26118 has 1 MA's), (176, 25890), (204, 25737), (205, 25734), (210, 25710), (215, 25686), (226, 25647), (229, 25629), (268, 25518), (275, 25497), (304, 25365), (305, 25362), (306, 25356), (310, 25341), (314, 25323), (382, 25056), (391, 25029), (400, 24984), (401, 24978), (404, 24966), (416, 24909), (425, 24867), (429, 24855), (433, 24843), (435, 24837), (460, 24786),

Gene: Charm\_33 Start: 26356, Stop: 24809, Start Num: 93

Candidate Starts for Charm\_33:

(49, 26449), (Start: 68 @26401 has 2 MA's), (78, 26380), (Start: 83 @26371 has 47 MA's), (Start: 93 @26356 has 2 MA's), (103, 26326), (144, 26107), (164, 26035), (172, 25969), (173, 25960), (178, 25939), (184, 25909), (197, 25831), (198, 25828), (220, 25723), (228, 25690), (245, 25615), (262, 25573), (275, 25555), (278, 25531), (306, 25414), (315, 25384), (342, 25303), (361, 25231), (364, 25219), (392, 25105), (397, 25090), (411, 25027), (413, 25021), (416, 24994), (423, 24958), (424, 24955), (432, 24937), (458, 24886),

Gene: Chucky\_50 Start: 36208, Stop: 37821, Start Num: 46

Candidate Starts for Chucky\_50:

(Start: 28 @36142 has 7 MA's), (Start: 45 @36199 has 5 MA's), (Start: 46 @36208 has 23 MA's), (Start: 102 @36355 has 3 MA's), (120, 36454), (Start: 124 @36472 has 1 MA's), (132, 36523), (154, 36604), (156, 36607), (170, 36679), (173, 36688), (174, 36691), (197, 36817), (202, 36844), (218, 36913), (229, 36958), (250, 37027), (263, 37054), (280, 37102), (290, 37150), (302, 37189), (310, 37216), (317, 37246), (351, 37369), (366, 37429), (376, 37474), (410, 37603), (419, 37654), (421, 37663), (433, 37702), (442, 37726), (449, 37741), (453, 37756), (458, 37771),

Gene: Chupacabra\_33 Start: 26669, Stop: 25161, Start Num: 98

Candidate Starts for Chupacabra\_33:

(Start: 98 @26669 has 76 MA's), (Start: 102 @26651 has 3 MA's), (103, 26645), (119, 26558), (Start: 124 @26534 has 1 MA's), (162, 26369), (197, 26192), (205, 26153), (207, 26141), (210, 26129), (211, 26126), (214, 26114), (278, 25868), (282, 25847), (317, 25718), (321, 25697), (351, 25604), (357, 25580), (361, 25565), (375, 25508), (380, 25487),

Gene: Cici\_33 Start: 26641, Stop: 25127, Start Num: 89

Candidate Starts for Cici\_33:

(Start: 67 @26683 has 1 MA's), (Start: 83 @26650 has 47 MA's), (Start: 89 @26641 has 107 MA's), (126, 26479), (138, 26413), (142, 26395), (163, 26320), (171, 26257), (172, 26254), (189, 26167), (213, 26041), (262, 25858), (279, 25801), (291, 25747), (304, 25696), (342, 25567), (346, 25558), (364, 25483), (366, 25477), (394, 25363), (397, 25354), (404, 25315), (457, 25165), (462, 25150),

Gene: Cindaradix\_32 Start: 26384, Stop: 24879, Start Num: 91

Candidate Starts for Cindaradix\_32:

(19, 26615), (22, 26597), (23, 26588), (Start: 57 @26441 has 10 MA's), (Start: 91 @26384 has 1 MA's), (Start: 98 @26375 has 76 MA's), (Start: 102 @26357 has 3 MA's), (112, 26300), (114, 26282), (122, 26252), (Start: 124 @26240 has 1 MA's), (148, 26114), (157, 26093), (164, 26063), (173, 26024), (197, 25895), (210, 25835), (223, 25781), (268, 25643), (281, 25580), (327, 25412), (329, 25409), (357, 25286), (364, 25259), (377, 25205), (379, 25196), (429, 24986), (435, 24968), (445, 24956), (451, 24947),

Gene: Cintron\_33 Start: 26703, Stop: 25171, Start Num: 89

Candidate Starts for Cintron\_33:

(Start: 67 @26745 has 1 MA's), (Start: 83 @26712 has 47 MA's), (Start: 89 @26703 has 107 MA's), (126, 26541), (138, 26475), (142, 26457), (163, 26382), (166, 26358), (171, 26319), (172, 26316), (189, 26229), (213, 26103), (215, 26091), (262, 25920), (291, 25809), (304, 25758), (331, 25659), (342, 25611), (346, 25602), (364, 25527), (366, 25521), (397, 25398), (404, 25359), (457, 25209), (462, 25194),

Gene: Citius\_33 Start: 26652, Stop: 25138, Start Num: 89

Candidate Starts for Citius\_33:

(Start: 67 @26694 has 1 MA's), (Start: 83 @26661 has 47 MA's), (Start: 89 @26652 has 107 MA's), (126, 26490), (138, 26424), (142, 26406), (163, 26331), (166, 26307), (171, 26268), (172, 26265), (189, 26178), (210, 26064), (213, 26052), (262, 25869), (291, 25758), (304, 25707), (342, 25578), (346, 25569), (364, 25494), (366, 25488), (397, 25365), (404, 25326), (457, 25176), (462, 25161),

Gene: Clarenza\_33 Start: 26634, Stop: 25120, Start Num: 89

Candidate Starts for Clarenza\_33:

(Start: 67 @26676 has 1 MA's), (Start: 83 @26643 has 47 MA's), (Start: 89 @26634 has 107 MA's), (126, 26472), (138, 26406), (142, 26388), (163, 26313), (166, 26289), (171, 26250), (172, 26247), (189, 26160), (210, 26046), (213, 26034), (262, 25851), (291, 25740), (304, 25689), (342, 25560), (346, 25551), (364, 25476), (366, 25470), (397, 25347), (404, 25308), (457, 25158), (462, 25143),

Gene: Cocoaberry\_33 Start: 26641, Stop: 25127, Start Num: 89

Candidate Starts for Cocoaberry\_33:

(Start: 67 @26683 has 1 MA's), (Start: 83 @26650 has 47 MA's), (Start: 89 @26641 has 107 MA's), (126, 26479), (138, 26413), (142, 26395), (163, 26320), (166, 26296), (171, 26257), (172, 26254), (189, 26167), (210, 26053), (213, 26041), (262, 25858), (291, 25747), (304, 25696), (342, 25567), (346, 25558), (364, 25483), (366, 25477), (397, 25354), (404, 25315), (457, 25165), (462, 25150),

Gene: Community\_53 Start: 37437, Stop: 38921, Start Num: 88

Candidate Starts for Community\_53:

(Start: 88 @37437 has 4 MA's), (Start: 94 @37446 has 34 MA's), (167, 37767), (217, 38046), (264, 38220), (317, 38412), (383, 38649), (424, 38811),

Gene: Connomayer\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Connomayer\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Conspiracy\_30 Start: 25686, Stop: 24193, Start Num: 98

Candidate Starts for Conspiracy\_30:

(Start: 98 @25686 has 76 MA's), (Start: 105 @25653 has 1 MA's), (Start: 106 @25650 has 3 MA's), (Start: 109 @25632 has 4 MA's), (Start: 124 @25551 has 1 MA's), (155, 25407), (163, 25380), (174, 25332), (205, 25167), (210, 25143), (211, 25140), (215, 25119), (275, 24930), (317, 24759), (350, 24624), (361, 24582), (364, 24570), (386, 24486), (391, 24471), (394, 24456), (435, 24279), (455, 24249), (466, 24216),

Gene: Coog\_30 Start: 25790, Stop: 24333, Start Num: 106

Candidate Starts for Coog\_30:

(Start: 98 @25826 has 76 MA's), (Start: 105 @25793 has 1 MA's), (Start: 106 @25790 has 3 MA's), (Start: 109 @25772 has 4 MA's), (Start: 124 @25691 has 1 MA's), (155, 25547), (163, 25520), (174, 25472), (205, 25307), (210, 25283), (211, 25280), (215, 25259), (229, 25202), (275, 25070), (306, 24929), (317, 24899), (361, 24722), (364, 24710), (386, 24626), (391, 24611), (394, 24596), (435, 24419), (455, 24389), (466, 24356),

Gene: CosmicSans\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for CosmicSans\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (179, 23240), (199, 23129), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: Crewmate\_55 Start: 36855, Stop: 38273, Start Num: 94

Candidate Starts for Crewmate\_55:

(82, 36837), (92, 36852), (Start: 94 @36855 has 34 MA's), (Start: 98 @36864 has 76 MA's), (119, 36978), (Start: 124 @37002 has 1 MA's), (128, 37023), (140, 37086), (154, 37134), (170, 37197), (174, 37209), (194, 37317), (201, 37359), (213, 37410), (222, 37449), (342, 37854), (362, 37929), (365, 37941), (393, 38034), (412, 38112), (436, 38202),

Gene: Cuco\_30 Start: 25776, Stop: 24283, Start Num: 98

Candidate Starts for Cuco\_30:

(Start: 98 @25776 has 76 MA's), (Start: 105 @25743 has 1 MA's), (Start: 106 @25740 has 3 MA's), (Start: 109 @25722 has 4 MA's), (Start: 124 @25641 has 1 MA's), (155, 25497), (163, 25470), (174, 25422), (205, 25257), (210, 25233), (211, 25230), (215, 25209), (275, 25020), (306, 24879), (317, 24849), (361, 24672), (364, 24660), (386, 24576), (391, 24561), (394, 24546), (435, 24369), (455, 24339), (466, 24306),

Gene: Cyan\_50 Start: 35259, Stop: 36668, Start Num: 98

Candidate Starts for Cyan\_50:

(Start: 98 @35259 has 76 MA's), (119, 35373), (Start: 124 @35397 has 1 MA's), (140, 35481), (170, 35592), (174, 35604), (176, 35613), (194, 35712), (213, 35805), (215, 35817), (280, 36003), (357,

36306), (362, 36324), (365, 36336), (374, 36369), (412, 36507),

Gene: Daishi\_35 Start: 26150, Stop: 24582, Start Num: 89

Candidate Starts for Daishi\_35:

(33, 26300), (41, 26285), (Start: 71 @26186 has 1 MA's), (Start: 89 @26150 has 107 MA's), (144, 25895), (150, 25871), (165, 25811), (171, 25763), (172, 25760), (189, 25673), (193, 25661), (194, 25640), (199, 25616), (213, 25547), (229, 25478), (230, 25469), (262, 25364), (275, 25319), (304, 25187), (329, 25103), (345, 25046), (397, 24839), (425, 24698),

Gene: Danforth\_29 Start: 24993, Stop: 23491, Start Num: 89

Candidate Starts for Danforth\_29:

(54, 25062), (Start: 67 @25035 has 1 MA's), (Start: 71 @25029 has 1 MA's), (Start: 89 @24993 has 107 MA's), (Start: 124 @24843 has 1 MA's), (144, 24738), (163, 24672), (165, 24654), (171, 24612), (172, 24609), (189, 24522), (213, 24396), (234, 24303), (245, 24255), (262, 24213), (280, 24153), (304, 24051), (342, 23916), (361, 23844), (388, 23739), (394, 23712), (397, 23703), (423, 23580), (448, 23532),

Gene: Danzina\_52 Start: 35300, Stop: 36943, Start Num: 28

Candidate Starts for Danzina\_52:

(Start: 28 @35300 has 7 MA's), (Start: 46 @35366 has 23 MA's), (Start: 102 @35486 has 3 MA's), (118, 35576), (Start: 124 @35603 has 1 MA's), (132, 35654), (154, 35735), (156, 35738), (170, 35810), (173, 35819), (174, 35822), (202, 35975), (215, 36032), (216, 36035), (218, 36044), (225, 36068), (242, 36137), (290, 36272), (310, 36338), (314, 36353), (317, 36368), (346, 36467), (351, 36491), (353, 36500), (359, 36524), (376, 36596), (421, 36785), (430, 36815), (433, 36824), (442, 36848), (449, 36863), (453, 36878),

Gene: DARTHPhader\_36 Start: 28430, Stop: 26865, Start Num: 98

Candidate Starts for DARTHPhader\_36:

(Start: 98 @28430 has 76 MA's), (103, 28406), (Start: 124 @28295 has 1 MA's), (126, 28283), (151, 28160), (204, 27911), (210, 27884), (215, 27860), (226, 27821), (229, 27803), (246, 27749), (268, 27692), (290, 27593), (297, 27569), (305, 27536), (306, 27530), (310, 27515), (312, 27509), (314, 27497), (364, 27302), (375, 27257), (391, 27203), (404, 27140), (416, 27083), (425, 27041), (457, 26969), (460, 26960), (468, 26939), (480, 26876),

Gene: Dattran\_52 Start: 35171, Stop: 36814, Start Num: 28

Candidate Starts for Dattran\_52:

(Start: 28 @35171 has 7 MA's), (Start: 46 @35237 has 23 MA's), (Start: 102 @35357 has 3 MA's), (120, 35456), (Start: 124 @35474 has 1 MA's), (132, 35525), (154, 35606), (156, 35609), (170, 35681), (173, 35690), (174, 35693), (215, 35903), (216, 35906), (218, 35915), (290, 36143), (310, 36209), (317, 36239), (346, 36338), (351, 36362), (353, 36371), (359, 36395), (376, 36467), (421, 36656), (430, 36686), (433, 36695), (442, 36719), (449, 36734), (453, 36749),

Gene: Datway\_33 Start: 26665, Stop: 25142, Start Num: 83

Candidate Starts for Datway\_33:

(Start: 67 @26698 has 1 MA's), (Start: 83 @26665 has 47 MA's), (Start: 89 @26656 has 107 MA's), (Start: 105 @26611 has 1 MA's), (126, 26494), (138, 26428), (142, 26410), (163, 26335), (171, 26272), (172, 26269), (189, 26182), (213, 26056), (262, 25873), (279, 25816), (291, 25762), (304, 25711), (342, 25582), (346, 25573), (364, 25498), (366, 25492), (394, 25378), (397, 25369), (404, 25330), (457, 25180), (462, 25165),

Gene: Deano\_33 Start: 26645, Stop: 25131, Start Num: 89

Candidate Starts for Deano\_33:

(Start: 67 @26687 has 1 MA's), (Start: 83 @26654 has 47 MA's), (Start: 89 @26645 has 107 MA's), (126, 26483), (138, 26417), (142, 26399), (163, 26324), (166, 26300), (171, 26261), (172, 26258), (189, 26171), (210, 26057), (213, 26045), (262, 25862), (291, 25751), (304, 25700), (342, 25571), (346, 25562), (364, 25487), (366, 25481), (397, 25358), (404, 25319), (457, 25169), (462, 25154),

Gene: Dhanush\_33 Start: 26640, Stop: 25126, Start Num: 89

Candidate Starts for Dhanush\_33:

(Start: 67 @26682 has 1 MA's), (Start: 83 @26649 has 47 MA's), (Start: 89 @26640 has 107 MA's), (126, 26478), (138, 26412), (142, 26394), (163, 26319), (166, 26295), (171, 26256), (172, 26253), (189, 26166), (210, 26052), (213, 26040), (262, 25857), (291, 25746), (304, 25695), (342, 25566), (346, 25557), (364, 25482), (366, 25476), (397, 25353), (404, 25314), (457, 25164), (462, 25149),

Gene: Dinger\_29 Start: 23598, Stop: 22111, Start Num: 98

Candidate Starts for Dinger\_29:

(Start: 98 @23598 has 76 MA's), (Start: 99 @23592 has 3 MA's), (Start: 124 @23463 has 1 MA's), (132, 23415), (179, 23223), (186, 23184), (199, 23112), (211, 23052), (214, 23040), (238, 22947), (249, 22914), (258, 22893), (263, 22875), (268, 22863), (272, 22848), (275, 22842), (282, 22794), (290, 22761), (304, 22704), (317, 22665), (318, 22659), (362, 22509), (399, 22368), (404, 22338), (471, 22122),

Gene: DirtyDunning\_33 Start: 26700, Stop: 25138, Start Num: 57

Candidate Starts for DirtyDunning\_33:

(Start: 57 @26700 has 10 MA's), (Start: 98 @26634 has 76 MA's), (Start: 102 @26616 has 3 MA's), (112, 26559), (114, 26541), (122, 26511), (Start: 124 @26499 has 1 MA's), (148, 26373), (157, 26352), (164, 26322), (173, 26283), (181, 26244), (197, 26154), (210, 26094), (223, 26040), (268, 25902), (327, 25671), (348, 25581), (357, 25545), (364, 25518), (377, 25464), (379, 25455), (429, 25245), (435, 25227), (445, 25215), (451, 25206),

Gene: Discoknowium\_30 Start: 25895, Stop: 24402, Start Num: 98

Candidate Starts for Discoknowium\_30:

(Start: 98 @25895 has 76 MA's), (Start: 105 @25862 has 1 MA's), (Start: 106 @25859 has 3 MA's), (Start: 109 @25841 has 4 MA's), (Start: 124 @25760 has 1 MA's), (155, 25616), (163, 25589), (174, 25541), (205, 25376), (210, 25352), (211, 25349), (215, 25328), (275, 25139), (317, 24968), (350, 24833), (361, 24791), (364, 24779), (386, 24695), (391, 24680), (394, 24665), (435, 24488), (455, 24458), (466, 24425),

Gene: Dixon\_30 Start: 25012, Stop: 23510, Start Num: 89

Candidate Starts for Dixon\_30:

(54, 25081), (Start: 67 @25054 has 1 MA's), (Start: 71 @25048 has 1 MA's), (Start: 89 @25012 has 107 MA's), (Start: 124 @24862 has 1 MA's), (144, 24757), (163, 24691), (165, 24673), (171, 24631), (172, 24628), (189, 24541), (213, 24415), (234, 24322), (245, 24274), (262, 24232), (280, 24172), (304, 24070), (342, 23935), (361, 23863), (388, 23758), (397, 23722), (404, 23683), (423, 23599), (448, 23551),

Gene: Donkey\_43 Start: 31411, Stop: 32850, Start Num: 97

Candidate Starts for Donkey\_43:

(Start: 97 @31411 has 18 MA's), (118, 31522), (120, 31531), (133, 31594), (138, 31618), (141, 31627), (174, 31777), (176, 31786), (203, 31942), (205, 31948), (211, 31975), (226, 32035), (280, 32209), (282, 32224), (314, 32332), (367, 32515), (436, 32779), (443, 32794), (444, 32797),

Gene: DontArgue\_32 Start: 25416, Stop: 23920, Start Num: 98

Candidate Starts for DontArgue\_32:

(63, 25482), (Start: 91 @25425 has 1 MA's), (Start: 98 @25416 has 76 MA's), (Start: 102 @25398 has 3 MA's), (119, 25305), (Start: 124 @25281 has 1 MA's), (140, 25197), (148, 25155), (158, 25131), (164, 25104), (173, 25065), (197, 24936), (210, 24876), (223, 24822), (268, 24684), (347, 24366), (357, 24327), (364, 24300), (373, 24261), (377, 24246), (379, 24237), (424, 24042), (431, 24021), (433, 24015), (435, 24009), (445, 23997), (451, 23988), (455, 23976), (473, 23925),

Gene: DrManhattan\_52 Start: 34287, Stop: 35705, Start Num: 94

Candidate Starts for DrManhattan\_52:

(82, 34269), (92, 34284), (Start: 94 @34287 has 34 MA's), (Start: 98 @34296 has 76 MA's), (Start: 102 @34314 has 3 MA's), (Start: 124 @34434 has 1 MA's), (140, 34518), (154, 34566), (170, 34629), (174, 34641), (194, 34749), (213, 34842), (283, 35061), (356, 35340), (362, 35361), (412, 35544),

Gene: DrSierra\_48 Start: 34086, Stop: 35504, Start Num: 94

Candidate Starts for DrSierra\_48:

(82, 34068), (92, 34083), (Start: 94 @34086 has 34 MA's), (Start: 98 @34095 has 76 MA's), (Start: 102 @34113 has 3 MA's), (119, 34209), (Start: 124 @34233 has 1 MA's), (140, 34317), (141, 34320), (154, 34365), (170, 34428), (174, 34440), (176, 34449), (194, 34548), (213, 34641), (222, 34680), (339, 35070), (362, 35160), (365, 35172), (412, 35343),

Gene: DreamTeam1\_33 Start: 26239, Stop: 24692, Start Num: 93

Candidate Starts for DreamTeam1\_33:

(49, 26332), (Start: 68 @26284 has 2 MA's), (78, 26263), (Start: 83 @26254 has 47 MA's), (Start: 93 @26239 has 2 MA's), (103, 26209), (127, 26080), (144, 25990), (164, 25918), (172, 25852), (173, 25843), (178, 25822), (184, 25792), (197, 25714), (198, 25711), (220, 25606), (228, 25573), (245, 25498), (262, 25456), (275, 25438), (278, 25414), (306, 25297), (315, 25267), (342, 25186), (361, 25114), (364, 25102), (392, 24988), (397, 24973), (413, 24904), (423, 24841), (424, 24838), (432, 24820), (458, 24769),

Gene: DroogsArmy\_34 Start: 29062, Stop: 27602, Start Num: 98

Candidate Starts for DroogsArmy\_34:

(38, 29215), (72, 29110), (79, 29095), (Start: 98 @29062 has 76 MA's), (Start: 99 @29056 has 3 MA's), (Start: 102 @29044 has 3 MA's), (103, 29038), (123, 28933), (Start: 124 @28927 has 1 MA's), (129, 28891), (152, 28789), (163, 28756), (172, 28720), (179, 28687), (214, 28507), (259, 28357), (274, 28312), (306, 28168), (320, 28120), (350, 28039), (353, 28027), (355, 28021), (364, 27985), (377, 27931), (386, 27901), (471, 27613),

Gene: Druantia\_33 Start: 26640, Stop: 25126, Start Num: 89

Candidate Starts for Druantia\_33:

(Start: 67 @26682 has 1 MA's), (Start: 83 @26649 has 47 MA's), (Start: 89 @26640 has 107 MA's), (126, 26478), (138, 26412), (142, 26394), (163, 26319), (166, 26295), (171, 26256), (172, 26253), (189, 26166), (210, 26052), (213, 26040), (262, 25857), (291, 25746), (304, 25695), (342, 25566), (346, 25557), (364, 25482), (366, 25476), (397, 25353), (404, 25314), (457, 25164), (462, 25149),

Gene: Dublin\_29 Start: 25745, Stop: 24252, Start Num: 98

Candidate Starts for Dublin\_29:

(Start: 98 @25745 has 76 MA's), (Start: 105 @25712 has 1 MA's), (Start: 106 @25709 has 3 MA's), (Start: 109 @25691 has 4 MA's), (Start: 124 @25610 has 1 MA's), (155, 25466), (163, 25439), (174, 25391), (205, 25226), (210, 25202), (211, 25199), (215, 25178), (229, 25121), (275, 24989), (306, 24848), (317, 24818), (361, 24641), (364, 24629), (386, 24545), (391, 24530), (394, 24515), (435, 24338), (455, 24308), (466, 24275),

Gene: Dulcie\_36 Start: 29273, Stop: 30550, Start Num: 137

Candidate Starts for Dulcie\_36:

(32, 28967), (34, 28973), (40, 28979), (42, 28982), (44, 28997), (Start: 57 @29048 has 10 MA's), (65, 29063), (69, 29072), (Start: 136 @29267 has 1 MA's), (Start: 137 @29273 has 1 MA's), (174, 29411), (Start: 177 @29423 has 1 MA's), (179, 29432), (180, 29441), (200, 29549), (205, 29570), (207, 29582), (213, 29606), (222, 29648), (260, 29777), (279, 29837), (293, 29894), (301, 29921), (310, 29948), (311, 29951), (314, 29963), (343, 30071), (351, 30104), (371, 30185), (376, 30200), (402, 30305), (405, 30314), (426, 30419), (462, 30518), (472, 30542),

Gene: DustyMartin\_38 Start: 26956, Stop: 25430, Start Num: 98

Candidate Starts for DustyMartin\_38:

(Start: 90 @26971 has 2 MA's), (Start: 98 @26956 has 76 MA's), (Start: 124 @26821 has 1 MA's), (205, 26440), (211, 26413), (214, 26401), (277, 26161), (282, 26134), (299, 26062), (309, 26023), (321, 25984), (347, 25906), (357, 25867), (361, 25852), (375, 25795), (380, 25774), (402, 25687), (424, 25582), (431, 25561), (433, 25555), (462, 25486),

Gene: Dwayne\_50 Start: 36196, Stop: 37809, Start Num: 46

Candidate Starts for Dwayne\_50:

(Start: 28 @36130 has 7 MA's), (Start: 45 @36187 has 5 MA's), (Start: 46 @36196 has 23 MA's), (Start: 102 @36343 has 3 MA's), (120, 36442), (Start: 124 @36460 has 1 MA's), (132, 36511), (154, 36592), (156, 36595), (170, 36667), (173, 36676), (174, 36679), (197, 36805), (202, 36832), (218, 36901), (229, 36946), (250, 37015), (263, 37042), (280, 37090), (290, 37138), (302, 37177), (310, 37204), (317, 37234), (351, 37357), (366, 37417), (376, 37462), (410, 37591), (419, 37642), (421, 37651), (433, 37690), (442, 37714), (449, 37729), (453, 37744), (458, 37759),

Gene: Eaglepride\_35 Start: 26850, Stop: 25342, Start Num: 98

Candidate Starts for Eaglepride\_35:

(Start: 98 @26850 has 76 MA's), (Start: 99 @26844 has 3 MA's), (103, 26826), (Start: 124 @26715 has 1 MA's), (162, 26550), (197, 26373), (205, 26334), (207, 26322), (210, 26310), (211, 26307), (214, 26295), (277, 26055), (278, 26049), (282, 26028), (294, 25983), (321, 25878), (347, 25800), (351, 25785), (357, 25761), (361, 25746), (375, 25689), (380, 25668), (399, 25602), (431, 25455), (462, 25380),

Gene: Eapen\_33 Start: 26635, Stop: 25121, Start Num: 89

Candidate Starts for Eapen\_33:

(Start: 67 @26677 has 1 MA's), (Start: 83 @26644 has 47 MA's), (Start: 89 @26635 has 107 MA's), (126, 26473), (138, 26407), (142, 26389), (163, 26314), (166, 26290), (171, 26251), (172, 26248), (189, 26161), (210, 26047), (213, 26035), (262, 25852), (291, 25741), (304, 25690), (342, 25561), (346, 25552), (364, 25477), (366, 25471), (397, 25348), (404, 25309), (457, 25159), (462, 25144),

Gene: Edison31\_34 Start: 26880, Stop: 25372, Start Num: 98

Candidate Starts for Edison31\_34:

(Start: 98 @26880 has 76 MA's), (Start: 99 @26874 has 3 MA's), (Start: 102 @26862 has 3 MA's), (103, 26856), (119, 26769), (Start: 124 @26745 has 1 MA's), (162, 26580), (197, 26403), (205, 26364), (207, 26352), (210, 26340), (211, 26337), (214, 26325), (278, 26079), (282, 26058), (321, 25908), (347, 25830), (351, 25815), (357, 25791), (361, 25776), (375, 25719), (380, 25698), (440, 25464),

Gene: Ejemplo\_49 Start: 36125, Stop: 37747, Start Num: 45

Candidate Starts for Ejemplo\_49:

(Start: 28 @36068 has 7 MA's), (Start: 45 @36125 has 5 MA's), (Start: 46 @36134 has 23 MA's), (Start: 102 @36281 has 3 MA's), (120, 36380), (Start: 124 @36398 has 1 MA's), (132, 36449), (154, 36530), (156, 36533), (170, 36605), (173, 36614), (174, 36617), (197, 36743), (202, 36770), (218, 36839), (229, 36884), (250, 36953), (263, 36980), (280, 37028), (290, 37076), (302, 37115), (317, 37172), (351, 37295), (366, 37355), (376, 37400), (410, 37529), (419, 37580), (421, 37589), (433, 37628), (442, 37652), (449, 37667), (453, 37682), (458, 37697),

Gene: EITiger69\_31 Start: 25415, Stop: 23934, Start Num: 98

Candidate Starts for EITiger69\_31:

(75, 25442), (Start: 98 @25415 has 76 MA's), (Start: 106 @25379 has 3 MA's), (Start: 124 @25280 has 1 MA's), (129, 25244), (140, 25196), (148, 25154), (158, 25130), (164, 25103), (173, 25064), (179, 25040), (181, 25025), (205, 24896), (284, 24602), (289, 24584), (297, 24557), (304, 24527), (310, 24503), (317, 24488), (335, 24428), (348, 24377), (350, 24368), (364, 24314), (372, 24281), (391, 24215), (404, 24152), (435, 24023), (471, 23945),

Gene: Elezi\_48 Start: 35958, Stop: 37379, Start Num: 94

Candidate Starts for Elezi\_48:

(82, 35940), (92, 35955), (Start: 94 @35958 has 34 MA's), (Start: 98 @35967 has 76 MA's), (119, 36081), (Start: 124 @36105 has 1 MA's), (140, 36189), (149, 36222), (154, 36237), (170, 36300), (174, 36312), (176, 36321), (194, 36420), (201, 36462), (213, 36513), (222, 36552), (255, 36630), (264, 36657), (357, 37017), (360, 37026), (362, 37035), (365, 37047), (412, 37218), (435, 37305),

Gene: Elfy\_51 Start: 33960, Stop: 35375, Start Num: 98

Candidate Starts for Elfy\_51:

(Start: 98 @33960 has 76 MA's), (150, 34215), (159, 34245), (170, 34290), (174, 34302), (178, 34320), (180, 34332), (185, 34359), (187, 34365), (188, 34371), (211, 34494), (215, 34515), (222, 34542), (224, 34548), (228, 34569), (283, 34722), (286, 34734), (312, 34839), (313, 34845), (322, 34887), (352, 34986), (362, 35025), (370, 35055), (372, 35061), (374, 35070), (383, 35103), (404, 35184), (412, 35208), (413, 35211), (437, 35307), (461, 35367),

Gene: Emaanora\_53 Start: 36119, Stop: 37732, Start Num: 46

Candidate Starts for Emaanora\_53:

(Start: 28 @36053 has 7 MA's), (Start: 45 @36110 has 5 MA's), (Start: 46 @36119 has 23 MA's), (Start: 102 @36266 has 3 MA's), (120, 36365), (Start: 124 @36383 has 1 MA's), (132, 36434), (154, 36515), (156, 36518), (170, 36590), (173, 36599), (174, 36602), (197, 36728), (202, 36755), (218, 36824), (229, 36869), (250, 36938), (263, 36965), (280, 37013), (290, 37061), (302, 37100), (310, 37127), (317, 37157), (351, 37280), (366, 37340), (376, 37385), (410, 37514), (419, 37565), (421, 37574), (433, 37613), (442, 37637), (449, 37652), (453, 37667), (458, 37682),

Gene: Eraser\_48 Start: 35968, Stop: 37389, Start Num: 94

Candidate Starts for Eraser\_48:

(82, 35950), (92, 35965), (Start: 94 @35968 has 34 MA's), (Start: 98 @35977 has 76 MA's), (119, 36091), (Start: 124 @36115 has 1 MA's), (140, 36199), (149, 36232), (154, 36247), (170, 36310), (174, 36322), (176, 36331), (194, 36430), (201, 36472), (213, 36523), (222, 36562), (255, 36640), (264, 36667), (357, 37027), (360, 37036), (362, 37045), (365, 37057), (412, 37228), (435, 37315),

Gene: Erik\_29 Start: 23479, Stop: 22139, Start Num: 124

Candidate Starts for Erik\_29:

(Start: 124 @23479 has 1 MA's), (132, 23431), (179, 23239), (199, 23128), (211, 23068), (214, 23056), (228, 22993), (238, 22963), (249, 22930), (258, 22909), (268, 22879), (272, 22864), (275, 22858), (282, 22810), (290, 22777), (304, 22720), (317, 22681), (318, 22675), (348, 22579), (356, 22546), (362, 22525), (364, 22516), (404, 22354),

Gene: Eris\_32 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Eris\_32:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Eros\_33 Start: 26648, Stop: 25125, Start Num: 83

Candidate Starts for Eros\_33:

(Start: 67 @26681 has 1 MA's), (Start: 83 @26648 has 47 MA's), (Start: 89 @26639 has 107 MA's), (126, 26477), (138, 26411), (142, 26393), (163, 26318), (166, 26294), (171, 26255), (172, 26252), (189, 26165), (210, 26051), (213, 26039), (262, 25856), (291, 25745), (304, 25694), (342, 25565), (346, 25556), (364, 25481), (366, 25475), (397, 25352), (404, 25313), (457, 25163), (462, 25148),

Gene: Espica\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for Espica\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (151, 23345), (179, 23240), (199, 23129), (204, 23099), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: EtoileNova\_34 Start: 27227, Stop: 25725, Start Num: 99

Candidate Starts for EtoileNova\_34:

(Start: 90 @27248 has 2 MA's), (Start: 98 @27233 has 76 MA's), (Start: 99 @27227 has 3 MA's), (Start: 100 @27224 has 1 MA's), (130, 27056), (132, 27050), (162, 26933), (176, 26873), (197, 26756), (205, 26717), (211, 26690), (214, 26678), (241, 26543), (287, 26390), (309, 26300), (321, 26261), (350, 26171), (361, 26129), (364, 26117), (375, 26072), (380, 26051), (431, 25838), (440, 25817),

Gene: Euratis\_57 Start: 38667, Stop: 40322, Start Num: 62

Candidate Starts for Euratis\_57:

(Start: 62 @38667 has 1 MA's), (81, 38712), (Start: 88 @38721 has 4 MA's), (Start: 98 @38733 has 76 MA's), (Start: 104 @38763 has 3 MA's), (139, 38949), (140, 38952), (146, 38985), (148, 38994), (161, 39033), (172, 39099), (174, 39111), (186, 39171), (190, 39189), (192, 39198), (197, 39240), (216, 39327), (267, 39525), (270, 39537), (275, 39555), (278, 39582), (288, 39627), (291, 39639), (303, 39693), (306, 39705), (317, 39735), (345, 39834), (360, 39894), (380, 39978), (409, 40095), (412, 40101), (423, 40167), (452, 40245), (454, 40257),

Gene: Expelliarmus\_29 Start: 24979, Stop: 23477, Start Num: 89

Candidate Starts for Expelliarmus\_29:

(54, 25048), (Start: 67 @25021 has 1 MA's), (Start: 71 @25015 has 1 MA's), (Start: 89 @24979 has 107 MA's), (Start: 124 @24829 has 1 MA's), (144, 24724), (163, 24658), (165, 24640), (171, 24598), (172, 24595), (189, 24508), (194, 24475), (213, 24382), (234, 24289), (245, 24241), (262, 24199), (280, 24139), (304, 24037), (342, 23902), (361, 23830), (388, 23725), (394, 23698), (397, 23689), (423, 23566), (435, 23536), (448, 23518),

Gene: FatCactus\_32 Start: 25084, Stop: 23525, Start Num: 89

Candidate Starts for FatCactus\_32:

(35, 25234), (36, 25231), (Start: 88 @25087 has 4 MA's), (Start: 89 @25084 has 107 MA's), (Start: 105 @25039 has 1 MA's), (Start: 124 @24934 has 1 MA's), (163, 24763), (164, 24757), (172, 24691), (173, 24682), (178, 24661), (194, 24571), (199, 24547), (201, 24529), (207, 24502), (220, 24445), (228, 24412), (234, 24385), (235, 24379), (248, 24331), (251, 24328), (274, 24280), (276, 24274), (278, 24253), (306, 24136), (315, 24106), (342, 24022), (367, 23929), (372, 23905), (397, 23809), (420, 23695), (423, 23677), (435, 23647), (439, 23638), (450, 23623), (470, 23569), (476, 23554),

Gene: Floof\_64 Start: 39661, Stop: 41214, Start Num: 68

Candidate Starts for Floof\_64:

(61, 39643), (Start: 68 @39661 has 2 MA's), (Start: 76 @39679 has 1 MA's), (108, 39766), (118, 39820), (131, 39886), (133, 39892), (142, 39934), (179, 40114), (183, 40138), (222, 40336), (226,

40348), (283, 40603), (337, 40783), (344, 40807), (347, 40819), (383, 40963), (391, 40987), (416, 41098),

Gene: Florean\_33 Start: 26636, Stop: 25122, Start Num: 89

Candidate Starts for Florean\_33:

(Start: 67 @26678 has 1 MA's), (Start: 83 @26645 has 47 MA's), (Start: 89 @26636 has 107 MA's), (126, 26474), (138, 26408), (142, 26390), (163, 26315), (166, 26291), (171, 26252), (172, 26249), (189, 26162), (210, 26048), (213, 26036), (262, 25853), (291, 25742), (304, 25691), (342, 25562), (346, 25553), (364, 25478), (366, 25472), (397, 25349), (404, 25310), (457, 25160), (462, 25145),

Gene: Florence1\_30 Start: 25514, Stop: 24075, Start Num: 109

Candidate Starts for Florence1\_30:

(Start: 98 @25568 has 76 MA's), (Start: 105 @25535 has 1 MA's), (Start: 106 @25532 has 3 MA's), (Start: 109 @25514 has 4 MA's), (Start: 124 @25433 has 1 MA's), (155, 25289), (163, 25262), (174, 25214), (205, 25049), (210, 25025), (211, 25022), (215, 25001), (275, 24812), (306, 24671), (317, 24641), (361, 24464), (364, 24452), (386, 24368), (391, 24353), (394, 24338), (435, 24161), (455, 24131), (466, 24098),

Gene: Florence4\_31 Start: 25514, Stop: 24075, Start Num: 109

Candidate Starts for Florence4\_31:

(Start: 98 @25568 has 76 MA's), (Start: 105 @25535 has 1 MA's), (Start: 106 @25532 has 3 MA's), (Start: 109 @25514 has 4 MA's), (Start: 124 @25433 has 1 MA's), (155, 25289), (163, 25262), (174, 25214), (205, 25049), (210, 25025), (211, 25022), (215, 25001), (275, 24812), (306, 24671), (317, 24641), (361, 24464), (364, 24452), (386, 24368), (391, 24353), (394, 24338), (435, 24161), (455, 24131), (466, 24098),

Gene: Flutur\_49 Start: 35547, Stop: 36965, Start Num: 94

Candidate Starts for Flutur\_49:

(82, 35529), (92, 35544), (Start: 94 @35547 has 34 MA's), (Start: 98 @35556 has 76 MA's), (119, 35670), (140, 35778), (170, 35889), (174, 35901), (176, 35910), (194, 36009), (213, 36102), (215, 36114), (222, 36141), (264, 36246), (280, 36300), (362, 36621), (365, 36633), (374, 36666), (412, 36804),

Gene: Flux\_33 Start: 26681, Stop: 25125, Start Num: 67

Candidate Starts for Flux\_33:

(Start: 67 @26681 has 1 MA's), (Start: 83 @26648 has 47 MA's), (Start: 89 @26639 has 107 MA's), (126, 26477), (138, 26411), (142, 26393), (163, 26318), (166, 26294), (171, 26255), (172, 26252), (189, 26165), (210, 26051), (213, 26039), (262, 25856), (291, 25745), (304, 25694), (342, 25565), (346, 25556), (364, 25481), (366, 25475), (397, 25352), (404, 25313), (457, 25163), (462, 25148),

Gene: FlyCatcher\_36 Start: 28870, Stop: 27362, Start Num: 98

Candidate Starts for FlyCatcher\_36:

(Start: 90 @28885 has 2 MA's), (Start: 98 @28870 has 76 MA's), (126, 28723), (162, 28570), (176, 28510), (197, 28393), (205, 28354), (210, 28330), (211, 28327), (214, 28315), (241, 28180), (278, 28069), (282, 28048), (287, 28027), (309, 27937), (320, 27901), (321, 27898), (345, 27832), (350, 27808), (357, 27781), (361, 27766), (364, 27754), (372, 27721), (380, 27688), (424, 27496), (431, 27475), (440, 27454), (462, 27400),

Gene: ForGetIt\_30 Start: 25711, Stop: 24218, Start Num: 98

Candidate Starts for ForGetIt\_30:

(Start: 98 @25711 has 76 MA's), (Start: 105 @25678 has 1 MA's), (Start: 106 @25675 has 3 MA's), (Start: 109 @25657 has 4 MA's), (Start: 124 @25576 has 1 MA's), (155, 25432), (163, 25405), (174, 25357), (205, 25192), (210, 25168), (211, 25165), (215, 25144), (275, 24955), (317, 24784), (350,

24649), (361, 24607), (364, 24595), (386, 24511), (391, 24496), (394, 24481), (435, 24304), (455, 24274), (466, 24241),

Gene: Funston\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Funston\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Gadost\_33 Start: 26641, Stop: 25127, Start Num: 89

Candidate Starts for Gadost\_33:

(Start: 67 @26683 has 1 MA's), (Start: 83 @26650 has 47 MA's), (Start: 89 @26641 has 107 MA's), (126, 26479), (138, 26413), (142, 26395), (163, 26320), (166, 26296), (171, 26257), (172, 26254), (189, 26167), (210, 26053), (213, 26041), (262, 25858), (291, 25747), (304, 25696), (342, 25567), (346, 25558), (364, 25483), (366, 25477), (397, 25354), (404, 25315), (457, 25165), (462, 25150),

Gene: Gambol\_44 Start: 31430, Stop: 32869, Start Num: 97

Candidate Starts for Gambol\_44:

(Start: 97 @31430 has 18 MA's), (118, 31541), (120, 31550), (133, 31613), (138, 31637), (141, 31646), (174, 31796), (176, 31805), (203, 31961), (205, 31967), (211, 31994), (226, 32054), (280, 32228), (282, 32243), (314, 32351), (367, 32534), (436, 32798), (443, 32813), (444, 32816),

Gene: GardenState\_58 Start: 37501, Stop: 38922, Start Num: 87

Candidate Starts for GardenState\_58:

(Start: 87 @37501 has 2 MA's), (174, 37861), (211, 38053), (213, 38062), (251, 38167), (317, 38401), (331, 38440), (383, 38641), (391, 38665), (398, 38686), (429, 38812), (462, 38899),

Gene: George\_29 Start: 25777, Stop: 24284, Start Num: 98

Candidate Starts for George\_29:

(Start: 98 @25777 has 76 MA's), (Start: 105 @25744 has 1 MA's), (Start: 106 @25741 has 3 MA's), (Start: 109 @25723 has 4 MA's), (Start: 124 @25642 has 1 MA's), (155, 25498), (163, 25471), (174, 25423), (205, 25258), (210, 25234), (211, 25231), (215, 25210), (275, 25021), (306, 24880), (317, 24850), (361, 24673), (364, 24661), (386, 24577), (391, 24562), (394, 24547), (435, 24370), (455, 24340), (466, 24307),

Gene: Ghouboy\_30 Start: 25972, Stop: 24533, Start Num: 109

Candidate Starts for Ghouboy\_30:

(Start: 98 @26026 has 76 MA's), (Start: 105 @25993 has 1 MA's), (Start: 106 @25990 has 3 MA's), (Start: 109 @25972 has 4 MA's), (Start: 124 @25891 has 1 MA's), (147, 25771), (155, 25747), (163, 25720), (174, 25672), (205, 25507), (210, 25483), (211, 25480), (215, 25459), (229, 25402), (275, 25270), (306, 25129), (317, 25099), (350, 24964), (361, 24922), (364, 24910), (386, 24826), (391, 24811), (394, 24796), (435, 24619), (455, 24589),

Gene: Giorgio\_42 Start: 31348, Stop: 32787, Start Num: 97

Candidate Starts for Giorgio\_42:

(Start: 97 @31348 has 18 MA's), (118, 31459), (120, 31468), (133, 31531), (138, 31555), (141, 31564), (174, 31714), (176, 31723), (203, 31879), (205, 31885), (211, 31912), (280, 32146), (282, 32161), (314, 32269), (390, 32539), (436, 32716), (443, 32731), (444, 32734),

Gene: Goby\_50 Start: 35136, Stop: 36713, Start Num: 46

Candidate Starts for Goby\_50:

(Start: 28 @35070 has 7 MA's), (Start: 46 @35136 has 23 MA's), (Start: 102 @35256 has 3 MA's), (120, 35355), (Start: 124 @35373 has 1 MA's), (132, 35424), (154, 35505), (156, 35508), (170, 35580), (173, 35589), (174, 35592), (215, 35802), (216, 35805), (218, 35814), (290, 36042), (310, 36108), (317, 36138), (346, 36237), (351, 36261), (353, 36270), (359, 36294), (376, 36366), (421, 36555), (430, 36585), (433, 36594), (442, 36618), (449, 36633), (453, 36648),

Gene: Godpower\_51 Start: 35115, Stop: 36692, Start Num: 46

Candidate Starts for Godpower\_51:

(Start: 28 @35049 has 7 MA's), (Start: 46 @35115 has 23 MA's), (Start: 102 @35235 has 3 MA's), (120, 35334), (Start: 124 @35352 has 1 MA's), (132, 35403), (154, 35484), (156, 35487), (170, 35559), (173, 35568), (174, 35571), (202, 35724), (215, 35781), (216, 35784), (218, 35793), (290, 36021), (310, 36087), (317, 36117), (346, 36216), (351, 36240), (353, 36249), (359, 36273), (376, 36345), (421, 36534), (433, 36573), (442, 36597), (449, 36612), (453, 36627),

Gene: Gollum\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for Gollum\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (179, 23240), (186, 23201), (199, 23129), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: GrimEater\_48 Start: 33306, Stop: 34718, Start Num: 98

Candidate Starts for GrimEater\_48:

(Start: 98 @33306 has 76 MA's), (149, 33558), (170, 33636), (174, 33648), (180, 33678), (185, 33705), (187, 33711), (228, 33915), (245, 33948), (264, 33996), (312, 34185), (313, 34191), (342, 34296), (357, 34353), (361, 34368), (395, 34482), (412, 34554), (438, 34653),

Gene: Groundhog\_29 Start: 24980, Stop: 23478, Start Num: 89

Candidate Starts for Groundhog\_29:

(54, 25052), (Start: 67 @25022 has 1 MA's), (Start: 71 @25016 has 1 MA's), (Start: 89 @24980 has 107 MA's), (Start: 124 @24830 has 1 MA's), (144, 24725), (163, 24659), (165, 24641), (171, 24599), (172, 24596), (189, 24509), (213, 24383), (234, 24290), (245, 24242), (262, 24200), (280, 24140), (304, 24038), (342, 23903), (361, 23831), (388, 23726), (394, 23699), (397, 23690), (423, 23567), (448, 23519),

Gene: Gumpizza\_42 Start: 31304, Stop: 32743, Start Num: 97

Candidate Starts for Gumpizza\_42:

(Start: 97 @31304 has 18 MA's), (118, 31415), (120, 31424), (133, 31487), (138, 31511), (141, 31520), (174, 31670), (176, 31679), (203, 31835), (205, 31841), (211, 31868), (280, 32102), (282, 32117), (314, 32225), (390, 32495), (436, 32672), (443, 32687), (444, 32690),

Gene: HINdeR\_33 Start: 29171, Stop: 27708, Start Num: 98

Candidate Starts for HINdeR\_33:

(51, 29273), (60, 29243), (74, 29210), (Start: 98 @29171 has 76 MA's), (Start: 124 @29036 has 1 MA's), (129, 29000), (148, 28910), (157, 28889), (158, 28886), (173, 28820), (179, 28796), (181, 28781), (193, 28730), (203, 28658), (204, 28655), (207, 28640), (209, 28631), (227, 28556), (229, 28547), (259, 28463), (277, 28397), (329, 28208), (351, 28139), (363, 28091), (379, 28025), (386, 28004), (412, 27899), (445, 27785), (456, 27761), (462, 27743), (471, 27719), (473, 27713),

Gene: Halsey\_43 Start: 31558, Stop: 32997, Start Num: 97

Candidate Starts for Halsey\_43:

(Start: 97 @31558 has 18 MA's), (118, 31669), (120, 31678), (133, 31741), (138, 31765), (141, 31774), (174, 31924), (176, 31933), (203, 32089), (205, 32095), (211, 32122), (280, 32356), (314, 32479), (436, 32926), (443, 32941), (444, 32944),

Gene: HamSlice\_32 Start: 26644, Stop: 25121, Start Num: 83

Candidate Starts for HamSlice\_32:

(Start: 67 @26677 has 1 MA's), (Start: 83 @26644 has 47 MA's), (Start: 89 @26635 has 107 MA's), (126, 26473), (138, 26407), (142, 26389), (163, 26314), (166, 26290), (171, 26251), (172, 26248), (189, 26161), (210, 26047), (213, 26035), (262, 25852), (291, 25741), (304, 25690), (342, 25561), (346, 25552), (364, 25477), (366, 25471), (397, 25348), (404, 25309), (457, 25159), (462, 25144),

Gene: Happiness\_33 Start: 26642, Stop: 25128, Start Num: 89

Candidate Starts for Happiness\_33:

(Start: 67 @26684 has 1 MA's), (Start: 83 @26651 has 47 MA's), (Start: 89 @26642 has 107 MA's), (126, 26480), (138, 26414), (142, 26396), (163, 26321), (166, 26297), (171, 26258), (172, 26255), (189, 26168), (210, 26054), (213, 26042), (262, 25859), (291, 25748), (304, 25697), (342, 25568), (346, 25559), (364, 25484), (366, 25478), (397, 25355), (404, 25316), (457, 25166), (462, 25151),

Gene: Harlequin\_29 Start: 23641, Stop: 22145, Start Num: 83

Candidate Starts for Harlequin\_29:

(Start: 83 @23641 has 47 MA's), (Start: 98 @23620 has 76 MA's), (Start: 99 @23614 has 3 MA's), (Start: 124 @23485 has 1 MA's), (132, 23437), (151, 23350), (179, 23245), (199, 23134), (211, 23074), (214, 23062), (228, 22999), (238, 22969), (249, 22936), (258, 22915), (268, 22885), (275, 22864), (281, 22819), (282, 22816), (283, 22810), (304, 22726), (317, 22687), (318, 22681), (356, 22552), (362, 22531), (364, 22522), (404, 22360),

Gene: HashRod\_37 Start: 27309, Stop: 25741, Start Num: 89

Candidate Starts for HashRod\_37:

(33, 27459), (41, 27444), (Start: 71 @27345 has 1 MA's), (Start: 89 @27309 has 107 MA's), (144, 27054), (150, 27030), (165, 26970), (171, 26922), (172, 26919), (189, 26832), (193, 26820), (194, 26799), (199, 26775), (213, 26706), (229, 26637), (230, 26628), (262, 26523), (275, 26478), (304, 26346), (329, 26262), (345, 26205), (397, 25998), (425, 25857),

Gene: Herbertwm\_31 Start: 25845, Stop: 24304, Start Num: 89

Candidate Starts for Herbertwm\_31:

(18, 26094), (21, 26091), (24, 26064), (25, 26055), (47, 25950), (49, 25944), (56, 25911), (69, 25884), (70, 25881), (Start: 89 @25845 has 107 MA's), (138, 25617), (142, 25599), (162, 25527), (169, 25470), (171, 25452), (172, 25449), (193, 25350), (198, 25308), (213, 25236), (228, 25170), (230, 25158), (262, 25053), (275, 25023), (280, 24993), (306, 24882), (342, 24729), (348, 24708), (361, 24657), (364, 24645), (366, 24639), (381, 24576), (392, 24531), (397, 24516),

Gene: Hippo\_50 Start: 36182, Stop: 37795, Start Num: 46

Candidate Starts for Hippo\_50:

(Start: 28 @36116 has 7 MA's), (Start: 45 @36173 has 5 MA's), (Start: 46 @36182 has 23 MA's), (Start: 102 @36329 has 3 MA's), (120, 36428), (Start: 124 @36446 has 1 MA's), (132, 36497), (154, 36578), (156, 36581), (170, 36653), (173, 36662), (174, 36665), (197, 36791), (202, 36818), (218, 36887), (229, 36932), (250, 37001), (263, 37028), (280, 37076), (290, 37124), (302, 37163), (310, 37190), (317, 37220), (351, 37343), (366, 37403), (376, 37448), (410, 37577), (419, 37628), (421, 37637), (433, 37676), (442, 37700), (449, 37715), (453, 37730), (458, 37745),

Gene: Hiro\_29 Start: 23875, Stop: 22397, Start Num: 98

Candidate Starts for Hiro\_29:

(Start: 83 @23896 has 47 MA's), (Start: 98 @23875 has 76 MA's), (Start: 99 @23869 has 3 MA's), (112, 23800), (Start: 124 @23740 has 1 MA's), (151, 23602), (152, 23599), (161, 23572), (173, 23521), (193, 23431), (204, 23359), (209, 23335), (213, 23320), (215, 23308), (226, 23269), (252, 23188), (256, 23176), (269, 23137), (275, 23119), (288, 23050), (291, 23038), (296, 23023), (298, 23011), (304, 22987), (306, 22978), (317, 22948), (320, 22930), (331, 22909), (336, 22888), (347, 22855), (350, 22843), (377, 22735), (403, 22630), (416, 22570), (424, 22531), (425, 22528), (433, 22504), (435, 22498),

Gene: Holli\_33 Start: 26436, Stop: 24913, Start Num: 83

Candidate Starts for Holli\_33:

(Start: 67 @26469 has 1 MA's), (Start: 83 @26436 has 47 MA's), (Start: 89 @26427 has 107 MA's), (126, 26265), (138, 26199), (142, 26181), (163, 26106), (166, 26082), (171, 26043), (172, 26040), (189, 25953), (210, 25839), (213, 25827), (262, 25644), (291, 25533), (304, 25482), (342, 25353), (346, 25344), (364, 25269), (366, 25263), (397, 25140), (404, 25101), (457, 24951), (462, 24936),

Gene: Honk\_61 Start: 38228, Stop: 39772, Start Num: 84

Candidate Starts for Honk\_61:

(Start: 84 @38228 has 1 MA's), (133, 38429), (150, 38507), (176, 38630), (188, 38690), (195, 38738), (199, 38759), (203, 38786), (205, 38792), (222, 38870), (310, 39188), (317, 39218), (318, 39224), (354, 39353), (357, 39365), (360, 39374), (377, 39449), (383, 39470), (408, 39560), (413, 39575), (454, 39707),

Gene: Hookmount\_34 Start: 27245, Stop: 25722, Start Num: 90

Candidate Starts for Hookmount\_34:

(Start: 90 @27245 has 2 MA's), (Start: 98 @27230 has 76 MA's), (Start: 99 @27224 has 3 MA's), (Start: 100 @27221 has 1 MA's), (130, 27053), (132, 27047), (162, 26930), (176, 26870), (197, 26753), (205, 26714), (211, 26687), (214, 26675), (241, 26540), (287, 26387), (309, 26297), (321, 26258), (350, 26168), (361, 26126), (364, 26114), (375, 26069), (380, 26048), (431, 25835), (440, 25814),

Gene: Houdini22\_33 Start: 26641, Stop: 25127, Start Num: 89

Candidate Starts for Houdini22\_33:

(Start: 67 @26683 has 1 MA's), (Start: 83 @26650 has 47 MA's), (Start: 89 @26641 has 107 MA's), (126, 26479), (138, 26413), (142, 26395), (163, 26320), (166, 26296), (171, 26257), (172, 26254), (189, 26167), (210, 26053), (213, 26041), (262, 25858), (291, 25747), (304, 25696), (342, 25567), (346, 25558), (364, 25483), (366, 25477), (397, 25354), (404, 25315), (457, 25165), (462, 25150),

Gene: HuhtaEnerson15\_30 Start: 25723, Stop: 24284, Start Num: 109

Candidate Starts for HuhtaEnerson15\_30:

(Start: 98 @25777 has 76 MA's), (Start: 105 @25744 has 1 MA's), (Start: 106 @25741 has 3 MA's), (Start: 109 @25723 has 4 MA's), (Start: 124 @25642 has 1 MA's), (155, 25498), (163, 25471), (174, 25423), (205, 25258), (210, 25234), (211, 25231), (215, 25210), (275, 25021), (306, 24880), (317, 24850), (361, 24673), (364, 24661), (386, 24577), (391, 24562), (394, 24547), (435, 24370), (455, 24340), (466, 24307),

Gene: Huxley\_33 Start: 26698, Stop: 25184, Start Num: 89

Candidate Starts for Huxley\_33:

(Start: 67 @26740 has 1 MA's), (Start: 83 @26707 has 47 MA's), (Start: 89 @26698 has 107 MA's), (126, 26536), (138, 26470), (142, 26452), (163, 26377), (166, 26353), (171, 26314), (172, 26311), (189, 26224), (210, 26110), (213, 26098), (262, 25915), (291, 25804), (304, 25753), (342, 25624), (346, 25615), (364, 25540), (366, 25534), (397, 25411), (404, 25372), (457, 25222), (462, 25207),

Gene: IAmGroot\_57 Start: 37709, Stop: 39130, Start Num: 87

Candidate Starts for IAmGroot\_57:

(Start: 87 @37709 has 2 MA's), (174, 38069), (211, 38261), (213, 38270), (251, 38375), (317, 38609), (331, 38648), (383, 38849), (391, 38873), (398, 38894), (429, 39020), (462, 39107),

Gene: ICleared\_33 Start: 26628, Stop: 25132, Start Num: 98

Candidate Starts for ICleared\_33:

(Start: 57 @26694 has 10 MA's), (Start: 98 @26628 has 76 MA's), (Start: 102 @26610 has 3 MA's), (111, 26556), (122, 26505), (Start: 124 @26493 has 1 MA's), (148, 26367), (157, 26346), (164, 26316), (173, 26277), (181, 26238), (197, 26148), (210, 26088), (223, 26034), (268, 25896), (327, 25665), (348, 25575), (357, 25539), (364, 25512), (377, 25458), (379, 25449), (429, 25239), (435, 25221), (445, 25209), (451, 25200),

Gene: IUFootball\_51 Start: 37490, Stop: 38902, Start Num: 98

Candidate Starts for IUFootball\_51:

(Start: 98 @37490 has 76 MA's), (Start: 124 @37628 has 1 MA's), (156, 37763), (170, 37823), (174, 37835), (178, 37853), (185, 37892), (211, 38027), (213, 38036), (260, 38168), (264, 38180), (285, 38261), (342, 38471), (351, 38504), (362, 38546), (369, 38573), (374, 38591), (413, 38732), (428, 38795), (436, 38819), (469, 38897),

Gene: Iceman\_34 Start: 26926, Stop: 25412, Start Num: 89

Candidate Starts for Iceman\_34:

(Start: 67 @26968 has 1 MA's), (Start: 83 @26935 has 47 MA's), (Start: 89 @26926 has 107 MA's), (126, 26764), (138, 26698), (142, 26680), (163, 26605), (166, 26581), (171, 26542), (172, 26539), (189, 26452), (213, 26326), (262, 26143), (291, 26032), (304, 25981), (342, 25852), (346, 25843), (364, 25768), (366, 25762), (397, 25639), (404, 25600), (457, 25450), (462, 25435),

Gene: Iracema64\_34 Start: 26931, Stop: 25453, Start Num: 102

Candidate Starts for Iracema64\_34:

(Start: 57 @27015 has 10 MA's), (Start: 98 @26949 has 76 MA's), (Start: 102 @26931 has 3 MA's), (112, 26874), (114, 26856), (122, 26826), (Start: 124 @26814 has 1 MA's), (148, 26688), (157, 26667), (164, 26637), (173, 26598), (181, 26559), (197, 26469), (210, 26409), (223, 26355), (268, 26217), (327, 25986), (348, 25896), (357, 25860), (364, 25833), (377, 25779), (379, 25770), (429, 25560), (435, 25542), (445, 25530), (451, 25521),

Gene: Iter\_51 Start: 35996, Stop: 37411, Start Num: 98

Candidate Starts for Iter\_51:

(Start: 98 @35996 has 76 MA's), (Start: 102 @36014 has 3 MA's), (119, 36110), (Start: 124 @36134 has 1 MA's), (140, 36218), (156, 36269), (170, 36329), (174, 36341), (180, 36371), (194, 36449), (213, 36542), (222, 36581), (362, 37064), (365, 37076), (412, 37247),

Gene: IttyBittyPiggy\_50 Start: 34701, Stop: 36119, Start Num: 94

Candidate Starts for IttyBittyPiggy\_50:

(82, 34683), (92, 34698), (Start: 94 @34701 has 34 MA's), (Start: 98 @34710 has 76 MA's), (140, 34932), (170, 35043), (174, 35055), (176, 35064), (193, 35142), (194, 35163), (201, 35205), (213, 35256), (215, 35268), (228, 35322), (357, 35757), (362, 35775), (365, 35787),

Gene: Jabiru\_31 Start: 25464, Stop: 23983, Start Num: 98

Candidate Starts for Jabiru\_31:

(75, 25491), (Start: 98 @25464 has 76 MA's), (Start: 106 @25428 has 3 MA's), (Start: 124 @25329 has 1 MA's), (129, 25293), (140, 25245), (148, 25203), (158, 25179), (164, 25152), (173, 25113), (179, 25089), (181, 25074), (205, 24945), (284, 24651), (289, 24633), (297, 24606), (304, 24576), (310, 24552), (317, 24537), (335, 24477), (348, 24426), (350, 24417), (364, 24363), (372, 24330), (391, 24264), (404, 24201), (435, 24072), (471, 23994),

Gene: Janeemi\_52 Start: 36965, Stop: 38386, Start Num: 94

Candidate Starts for Janeemi\_52:

(Start: 66 @36914 has 3 MA's), (82, 36947), (92, 36962), (Start: 94 @36965 has 34 MA's), (Start: 98 @36974 has 76 MA's), (123, 37106), (Start: 124 @37112 has 1 MA's), (140, 37196), (154, 37244), (170, 37307), (174, 37319), (176, 37328), (194, 37427), (213, 37520), (222, 37559), (280, 37718), (283, 37739), (362, 38042), (365, 38054), (412, 38225), (435, 38312),

Gene: Jankie\_50 Start: 33484, Stop: 34896, Start Num: 98

Candidate Starts for Jankie\_50:

(Start: 98 @33484 has 76 MA's), (149, 33736), (170, 33814), (174, 33826), (180, 33856), (187, 33889), (228, 34093), (245, 34126), (264, 34174), (312, 34363), (313, 34369), (342, 34474), (357, 34531), (361, 34546), (395, 34660), (412, 34732), (438, 34831),

Gene: Jaykayelowell\_33 Start: 26633, Stop: 25119, Start Num: 89

Candidate Starts for Jaykayelowell\_33:

(Start: 67 @26675 has 1 MA's), (Start: 83 @26642 has 47 MA's), (Start: 89 @26633 has 107 MA's), (126, 26471), (138, 26405), (142, 26387), (163, 26312), (166, 26288), (171, 26249), (172, 26246), (189, 26159), (210, 26045), (213, 26033), (262, 25850), (291, 25739), (304, 25688), (342, 25559), (346, 25550), (351, 25526), (364, 25475), (366, 25469), (397, 25346), (404, 25307), (457, 25157), (462, 25142),

Gene: Jester\_29 Start: 23572, Stop: 22076, Start Num: 83

Candidate Starts for Jester\_29:

(Start: 83 @23572 has 47 MA's), (Start: 98 @23551 has 76 MA's), (Start: 99 @23545 has 3 MA's), (Start: 124 @23416 has 1 MA's), (132, 23368), (151, 23281), (179, 23176), (199, 23065), (211, 23005), (214, 22993), (228, 22930), (238, 22900), (249, 22867), (258, 22846), (268, 22816), (275, 22795), (281, 22750), (282, 22747), (283, 22741), (304, 22657), (317, 22618), (318, 22612), (356, 22483), (362, 22462), (364, 22453), (404, 22291),

Gene: JetBlade\_33 Start: 26634, Stop: 25120, Start Num: 89

Candidate Starts for JetBlade\_33:

(Start: 67 @26676 has 1 MA's), (Start: 83 @26643 has 47 MA's), (Start: 89 @26634 has 107 MA's), (126, 26472), (138, 26406), (142, 26388), (163, 26313), (166, 26289), (171, 26250), (172, 26247), (189, 26160), (210, 26046), (213, 26034), (262, 25851), (291, 25740), (304, 25689), (342, 25560), (346, 25551), (364, 25476), (366, 25470), (397, 25347), (404, 25308), (457, 25158), (462, 25143),

Gene: Joemato\_50 Start: 35318, Stop: 36736, Start Num: 94

Candidate Starts for Joemato\_50:

(82, 35300), (92, 35315), (Start: 94 @35318 has 34 MA's), (Start: 98 @35327 has 76 MA's), (119, 35441), (Start: 124 @35465 has 1 MA's), (140, 35549), (170, 35660), (174, 35672), (176, 35681), (194, 35780), (213, 35873), (215, 35885), (222, 35912), (264, 36017), (280, 36071), (362, 36392), (365, 36404), (374, 36437), (412, 36575),

Gene: JohnDoe\_50 Start: 35314, Stop: 36732, Start Num: 94

Candidate Starts for JohnDoe\_50:

(82, 35296), (92, 35311), (Start: 94 @35314 has 34 MA's), (Start: 98 @35323 has 76 MA's), (119, 35437), (140, 35545), (170, 35656), (174, 35668), (176, 35677), (194, 35776), (213, 35869), (222, 35908), (280, 36067), (362, 36388), (365, 36400), (374, 36433), (412, 36571),

Gene: JoongJeon\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for JoongJeon\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250),

(189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Jovo\_30 Start: 25967, Stop: 24474, Start Num: 98

Candidate Starts for Jovo\_30:

(Start: 98 @25967 has 76 MA's), (Start: 105 @25934 has 1 MA's), (Start: 106 @25931 has 3 MA's), (Start: 109 @25913 has 4 MA's), (Start: 124 @25832 has 1 MA's), (155, 25688), (163, 25661), (174, 25613), (205, 25448), (210, 25424), (211, 25421), (215, 25400), (275, 25211), (317, 25040), (350, 24905), (361, 24863), (364, 24851), (386, 24767), (391, 24752), (394, 24737), (435, 24560), (455, 24530), (466, 24497),

Gene: Jstan\_50 Start: 35963, Stop: 37384, Start Num: 94

Candidate Starts for Jstan\_50:

(82, 35945), (92, 35960), (Start: 94 @35963 has 34 MA's), (Start: 98 @35972 has 76 MA's), (119, 36086), (Start: 124 @36110 has 1 MA's), (140, 36194), (149, 36227), (154, 36242), (170, 36305), (174, 36317), (176, 36326), (194, 36425), (201, 36467), (213, 36518), (222, 36557), (255, 36635), (264, 36662), (280, 36716), (357, 37022), (360, 37031), (362, 37040), (365, 37052), (412, 37223), (435, 37310),

Gene: JuneStar\_51 Start: 38077, Stop: 39495, Start Num: 94

Candidate Starts for JuneStar\_51:

(82, 38059), (92, 38074), (Start: 94 @38077 has 34 MA's), (Start: 98 @38086 has 76 MA's), (Start: 124 @38224 has 1 MA's), (140, 38308), (170, 38419), (174, 38431), (176, 38440), (194, 38539), (201, 38581), (213, 38632), (222, 38671), (342, 39076), (357, 39133), (362, 39151), (365, 39163), (413, 39337),

Gene: KADY\_37 Start: 27309, Stop: 25741, Start Num: 89

Candidate Starts for KADY\_37:

(33, 27459), (41, 27444), (Start: 71 @27345 has 1 MA's), (Start: 89 @27309 has 107 MA's), (144, 27054), (150, 27030), (165, 26970), (171, 26922), (172, 26919), (189, 26832), (193, 26820), (194, 26799), (199, 26775), (213, 26706), (229, 26637), (230, 26628), (262, 26523), (275, 26478), (304, 26346), (329, 26262), (345, 26205), (397, 25998), (425, 25857),

Gene: KFPoly\_33 Start: 26634, Stop: 25120, Start Num: 89

Candidate Starts for KFPoly\_33:

(Start: 67 @26676 has 1 MA's), (Start: 83 @26643 has 47 MA's), (Start: 89 @26634 has 107 MA's), (126, 26472), (138, 26406), (142, 26388), (163, 26313), (166, 26289), (171, 26250), (172, 26247), (189, 26160), (210, 26046), (213, 26034), (262, 25851), (291, 25740), (304, 25689), (342, 25560), (346, 25551), (364, 25476), (366, 25470), (397, 25347), (404, 25308), (457, 25158), (462, 25143),

Gene: Kaine\_52 Start: 36736, Stop: 38322, Start Num: 46

Candidate Starts for Kaine\_52:

(29, 36673), (30, 36679), (Start: 46 @36736 has 23 MA's), (Start: 104 @36874 has 3 MA's), (116, 36946), (118, 36952), (Start: 124 @36979 has 1 MA's), (132, 37030), (135, 37042), (149, 37096), (156, 37114), (173, 37195), (174, 37198), (212, 37393), (229, 37465), (231, 37474), (250, 37531), (271, 37573), (280, 37603), (310, 37717), (317, 37747), (318, 37753), (346, 37846), (349, 37861), (351, 37870), (357, 37897), (358, 37900), (368, 37942), (376, 37975), (378, 37984), (413, 38110), (419, 38155), (421, 38164), (425, 38179), (430, 38194), (433, 38203), (442, 38227), (458, 38272),

Gene: Kalimba\_43 Start: 31408, Stop: 32847, Start Num: 97

Candidate Starts for Kalimba\_43:

(Start: 97 @31408 has 18 MA's), (118, 31519), (120, 31528), (133, 31591), (138, 31615), (141, 31624), (174, 31774), (176, 31783), (203, 31939), (205, 31945), (211, 31972), (226, 32032), (280, 32206),

(282, 32221), (314, 32329), (367, 32512), (436, 32776), (443, 32791), (444, 32794),

Gene: Katalie\_50 Start: 36352, Stop: 37929, Start Num: 46

Candidate Starts for Katalie\_50:

(Start: 28 @36286 has 7 MA's), (Start: 45 @36343 has 5 MA's), (Start: 46 @36352 has 23 MA's), (Start: 102 @36472 has 3 MA's), (Start: 124 @36589 has 1 MA's), (132, 36640), (154, 36721), (156, 36724), (170, 36796), (173, 36805), (174, 36808), (202, 36961), (205, 36970), (215, 37018), (218, 37030), (225, 37054), (242, 37123), (244, 37126), (290, 37258), (310, 37324), (317, 37354), (346, 37453), (349, 37468), (351, 37477), (353, 37486), (359, 37510), (376, 37582), (421, 37771), (433, 37810), (438, 37825), (442, 37834), (449, 37849),

Gene: Katalie136\_33 Start: 26647, Stop: 25133, Start Num: 89

Candidate Starts for Katalie136\_33:

(Start: 67 @26689 has 1 MA's), (Start: 83 @26656 has 47 MA's), (Start: 89 @26647 has 107 MA's), (126, 26485), (138, 26419), (142, 26401), (163, 26326), (171, 26263), (172, 26260), (189, 26173), (213, 26047), (262, 25864), (279, 25807), (291, 25753), (304, 25702), (342, 25573), (346, 25564), (364, 25489), (366, 25483), (394, 25369), (397, 25360), (404, 25321), (457, 25171), (462, 25156),

Gene: Kaylissa\_51 Start: 35709, Stop: 37127, Start Num: 94

Candidate Starts for Kaylissa\_51:

(82, 35691), (92, 35706), (Start: 94 @35709 has 34 MA's), (Start: 98 @35718 has 76 MA's), (119, 35832), (Start: 124 @35856 has 1 MA's), (140, 35940), (170, 36051), (174, 36063), (176, 36072), (194, 36171), (213, 36264), (215, 36276), (222, 36303), (264, 36408), (280, 36462), (362, 36783), (365, 36795), (374, 36828), (412, 36966),

Gene: KeAlii\_47 Start: 34815, Stop: 36296, Start Num: 94

Candidate Starts for KeAlii\_47:

(Start: 94 @34815 has 34 MA's), (138, 35031), (167, 35142), (203, 35355), (383, 36024), (413, 36132), (418, 36174), (439, 36228),

Gene: KekoraPapaka\_32 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for KekoraPapaka\_32:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Kingmustik0402\_33 Start: 26629, Stop: 25115, Start Num: 89

Candidate Starts for Kingmustik0402\_33:

(Start: 67 @26671 has 1 MA's), (Start: 83 @26638 has 47 MA's), (Start: 89 @26629 has 107 MA's), (126, 26467), (138, 26401), (142, 26383), (163, 26308), (166, 26284), (171, 26245), (172, 26242), (189, 26155), (213, 26029), (262, 25846), (291, 25735), (304, 25684), (342, 25555), (346, 25546), (364, 25471), (366, 25465), (397, 25342), (404, 25303), (457, 25153), (462, 25138),

Gene: Kinmap\_35 Start: 26619, Stop: 25138, Start Num: 102

Candidate Starts for Kinmap\_35:

(Start: 91 @26646 has 1 MA's), (Start: 98 @26637 has 76 MA's), (Start: 102 @26619 has 3 MA's), (162, 26337), (197, 26160), (210, 26100), (258, 25938), (268, 25908), (308, 25740), (319, 25701), (340, 25617), (357, 25551), (364, 25524), (366, 25518), (373, 25485), (377, 25470), (424, 25266), (435, 25233), (445, 25221),

Gene: Klodlith\_34 Start: 26445, Stop: 24916, Start Num: 101

Candidate Starts for Klodlith\_34:

(48, 26547), (78, 26487), (Start: 83 @26478 has 47 MA's), (Start: 100 @26448 has 1 MA's), (101, 26445), (Start: 124 @26319 has 1 MA's), (144, 26214), (164, 26142), (172, 26076), (173, 26067), (220, 25830), (228, 25797), (237, 25758), (251, 25713), (262, 25680), (275, 25662), (291, 25581), (310, 25506), (315, 25491), (342, 25410), (353, 25368), (364, 25326), (385, 25245), (397, 25197), (411, 25134), (423, 25065), (432, 25044), (435, 25035),

Gene: Koan\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Koan\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Koreni\_32 Start: 26343, Stop: 24781, Start Num: 57

Candidate Starts for Koreni\_32:

(Start: 57 @26343 has 10 MA's), (Start: 98 @26277 has 76 MA's), (Start: 102 @26259 has 3 MA's), (111, 26205), (122, 26154), (Start: 124 @26142 has 1 MA's), (148, 26016), (157, 25995), (164, 25965), (173, 25926), (181, 25887), (197, 25797), (210, 25737), (223, 25683), (268, 25545), (327, 25314), (348, 25224), (357, 25188), (364, 25161), (377, 25107), (379, 25098), (429, 24888), (435, 24870), (445, 24858), (451, 24849),

Gene: Kratak\_33 Start: 26699, Stop: 25137, Start Num: 57

Candidate Starts for Kratak\_33:

(43, 26747), (Start: 57 @26699 has 10 MA's), (Start: 91 @26642 has 1 MA's), (Start: 98 @26633 has 76 MA's), (Start: 102 @26615 has 3 MA's), (112, 26558), (114, 26540), (122, 26510), (Start: 124 @26498 has 1 MA's), (148, 26372), (157, 26351), (164, 26321), (173, 26282), (210, 26093), (218, 26057), (223, 26039), (268, 25901), (278, 25856), (327, 25670), (357, 25544), (364, 25517), (377, 25463), (379, 25454), (429, 25244), (435, 25226), (445, 25214), (451, 25205),

Gene: Kremtemulon\_33 Start: 26749, Stop: 25187, Start Num: 57

Candidate Starts for Kremtemulon\_33:

(Start: 57 @26749 has 10 MA's), (Start: 98 @26683 has 76 MA's), (Start: 102 @26665 has 3 MA's), (112, 26608), (114, 26590), (122, 26560), (Start: 124 @26548 has 1 MA's), (148, 26422), (157, 26401), (164, 26371), (173, 26332), (181, 26293), (197, 26203), (210, 26143), (223, 26089), (268, 25951), (308, 25783), (327, 25720), (348, 25630), (357, 25594), (364, 25567), (377, 25513), (379, 25504), (429, 25294), (435, 25276), (445, 25264), (451, 25255),

Gene: Krishelle\_29 Start: 23947, Stop: 22448, Start Num: 83

Candidate Starts for Krishelle\_29:

(Start: 83 @23947 has 47 MA's), (Start: 98 @23926 has 76 MA's), (Start: 99 @23920 has 3 MA's), (112, 23851), (Start: 124 @23791 has 1 MA's), (151, 23653), (152, 23650), (161, 23623), (173, 23572), (193, 23482), (209, 23386), (213, 23371), (215, 23359), (226, 23320), (252, 23239), (256, 23227), (269, 23188), (275, 23170), (288, 23101), (296, 23074), (298, 23062), (304, 23038), (306, 23029), (317, 22999), (320, 22981), (331, 22960), (336, 22939), (347, 22906), (350, 22894), (377, 22786), (403, 22681), (416, 22621), (424, 22582), (425, 22579), (433, 22555), (435, 22549),

Gene: Kristoff\_35 Start: 27044, Stop: 25536, Start Num: 98

Candidate Starts for Kristoff\_35:

(Start: 98 @27044 has 76 MA's), (Start: 99 @27038 has 3 MA's), (Start: 102 @27026 has 3 MA's), (103, 27020), (119, 26933), (Start: 124 @26909 has 1 MA's), (162, 26744), (197, 26567), (205, 26528), (207, 26516), (210, 26504), (211, 26501), (214, 26489), (278, 26243), (282, 26222), (321, 26072), (351, 25979), (357, 25955), (361, 25940), (375, 25883), (380, 25862), (440, 25628),

Gene: Kyee\_33 Start: 26635, Stop: 25121, Start Num: 89

Candidate Starts for Kyee\_33:

(Start: 67 @26677 has 1 MA's), (Start: 83 @26644 has 47 MA's), (Start: 89 @26635 has 107 MA's), (126, 26473), (138, 26407), (142, 26389), (163, 26314), (166, 26290), (171, 26251), (172, 26248), (189, 26161), (210, 26047), (213, 26035), (262, 25852), (291, 25741), (304, 25690), (342, 25561), (346, 25552), (364, 25477), (366, 25471), (397, 25348), (404, 25309), (457, 25159), (462, 25144),

Gene: Lambert1\_34 Start: 27244, Stop: 25721, Start Num: 90

Candidate Starts for Lambert1\_34:

(Start: 90 @27244 has 2 MA's), (Start: 98 @27229 has 76 MA's), (Start: 99 @27223 has 3 MA's), (Start: 100 @27220 has 1 MA's), (130, 27052), (132, 27046), (162, 26929), (176, 26869), (197, 26752), (205, 26713), (211, 26686), (214, 26674), (241, 26539), (287, 26386), (309, 26296), (321, 26257), (350, 26167), (361, 26125), (364, 26113), (375, 26068), (380, 26047), (431, 25834), (440, 25813),

Gene: Lannister\_51 Start: 35058, Stop: 36647, Start Num: 46

Candidate Starts for Lannister\_51:

(27, 34986), (29, 34995), (30, 35001), (Start: 46 @35058 has 23 MA's), (79, 35130), (Start: 102 @35184 has 3 MA's), (116, 35268), (120, 35283), (127, 35316), (149, 35418), (156, 35436), (173, 35517), (174, 35520), (197, 35646), (202, 35673), (215, 35730), (218, 35742), (228, 35784), (229, 35787), (239, 35826), (244, 35844), (250, 35856), (317, 36072), (346, 36171), (351, 36195), (357, 36222), (368, 36267), (376, 36300), (419, 36480), (421, 36489), (433, 36528), (458, 36597), (464, 36615),

Gene: LappelDuVide\_33 Start: 26636, Stop: 25122, Start Num: 89

Candidate Starts for LappelDuVide\_33:

(Start: 67 @26678 has 1 MA's), (Start: 83 @26645 has 47 MA's), (Start: 89 @26636 has 107 MA's), (126, 26474), (138, 26408), (142, 26390), (163, 26315), (166, 26291), (171, 26252), (172, 26249), (189, 26162), (210, 26048), (213, 26036), (262, 25853), (291, 25742), (304, 25691), (342, 25562), (346, 25553), (364, 25478), (366, 25472), (397, 25349), (404, 25310), (457, 25160), (462, 25145),

Gene: LarryKay\_36 Start: 27311, Stop: 25743, Start Num: 89

Candidate Starts for LarryKay\_36:

(33, 27461), (41, 27446), (Start: 71 @27347 has 1 MA's), (Start: 89 @27311 has 107 MA's), (144, 27056), (150, 27032), (165, 26972), (171, 26924), (172, 26921), (189, 26834), (193, 26822), (194, 26801), (199, 26777), (213, 26708), (229, 26639), (230, 26630), (262, 26525), (275, 26480), (304, 26348), (329, 26264), (345, 26207), (397, 26000), (425, 25859),

Gene: Lego\_49 Start: 35038, Stop: 36447, Start Num: 98

Candidate Starts for Lego\_49:

(Start: 98 @35038 has 76 MA's), (119, 35152), (Start: 124 @35176 has 1 MA's), (140, 35260), (170, 35371), (174, 35383), (176, 35392), (194, 35491), (213, 35584), (215, 35596), (222, 35623), (280, 35782), (362, 36103), (365, 36115), (374, 36148), (412, 36286),

Gene: Lemur\_33 Start: 26634, Stop: 25120, Start Num: 89

Candidate Starts for Lemur\_33:

(Start: 67 @26676 has 1 MA's), (Start: 83 @26643 has 47 MA's), (Start: 89 @26634 has 107 MA's), (126, 26472), (138, 26406), (142, 26388), (163, 26313), (166, 26289), (171, 26250), (172, 26247), (189, 26160), (210, 26046), (213, 26034), (262, 25851), (291, 25740), (304, 25689), (342, 25560), (346, 25551), (364, 25476), (366, 25470), (397, 25347), (404, 25308), (457, 25158), (462, 25143),

Gene: Lev2\_30 Start: 25599, Stop: 24106, Start Num: 98

Candidate Starts for Lev2\_30:

(Start: 98 @25599 has 76 MA's), (Start: 105 @25566 has 1 MA's), (Start: 106 @25563 has 3 MA's), (Start: 109 @25545 has 4 MA's), (Start: 124 @25464 has 1 MA's), (155, 25320), (163, 25293), (174, 25245), (205, 25080), (210, 25056), (211, 25053), (215, 25032), (275, 24843), (317, 24672), (350, 24537), (361, 24495), (364, 24483), (386, 24399), (391, 24384), (394, 24369), (435, 24192), (455, 24162), (466, 24129),

Gene: Liebe\_51 Start: 37490, Stop: 38902, Start Num: 98

Candidate Starts for Liebe\_51:

(Start: 98 @37490 has 76 MA's), (Start: 124 @37628 has 1 MA's), (156, 37763), (170, 37823), (174, 37835), (178, 37853), (185, 37892), (211, 38027), (213, 38036), (260, 38168), (264, 38180), (285, 38261), (342, 38471), (351, 38504), (362, 38546), (369, 38573), (374, 38591), (413, 38732), (428, 38795), (436, 38819), (469, 38897),

Gene: Lika\_49 Start: 35118, Stop: 36695, Start Num: 46

Candidate Starts for Lika\_49:

(Start: 28 @35052 has 7 MA's), (Start: 46 @35118 has 23 MA's), (Start: 102 @35238 has 3 MA's), (120, 35337), (Start: 124 @35355 has 1 MA's), (132, 35406), (154, 35487), (156, 35490), (170, 35562), (173, 35571), (174, 35574), (202, 35727), (215, 35784), (216, 35787), (218, 35796), (290, 36024), (310, 36090), (317, 36120), (346, 36219), (351, 36243), (353, 36252), (359, 36276), (376, 36348), (421, 36537), (433, 36576), (442, 36600), (449, 36615), (453, 36630),

Gene: Lilbooboo\_54 Start: 38473, Stop: 40032, Start Num: 104

Candidate Starts for Lilbooboo\_54:

(Start: 62 @38377 has 1 MA's), (81, 38422), (Start: 88 @38431 has 4 MA's), (Start: 104 @38473 has 3 MA's), (139, 38659), (140, 38662), (146, 38695), (148, 38704), (161, 38743), (168, 38779), (172, 38809), (174, 38821), (185, 38878), (186, 38881), (190, 38899), (192, 38908), (267, 39235), (270, 39247), (275, 39265), (278, 39292), (288, 39337), (305, 39409), (306, 39415), (308, 39421), (317, 39445), (334, 39490), (345, 39544), (360, 39604), (380, 39688), (409, 39805), (423, 39877), (452, 39955), (454, 39967),

Gene: Lillie\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for Lillie\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (179, 23240), (199, 23129), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: LittleB\_33 Start: 26638, Stop: 25124, Start Num: 89

Candidate Starts for LittleB\_33:

(Start: 67 @26680 has 1 MA's), (Start: 83 @26647 has 47 MA's), (Start: 89 @26638 has 107 MA's), (126, 26476), (138, 26410), (142, 26392), (163, 26317), (166, 26293), (171, 26254), (172, 26251), (189, 26164), (210, 26050), (213, 26038), (262, 25855), (291, 25744), (304, 25693), (342, 25564), (346, 25555), (364, 25480), (366, 25474), (397, 25351), (404, 25312), (457, 25162), (462, 25147),

Gene: LittleCherry\_30 Start: 25778, Stop: 24285, Start Num: 98

Candidate Starts for LittleCherry\_30:

(Start: 98 @25778 has 76 MA's), (Start: 105 @25745 has 1 MA's), (Start: 106 @25742 has 3 MA's), (Start: 109 @25724 has 4 MA's), (Start: 124 @25643 has 1 MA's), (155, 25499), (163, 25472), (174, 25424), (205, 25259), (210, 25235), (211, 25232), (215, 25211), (275, 25022), (306, 24881), (317, 24851), (361, 24674), (364, 24662), (386, 24578), (391, 24563), (394, 24548), (435, 24371), (455, 24341), (466, 24308),

Gene: LittleGuy\_33 Start: 26578, Stop: 25082, Start Num: 98

Candidate Starts for LittleGuy\_33:

(Start: 57 @26644 has 10 MA's), (Start: 98 @26578 has 76 MA's), (Start: 102 @26560 has 3 MA's), (111, 26506), (122, 26455), (Start: 124 @26443 has 1 MA's), (148, 26317), (157, 26296), (164, 26266), (173, 26227), (181, 26188), (197, 26098), (210, 26038), (223, 25984), (268, 25846), (327, 25615), (348, 25525), (357, 25489), (364, 25462), (379, 25399), (429, 25189), (435, 25171), (445, 25159), (451, 25150),

Gene: Lizalica\_49 Start: 34782, Stop: 36191, Start Num: 98

Candidate Starts for Lizalica\_49:

(Start: 98 @34782 has 76 MA's), (140, 35004), (154, 35052), (170, 35115), (174, 35127), (176, 35136), (194, 35235), (213, 35328), (222, 35367), (280, 35526), (357, 35829), (362, 35847), (365, 35859), (374, 35892), (412, 36030),

Gene: LochMonster\_33 Start: 26613, Stop: 25117, Start Num: 98

Candidate Starts for LochMonster\_33:

(Start: 57 @26679 has 10 MA's), (Start: 98 @26613 has 76 MA's), (Start: 102 @26595 has 3 MA's), (112, 26538), (114, 26520), (122, 26490), (Start: 124 @26478 has 1 MA's), (148, 26352), (157, 26331), (164, 26301), (173, 26262), (181, 26223), (197, 26133), (210, 26073), (223, 26019), (268, 25881), (327, 25650), (348, 25560), (357, 25524), (364, 25497), (377, 25443), (379, 25434), (429, 25224), (435, 25206), (445, 25194), (451, 25185),

Gene: London\_48 Start: 35959, Stop: 37380, Start Num: 94

Candidate Starts for London\_48:

(82, 35941), (92, 35956), (Start: 94 @35959 has 34 MA's), (Start: 98 @35968 has 76 MA's), (119, 36082), (Start: 124 @36106 has 1 MA's), (140, 36190), (149, 36223), (154, 36238), (170, 36301), (174, 36313), (176, 36322), (194, 36421), (201, 36463), (213, 36514), (222, 36553), (255, 36631), (264, 36658), (357, 37018), (360, 37027), (362, 37036), (365, 37048), (412, 37219), (435, 37306),

Gene: Lorelei\_51 Start: 35146, Stop: 36723, Start Num: 46

Candidate Starts for Lorelei\_51:

(Start: 28 @35080 has 7 MA's), (Start: 46 @35146 has 23 MA's), (Start: 102 @35266 has 3 MA's), (Start: 124 @35383 has 1 MA's), (132, 35434), (154, 35515), (156, 35518), (170, 35590), (173, 35599), (174, 35602), (175, 35605), (179, 35623), (202, 35755), (215, 35812), (216, 35815), (218, 35824), (225, 35848), (242, 35917), (288, 36043), (290, 36052), (310, 36118), (317, 36148), (346, 36247), (351, 36271), (353, 36280), (359, 36304), (376, 36376), (421, 36565), (433, 36604), (442, 36628), (449, 36643), (453, 36658),

Gene: Lorenzo\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Lorenzo\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Louie6\_36 Start: 27310, Stop: 25742, Start Num: 89

Candidate Starts for Louie6\_36:

(33, 27460), (41, 27445), (Start: 71 @27346 has 1 MA's), (Start: 89 @27310 has 107 MA's), (144, 27055), (150, 27031), (165, 26971), (171, 26923), (172, 26920), (189, 26833), (193, 26821), (194, 26800), (199, 26776), (213, 26707), (229, 26638), (230, 26629), (262, 26524), (275, 26479), (304, 26347), (329, 26263), (345, 26206), (397, 25999), (425, 25858),

Gene: Lunsford\_34 Start: 26634, Stop: 25120, Start Num: 89

Candidate Starts for Lunsford\_34:

(Start: 67 @26676 has 1 MA's), (Start: 83 @26643 has 47 MA's), (Start: 89 @26634 has 107 MA's), (126, 26472), (138, 26406), (142, 26388), (163, 26313), (166, 26289), (171, 26250), (172, 26247), (210, 26046), (213, 26034), (262, 25851), (291, 25740), (304, 25689), (342, 25560), (346, 25551), (364, 25476), (366, 25470), (397, 25347), (404, 25308), (457, 25158), (462, 25143),

Gene: MaGuCo\_47 Start: 36178, Stop: 37593, Start Num: 98

Candidate Starts for MaGuCo\_47:

(Start: 98 @36178 has 76 MA's), (Start: 124 @36316 has 1 MA's), (170, 36511), (174, 36523), (178, 36541), (190, 36601), (193, 36610), (211, 36715), (213, 36724), (260, 36856), (264, 36868), (285, 36949), (342, 37159), (351, 37192), (362, 37234), (369, 37261), (374, 37279), (413, 37420), (428, 37483), (434, 37501), (436, 37507), (465, 37579), (469, 37585),

Gene: Mabodamaca\_60 Start: 40399, Stop: 41982, Start Num: 68

Candidate Starts for Mabodamaca\_60:

(61, 40381), (Start: 68 @40399 has 2 MA's), (Start: 76 @40417 has 1 MA's), (133, 40633), (145, 40693), (179, 40855), (183, 40879), (253, 41197), (311, 41431), (348, 41554), (373, 41659), (383, 41695), (391, 41719), (395, 41728), (406, 41782), (409, 41794), (417, 41839), (438, 41896),

Gene: Maneekul\_50 Start: 36203, Stop: 37825, Start Num: 45

Candidate Starts for Maneekul\_50:

(Start: 28 @36146 has 7 MA's), (Start: 45 @36203 has 5 MA's), (Start: 46 @36212 has 23 MA's), (Start: 102 @36359 has 3 MA's), (120, 36458), (Start: 124 @36476 has 1 MA's), (132, 36527), (154, 36608), (156, 36611), (170, 36683), (173, 36692), (174, 36695), (197, 36821), (202, 36848), (218, 36917), (229, 36962), (250, 37031), (263, 37058), (280, 37106), (290, 37154), (302, 37193), (310, 37220), (317, 37250), (351, 37373), (366, 37433), (376, 37478), (410, 37607), (419, 37658), (421, 37667), (433, 37706), (442, 37730), (449, 37745), (453, 37760), (458, 37775),

Gene: Margo\_34 Start: 27255, Stop: 25747, Start Num: 98

Candidate Starts for Margo\_34:

(Start: 90 @27270 has 2 MA's), (Start: 98 @27255 has 76 MA's), (Start: 99 @27249 has 3 MA's), (Start: 100 @27246 has 1 MA's), (130, 27078), (132, 27072), (162, 26955), (176, 26895), (197, 26778), (205, 26739), (211, 26712), (214, 26700), (241, 26565), (287, 26412), (309, 26322), (321, 26283), (350, 26193), (361, 26151), (364, 26139), (375, 26094), (380, 26073), (431, 25860), (440, 25839),

Gene: MarysWell\_29 Start: 25772, Stop: 24333, Start Num: 109

Candidate Starts for MarysWell\_29:

(Start: 98 @25826 has 76 MA's), (Start: 105 @25793 has 1 MA's), (Start: 106 @25790 has 3 MA's), (Start: 109 @25772 has 4 MA's), (Start: 124 @25691 has 1 MA's), (155, 25547), (163, 25520), (174, 25472), (205, 25307), (210, 25283), (211, 25280), (215, 25259), (275, 25070), (306, 24929), (317, 24899), (361, 24722), (364, 24710), (386, 24626), (391, 24611), (394, 24596), (435, 24419), (455, 24389), (456, 24386), (466, 24356),

Gene: Maureen\_51 Start: 37489, Stop: 38901, Start Num: 98

Candidate Starts for Maureen\_51:

(Start: 98 @37489 has 76 MA's), (Start: 124 @37627 has 1 MA's), (156, 37762), (170, 37822), (174, 37834), (178, 37852), (185, 37891), (211, 38026), (213, 38035), (260, 38167), (264, 38179), (285, 38260), (342, 38470), (351, 38503), (362, 38545), (369, 38572), (374, 38590), (413, 38731), (428, 38794), (436, 38818), (469, 38896),

Gene: Maverick\_33 Start: 26646, Stop: 25123, Start Num: 83

Candidate Starts for Maverick\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Mayonnaise\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Mayonnaise\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Mazhar510\_33 Start: 26638, Stop: 25124, Start Num: 89

Candidate Starts for Mazhar510\_33:

(Start: 67 @26680 has 1 MA's), (Start: 83 @26647 has 47 MA's), (Start: 89 @26638 has 107 MA's), (126, 26476), (138, 26410), (142, 26392), (163, 26317), (166, 26293), (171, 26254), (172, 26251), (210, 26050), (213, 26038), (262, 25855), (291, 25744), (304, 25693), (342, 25564), (346, 25555), (364, 25480), (366, 25474), (397, 25351), (404, 25312), (457, 25162), (462, 25147),

Gene: MeeZee\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for MeeZee\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: MegTheThird\_33 Start: 26339, Stop: 24783, Start Num: 88

Candidate Starts for MegTheThird\_33:

(Start: 88 @26339 has 4 MA's), (95, 26327), (115, 26225), (Start: 124 @26186 has 1 MA's), (144, 26081), (150, 26057), (163, 26015), (172, 25943), (173, 25934), (184, 25883), (194, 25823), (215, 25718), (226, 25679), (228, 25664), (229, 25661), (234, 25637), (243, 25595), (253, 25577), (262, 25547), (275, 25529), (278, 25505), (306, 25388), (315, 25358), (342, 25277), (345, 25271), (361, 25205), (364, 25193), (372, 25160), (385, 25112), (392, 25079), (397, 25064), (402, 25034), (404, 25025), (406, 25019), (423, 24932), (432, 24911), (435, 24902), (474, 24815),

Gene: Methuselah\_35 Start: 27305, Stop: 25737, Start Num: 89

Candidate Starts for Methuselah\_35:

(33, 27455), (41, 27440), (Start: 71 @27341 has 1 MA's), (Start: 89 @27305 has 107 MA's), (144, 27050), (150, 27026), (165, 26966), (171, 26918), (172, 26915), (189, 26828), (193, 26816), (194, 26795), (199, 26771), (213, 26702), (229, 26633), (230, 26624), (262, 26519), (275, 26474), (304, 26342), (329, 26258), (345, 26201), (397, 25994), (425, 25853),

Gene: Micasa\_30 Start: 25752, Stop: 24259, Start Num: 98

Candidate Starts for Micasa\_30:

(Start: 98 @25752 has 76 MA's), (Start: 105 @25719 has 1 MA's), (Start: 106 @25716 has 3 MA's), (Start: 109 @25698 has 4 MA's), (Start: 124 @25617 has 1 MA's), (155, 25473), (163, 25446), (174, 25398), (182, 25356), (205, 25233), (210, 25209), (211, 25206), (215, 25185), (229, 25128), (275, 24996), (306, 24855), (317, 24825), (361, 24648), (364, 24636), (386, 24552), (391, 24537), (394, 24522), (435, 24345), (455, 24315),

Gene: Midas2\_30 Start: 25826, Stop: 24333, Start Num: 98

Candidate Starts for Midas2\_30:

(Start: 98 @25826 has 76 MA's), (Start: 105 @25793 has 1 MA's), (Start: 106 @25790 has 3 MA's), (Start: 109 @25772 has 4 MA's), (Start: 124 @25691 has 1 MA's), (155, 25547), (163, 25520), (174, 25472), (205, 25307), (210, 25283), (211, 25280), (215, 25259), (229, 25202), (275, 25070), (306, 24929), (317, 24899), (361, 24722), (364, 24710), (386, 24626), (391, 24611), (394, 24596), (435, 24419), (455, 24389), (466, 24356),

Gene: Milcery\_30 Start: 25782, Stop: 24289, Start Num: 98

Candidate Starts for Milcery\_30:

(Start: 98 @25782 has 76 MA's), (Start: 105 @25749 has 1 MA's), (Start: 106 @25746 has 3 MA's), (Start: 109 @25728 has 4 MA's), (Start: 124 @25647 has 1 MA's), (155, 25503), (163, 25476), (174, 25428), (205, 25263), (210, 25239), (211, 25236), (215, 25215), (275, 25026), (306, 24885), (317, 24855), (361, 24678), (364, 24666), (386, 24582), (391, 24567), (394, 24552), (435, 24375), (455, 24345), (466, 24312),

Gene: Millski\_32 Start: 26641, Stop: 25127, Start Num: 89

Candidate Starts for Millski\_32:

(Start: 67 @26683 has 1 MA's), (Start: 83 @26650 has 47 MA's), (Start: 89 @26641 has 107 MA's), (126, 26479), (138, 26413), (142, 26395), (163, 26320), (166, 26296), (171, 26257), (172, 26254), (189, 26167), (210, 26053), (213, 26041), (262, 25858), (291, 25747), (304, 25696), (342, 25567), (346, 25558), (364, 25483), (366, 25477), (397, 25354), (404, 25315), (457, 25165), (462, 25150),

Gene: Miramae\_33 Start: 26969, Stop: 25407, Start Num: 57

Candidate Starts for Miramae\_33:

(Start: 57 @26969 has 10 MA's), (Start: 91 @26912 has 1 MA's), (Start: 98 @26903 has 76 MA's), (Start: 102 @26885 has 3 MA's), (112, 26828), (122, 26780), (Start: 124 @26768 has 1 MA's), (148, 26642), (157, 26621), (158, 26618), (164, 26591), (173, 26552), (197, 26423), (210, 26363), (268, 26171), (306, 26009), (357, 25814), (364, 25787), (377, 25733), (379, 25724), (429, 25514), (435, 25496), (445, 25484), (451, 25475), (457, 25457),

Gene: Misomonster\_38 Start: 27308, Stop: 25740, Start Num: 89

Candidate Starts for Misomonster\_38:

(33, 27458), (41, 27443), (Start: 71 @27344 has 1 MA's), (Start: 89 @27308 has 107 MA's), (144, 27053), (150, 27029), (165, 26969), (171, 26921), (172, 26918), (189, 26831), (193, 26819), (194, 26798), (199, 26774), (213, 26705), (229, 26636), (230, 26627), (262, 26522), (275, 26477), (304, 26345), (329, 26261), (345, 26204), (397, 25997), (425, 25856),

Gene: MissSwiss\_52 Start: 34520, Stop: 35938, Start Num: 94

Candidate Starts for MissSwiss\_52:

(82, 34502), (92, 34517), (Start: 94 @34520 has 34 MA's), (Start: 98 @34529 has 76 MA's), (119, 34643), (140, 34751), (154, 34799), (170, 34862), (174, 34874), (194, 34982), (213, 35075), (215, 35087), (222, 35114), (228, 35141), (356, 35573), (362, 35594), (383, 35672), (412, 35777),

Gene: Morpher26\_33 Start: 26647, Stop: 25133, Start Num: 89

Candidate Starts for Morpher26\_33:

(Start: 67 @26689 has 1 MA's), (Start: 83 @26656 has 47 MA's), (Start: 89 @26647 has 107 MA's), (126, 26485), (138, 26419), (142, 26401), (163, 26326), (171, 26263), (172, 26260), (189, 26173), (213, 26047), (262, 25864), (279, 25807), (291, 25753), (304, 25702), (342, 25573), (346, 25564), (364, 25489), (366, 25483), (394, 25369), (397, 25360), (404, 25321), (457, 25171), (462, 25156),

Gene: Moss\_43 Start: 31498, Stop: 32937, Start Num: 97

Candidate Starts for Moss\_43:

(Start: 97 @31498 has 18 MA's), (118, 31609), (120, 31618), (133, 31681), (138, 31705), (141, 31714), (174, 31864), (176, 31873), (203, 32029), (205, 32035), (211, 32062), (280, 32296), (314, 32419),

(436, 32866), (443, 32881), (444, 32884),

Gene: Mudpuppy\_46 Start: 34970, Stop: 36388, Start Num: 94

Candidate Starts for Mudpuppy\_46:

(82, 34952), (92, 34967), (Start: 94 @34970 has 34 MA's), (Start: 98 @34979 has 76 MA's), (119, 35093), (140, 35201), (170, 35312), (174, 35324), (176, 35333), (194, 35432), (213, 35525), (215, 35537), (228, 35591), (280, 35723), (348, 35990), (357, 36026), (362, 36044), (365, 36056), (374, 36089), (412, 36227),

Gene: Mundrea\_33 Start: 26612, Stop: 25116, Start Num: 98

Candidate Starts for Mundrea\_33:

(15, 26912), (19, 26852), (22, 26834), (23, 26825), (Start: 57 @26678 has 10 MA's), (Start: 91 @26621 has 1 MA's), (Start: 98 @26612 has 76 MA's), (Start: 102 @26594 has 3 MA's), (112, 26537), (114, 26519), (122, 26489), (Start: 124 @26477 has 1 MA's), (140, 26393), (148, 26351), (157, 26330), (173, 26261), (197, 26132), (210, 26072), (223, 26018), (268, 25880), (281, 25817), (308, 25712), (327, 25649), (348, 25559), (357, 25523), (364, 25496), (377, 25442), (379, 25433), (429, 25223), (431, 25217), (435, 25205), (445, 25193), (451, 25184),

Gene: MyraDee\_30 Start: 24175, Stop: 22685, Start Num: 89

Candidate Starts for MyraDee\_30:

(Start: 89 @24175 has 107 MA's), (101, 24151), (107, 24112), (Start: 124 @24025 has 1 MA's), (138, 23947), (139, 23944), (140, 23941), (144, 23920), (150, 23896), (163, 23854), (165, 23836), (171, 23794), (172, 23791), (189, 23704), (190, 23701), (193, 23692), (207, 23602), (213, 23578), (230, 23500), (245, 23437), (262, 23395), (275, 23365), (280, 23335), (304, 23233), (306, 23224), (351, 23074), (355, 23059), (374, 22981), (375, 22978), (388, 22930), (397, 22894), (416, 22798), (424, 22768), (446, 22723), (448, 22720), (455, 22708),

Gene: Mysterium\_42 Start: 31330, Stop: 32769, Start Num: 97

Candidate Starts for Mysterium\_42:

(Start: 97 @31330 has 18 MA's), (Start: 100 @31342 has 1 MA's), (118, 31441), (120, 31450), (133, 31513), (138, 31537), (141, 31546), (174, 31696), (176, 31705), (203, 31861), (205, 31867), (211, 31894), (280, 32128), (314, 32251), (390, 32521), (436, 32698), (443, 32713), (444, 32716),

Gene: Nabi\_51 Start: 35146, Stop: 36723, Start Num: 46

Candidate Starts for Nabi\_51:

(Start: 28 @35080 has 7 MA's), (Start: 46 @35146 has 23 MA's), (Start: 102 @35266 has 3 MA's), (Start: 124 @35383 has 1 MA's), (132, 35434), (154, 35515), (156, 35518), (170, 35590), (173, 35599), (174, 35602), (175, 35605), (179, 35623), (202, 35755), (215, 35812), (216, 35815), (218, 35824), (225, 35848), (242, 35917), (288, 36043), (290, 36052), (310, 36118), (317, 36148), (346, 36247), (351, 36271), (353, 36280), (359, 36304), (376, 36376), (421, 36565), (433, 36604), (442, 36628), (449, 36643), (453, 36658),

Gene: Naca\_31 Start: 25915, Stop: 24470, Start Num: 106

Candidate Starts for Naca\_31:

(75, 25978), (Start: 98 @25951 has 76 MA's), (Start: 106 @25915 has 3 MA's), (Start: 124 @25816 has 1 MA's), (140, 25732), (148, 25690), (158, 25666), (164, 25639), (173, 25600), (179, 25576), (205, 25432), (284, 25138), (297, 25093), (304, 25063), (310, 25039), (317, 25024), (335, 24964), (348, 24913), (350, 24904), (364, 24850), (372, 24817), (391, 24751), (435, 24559), (471, 24481),

Gene: Naiad\_29 Start: 23649, Stop: 22141, Start Num: 83

Candidate Starts for Naiad\_29:

(Start: 83 @23649 has 47 MA's), (Start: 98 @23628 has 76 MA's), (Start: 99 @23622 has 3 MA's), (Start: 124 @23493 has 1 MA's), (132, 23445), (151, 23358), (179, 23253), (199, 23142), (211, 23082),

(214, 23070), (228, 23007), (238, 22977), (249, 22944), (258, 22923), (268, 22893), (272, 22878), (275, 22872), (282, 22824), (290, 22791), (304, 22734), (317, 22695), (318, 22689), (362, 22539), (404, 22368), (471, 22152),

Gene: Nancinator\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for Nancinator\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (151, 23345), (179, 23240), (199, 23129), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: Natosaleda\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for Natosaleda\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (151, 23345), (179, 23240), (199, 23129), (204, 23099), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: NearlyHeadless\_30 Start: 25032, Stop: 23530, Start Num: 89

Candidate Starts for NearlyHeadless\_30:

(54, 25101), (Start: 67 @25074 has 1 MA's), (Start: 71 @25068 has 1 MA's), (Start: 89 @25032 has 107 MA's), (Start: 124 @24882 has 1 MA's), (144, 24777), (163, 24711), (165, 24693), (171, 24651), (172, 24648), (189, 24561), (194, 24528), (210, 24447), (213, 24435), (234, 24342), (245, 24294), (262, 24252), (280, 24192), (304, 24090), (342, 23955), (361, 23883), (388, 23778), (397, 23742), (404, 23703), (423, 23619), (448, 23571),

Gene: Nemo27\_33 Start: 26636, Stop: 25122, Start Num: 89

Candidate Starts for Nemo27\_33:

(Start: 67 @26678 has 1 MA's), (Start: 83 @26645 has 47 MA's), (Start: 89 @26636 has 107 MA's), (126, 26474), (138, 26408), (142, 26390), (163, 26315), (166, 26291), (171, 26252), (172, 26249), (189, 26162), (210, 26048), (213, 26036), (262, 25853), (291, 25742), (304, 25691), (342, 25562), (346, 25553), (364, 25478), (366, 25472), (397, 25349), (404, 25310), (457, 25160), (462, 25145),

Gene: Niobe\_48 Start: 35962, Stop: 37383, Start Num: 94

Candidate Starts for Niobe\_48:

(82, 35944), (92, 35959), (Start: 94 @35962 has 34 MA's), (Start: 98 @35971 has 76 MA's), (119, 36085), (Start: 124 @36109 has 1 MA's), (140, 36193), (149, 36226), (154, 36241), (170, 36304), (174, 36316), (176, 36325), (194, 36424), (201, 36466), (213, 36517), (222, 36556), (255, 36634), (264, 36661), (280, 36715), (357, 37021), (360, 37030), (362, 37039), (365, 37051), (412, 37222), (435, 37309),

Gene: Nitro\_51 Start: 37058, Stop: 38473, Start Num: 98

Candidate Starts for Nitro\_51:

(Start: 98 @37058 has 76 MA's), (Start: 102 @37076 has 3 MA's), (119, 37172), (140, 37280), (156, 37331), (170, 37391), (174, 37403), (180, 37433), (194, 37511), (213, 37604), (222, 37643), (331, 38003), (357, 38108), (362, 38126), (365, 38138), (412, 38309),

Gene: Noella\_34 Start: 27230, Stop: 25722, Start Num: 98

Candidate Starts for Noella\_34:

(Start: 90 @27245 has 2 MA's), (Start: 98 @27230 has 76 MA's), (Start: 99 @27224 has 3 MA's), (Start: 100 @27221 has 1 MA's), (130, 27053), (132, 27047), (162, 26930), (176, 26870), (197, 26753),

(205, 26714), (211, 26687), (214, 26675), (241, 26540), (287, 26387), (309, 26297), (321, 26258), (350, 26168), (361, 26126), (364, 26114), (375, 26069), (380, 26048), (431, 25835), (440, 25814),

Gene: Noelle\_33 Start: 26735, Stop: 25200, Start Num: 89

Candidate Starts for Noelle\_33:

(Start: 71 @26771 has 1 MA's), (Start: 83 @26744 has 47 MA's), (Start: 89 @26735 has 107 MA's), (110, 26654), (126, 26573), (138, 26507), (142, 26489), (163, 26414), (171, 26351), (172, 26348), (196, 26219), (213, 26135), (229, 26066), (240, 26003), (245, 25994), (262, 25952), (279, 25895), (291, 25841), (304, 25790), (342, 25640), (346, 25631), (364, 25556), (388, 25463), (394, 25436), (397, 25427), (404, 25388), (424, 25301), (457, 25238), (462, 25223),

Gene: Norbert\_33 Start: 27229, Stop: 25721, Start Num: 98

Candidate Starts for Norbert\_33:

(Start: 90 @27244 has 2 MA's), (Start: 98 @27229 has 76 MA's), (Start: 99 @27223 has 3 MA's), (Start: 100 @27220 has 1 MA's), (130, 27052), (132, 27046), (162, 26929), (176, 26869), (197, 26752), (205, 26713), (211, 26686), (214, 26674), (241, 26539), (287, 26386), (309, 26296), (321, 26257), (350, 26167), (361, 26125), (364, 26113), (375, 26068), (380, 26047), (431, 25834), (440, 25813),

Gene: NorthStar\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for NorthStar\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: NotAPhaseMom\_33 Start: 26641, Stop: 25127, Start Num: 89

Candidate Starts for NotAPhaseMom\_33:

(Start: 67 @26683 has 1 MA's), (Start: 83 @26650 has 47 MA's), (Start: 89 @26641 has 107 MA's), (126, 26479), (138, 26413), (142, 26395), (163, 26320), (166, 26296), (171, 26257), (172, 26254), (189, 26167), (210, 26053), (213, 26041), (262, 25858), (291, 25747), (304, 25696), (342, 25567), (346, 25558), (364, 25483), (366, 25477), (397, 25354), (404, 25315), (457, 25165), (462, 25150),

Gene: Nyxis\_33 Start: 26572, Stop: 25076, Start Num: 98

Candidate Starts for Nyxis\_33:

(Start: 57 @26638 has 10 MA's), (Start: 98 @26572 has 76 MA's), (Start: 102 @26554 has 3 MA's), (111, 26500), (122, 26449), (Start: 124 @26437 has 1 MA's), (148, 26311), (157, 26290), (164, 26260), (173, 26221), (181, 26182), (197, 26092), (210, 26032), (223, 25978), (268, 25840), (327, 25609), (348, 25519), (357, 25483), (364, 25456), (379, 25393), (429, 25183), (435, 25165), (445, 25153), (451, 25144),

Gene: OKCentral2016\_33 Start: 26376, Stop: 24868, Start Num: 98

Candidate Starts for OKCentral2016\_33:

(Start: 98 @26376 has 76 MA's), (Start: 102 @26358 has 3 MA's), (103, 26352), (119, 26265), (Start: 124 @26241 has 1 MA's), (162, 26076), (197, 25899), (205, 25860), (207, 25848), (210, 25836), (211, 25833), (214, 25821), (278, 25575), (282, 25554), (317, 25425), (321, 25404), (351, 25311), (357, 25287), (361, 25272), (375, 25215), (380, 25194),

Gene: OKaNui\_34 Start: 26690, Stop: 25176, Start Num: 89

Candidate Starts for OKaNui\_34:

(Start: 67 @26732 has 1 MA's), (Start: 83 @26699 has 47 MA's), (Start: 89 @26690 has 107 MA's), (126, 26528), (138, 26462), (142, 26444), (163, 26369), (166, 26345), (171, 26306), (172, 26303), (189, 26216), (210, 26102), (213, 26090), (262, 25907), (291, 25796), (304, 25745), (342, 25616), (346, 25607), (364, 25532), (366, 25526), (397, 25403), (404, 25364), (457, 25214), (462, 25199),

Gene: ObiToo\_54 Start: 36249, Stop: 37667, Start Num: 94

Candidate Starts for ObiToo\_54:

(82, 36231), (92, 36246), (Start: 94 @36249 has 34 MA's), (Start: 98 @36258 has 76 MA's), (119, 36372), (Start: 124 @36396 has 1 MA's), (128, 36417), (140, 36480), (154, 36528), (170, 36591), (174, 36603), (194, 36711), (201, 36753), (213, 36804), (222, 36843), (342, 37248), (362, 37323), (365, 37335), (393, 37428), (412, 37506), (436, 37596),

Gene: OzzyJ\_51 Start: 36081, Stop: 37724, Start Num: 28

Candidate Starts for OzzyJ\_51:

(14, 35901), (Start: 28 @36081 has 7 MA's), (Start: 46 @36147 has 23 MA's), (Start: 102 @36267 has 3 MA's), (Start: 109 @36306 has 4 MA's), (120, 36366), (Start: 124 @36384 has 1 MA's), (132, 36435), (154, 36516), (156, 36519), (170, 36591), (173, 36600), (174, 36603), (202, 36756), (215, 36813), (216, 36816), (218, 36825), (310, 37119), (317, 37149), (346, 37248), (351, 37272), (353, 37281), (359, 37305), (376, 37377), (421, 37566), (433, 37605), (442, 37629), (449, 37644), (453, 37659),

Gene: PP\_41 Start: 31804, Stop: 30374, Start Num: 86

Candidate Starts for PP\_41:

(Start: 86 @31804 has 1 MA's), (Start: 98 @31789 has 76 MA's), (114, 31696), (157, 31507), (210, 31252), (278, 31051), (291, 30994), (317, 30904), (319, 30889), (386, 30658), (391, 30643), (468, 30388),

Gene: Palestino\_32 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Palestino\_32:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Panamaxus\_33 Start: 27229, Stop: 25721, Start Num: 98

Candidate Starts for Panamaxus\_33:

(Start: 90 @27244 has 2 MA's), (Start: 98 @27229 has 76 MA's), (Start: 99 @27223 has 3 MA's), (Start: 100 @27220 has 1 MA's), (130, 27052), (132, 27046), (162, 26929), (176, 26869), (197, 26752), (205, 26713), (211, 26686), (214, 26674), (241, 26539), (287, 26386), (309, 26296), (321, 26257), (350, 26167), (361, 26125), (364, 26113), (375, 26068), (380, 26047), (431, 25834), (440, 25813),

Gene: Partridge\_29 Start: 23682, Stop: 22174, Start Num: 83

Candidate Starts for Partridge\_29:

(Start: 83 @23682 has 47 MA's), (Start: 98 @23661 has 76 MA's), (Start: 99 @23655 has 3 MA's), (Start: 124 @23526 has 1 MA's), (132, 23478), (179, 23286), (186, 23247), (199, 23175), (211, 23115), (214, 23103), (238, 23010), (249, 22977), (258, 22956), (263, 22938), (268, 22926), (272, 22911), (275, 22905), (282, 22857), (290, 22824), (304, 22767), (317, 22728), (318, 22722), (362, 22572), (399, 22431), (471, 22185),

Gene: Peaches\_33 Start: 26645, Stop: 25122, Start Num: 83

Candidate Starts for Peaches\_33:

(Start: 67 @26678 has 1 MA's), (Start: 83 @26645 has 47 MA's), (Start: 89 @26636 has 107 MA's), (126, 26474), (138, 26408), (142, 26390), (163, 26315), (166, 26291), (171, 26252), (172, 26249), (189, 26162), (210, 26048), (213, 26036), (262, 25853), (291, 25742), (304, 25691), (342, 25562), (346, 25553), (364, 25478), (366, 25472), (397, 25349), (404, 25310), (457, 25160), (462, 25145),

Gene: Pepe\_33 Start: 27246, Stop: 28529, Start Num: 136

Candidate Starts for Pepe\_33:

(Start: 136 @27246 has 1 MA's), (Start: 137 @27252 has 1 MA's), (143, 27273), (174, 27390), (Start: 177 @27402 has 1 MA's), (179, 27411), (180, 27420), (181, 27426), (197, 27516), (200, 27528), (207, 27561), (260, 27756), (279, 27816), (293, 27873), (310, 27927), (314, 27942), (343, 28050), (351, 28083), (371, 28164), (376, 28179), (426, 28398), (462, 28497), (472, 28521),

Gene: Perplexer\_33 Start: 26653, Stop: 25130, Start Num: 83

Candidate Starts for Perplexer\_33:

(Start: 67 @26686 has 1 MA's), (Start: 83 @26653 has 47 MA's), (Start: 89 @26644 has 107 MA's), (126, 26482), (138, 26416), (142, 26398), (163, 26323), (171, 26260), (172, 26257), (189, 26170), (213, 26044), (262, 25861), (279, 25804), (291, 25750), (304, 25699), (342, 25570), (346, 25561), (364, 25486), (366, 25480), (394, 25366), (397, 25357), (404, 25318), (457, 25168), (462, 25153),

Gene: PeterPeter\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for PeterPeter\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: PetiteSangsue\_33 Start: 26647, Stop: 25133, Start Num: 89

Candidate Starts for PetiteSangsue\_33:

(Start: 67 @26689 has 1 MA's), (Start: 83 @26656 has 47 MA's), (Start: 89 @26647 has 107 MA's), (126, 26485), (138, 26419), (142, 26401), (163, 26326), (171, 26263), (172, 26260), (189, 26173), (213, 26047), (262, 25864), (279, 25807), (291, 25753), (304, 25702), (342, 25573), (346, 25564), (364, 25489), (366, 25483), (394, 25369), (397, 25360), (404, 25321), (457, 25171), (462, 25156),

Gene: PetterN\_32 Start: 25311, Stop: 23830, Start Num: 98

Candidate Starts for PetterN\_32:

(75, 25338), (Start: 98 @25311 has 76 MA's), (Start: 106 @25275 has 3 MA's), (Start: 124 @25176 has 1 MA's), (129, 25140), (140, 25092), (148, 25050), (158, 25026), (164, 24999), (173, 24960), (179, 24936), (205, 24792), (284, 24498), (297, 24453), (304, 24423), (310, 24399), (317, 24384), (335, 24324), (348, 24273), (350, 24264), (364, 24210), (372, 24177), (391, 24111), (404, 24048), (435, 23919), (471, 23841),

Gene: Phacado\_33 Start: 26636, Stop: 25122, Start Num: 89

Candidate Starts for Phacado\_33:

(Start: 67 @26678 has 1 MA's), (Start: 83 @26645 has 47 MA's), (Start: 89 @26636 has 107 MA's), (126, 26474), (138, 26408), (142, 26390), (163, 26315), (166, 26291), (171, 26252), (172, 26249), (189, 26162), (210, 26048), (213, 26036), (262, 25853), (291, 25742), (304, 25691), (342, 25562), (346, 25553), (364, 25478), (366, 25472), (397, 25349), (404, 25310), (457, 25160), (462, 25145),

Gene: PhailMary\_28 Start: 23958, Stop: 22462, Start Num: 83

Candidate Starts for PhailMary\_28:

(Start: 83 @23958 has 47 MA's), (Start: 98 @23937 has 76 MA's), (Start: 99 @23931 has 3 MA's), (Start: 124 @23802 has 1 MA's), (132, 23754), (151, 23667), (179, 23562), (199, 23451), (211, 23391), (214, 23379), (228, 23316), (238, 23286), (249, 23253), (258, 23232), (268, 23202), (275, 23181), (281, 23136), (282, 23133), (283, 23127), (304, 23043), (317, 23004), (318, 22998), (348, 22902), (356, 22869), (362, 22848), (364, 22839), (404, 22677),

Gene: Phighter1804\_33 Start: 26682, Stop: 25120, Start Num: 57

Candidate Starts for Phighter1804\_33:

(Start: 57 @26682 has 10 MA's), (Start: 98 @26616 has 76 MA's), (Start: 102 @26598 has 3 MA's), (112, 26541), (114, 26523), (122, 26493), (Start: 124 @26481 has 1 MA's), (148, 26355), (157, 26334),

(164, 26304), (173, 26265), (181, 26226), (197, 26136), (210, 26076), (223, 26022), (268, 25884), (327, 25653), (348, 25563), (357, 25527), (364, 25500), (377, 25446), (379, 25437), (429, 25227), (435, 25209), (445, 25197), (451, 25188),

Gene: Phillis\_30 Start: 25078, Stop: 23576, Start Num: 89

Candidate Starts for Phillis\_30:

(54, 25147), (Start: 67 @25120 has 1 MA's), (Start: 71 @25114 has 1 MA's), (Start: 89 @25078 has 107 MA's), (Start: 124 @24928 has 1 MA's), (144, 24823), (163, 24757), (165, 24739), (171, 24697), (172, 24694), (189, 24607), (213, 24481), (234, 24388), (245, 24340), (262, 24298), (280, 24238), (304, 24136), (342, 24001), (361, 23929), (388, 23824), (397, 23788), (404, 23749), (411, 23725), (448, 23617),

Gene: Phives\_54 Start: 37471, Stop: 38946, Start Num: 94

Candidate Starts for Phives\_54:

(Start: 88 @37462 has 4 MA's), (Start: 94 @37471 has 34 MA's), (167, 37792), (217, 38071), (264, 38245), (317, 38437), (383, 38674), (424, 38836),

Gene: Phlorence\_30 Start: 25886, Stop: 24393, Start Num: 98

Candidate Starts for Phlorence\_30:

(Start: 98 @25886 has 76 MA's), (Start: 105 @25853 has 1 MA's), (Start: 106 @25850 has 3 MA's), (Start: 109 @25832 has 4 MA's), (Start: 124 @25751 has 1 MA's), (155, 25607), (163, 25580), (174, 25532), (205, 25367), (210, 25343), (211, 25340), (215, 25319), (275, 25130), (317, 24959), (350, 24824), (361, 24782), (364, 24770), (386, 24686), (391, 24671), (394, 24656), (435, 24479), (455, 24449), (466, 24416),

Gene: Phontbonne\_33 Start: 26573, Stop: 25077, Start Num: 98

Candidate Starts for Phontbonne\_33:

(Start: 57 @26639 has 10 MA's), (Start: 98 @26573 has 76 MA's), (Start: 102 @26555 has 3 MA's), (111, 26501), (122, 26450), (Start: 124 @26438 has 1 MA's), (148, 26312), (157, 26291), (164, 26261), (173, 26222), (181, 26183), (197, 26093), (210, 26033), (223, 25979), (268, 25841), (327, 25610), (348, 25520), (357, 25484), (364, 25457), (379, 25394), (429, 25184), (435, 25166), (445, 25154), (451, 25145),

Gene: Phoxy\_36 Start: 27306, Stop: 25738, Start Num: 89

Candidate Starts for Phoxy\_36:

(33, 27456), (41, 27441), (Start: 71 @27342 has 1 MA's), (Start: 89 @27306 has 107 MA's), (144, 27051), (150, 27027), (165, 26967), (171, 26919), (172, 26916), (189, 26829), (193, 26817), (194, 26796), (199, 26772), (213, 26703), (229, 26634), (230, 26625), (262, 26520), (275, 26475), (304, 26343), (329, 26259), (345, 26202), (397, 25995), (425, 25854),

Gene: Phrankenstein\_29 Start: 23582, Stop: 22086, Start Num: 83

Candidate Starts for Phrankenstein\_29:

(Start: 83 @23582 has 47 MA's), (Start: 98 @23561 has 76 MA's), (Start: 99 @23555 has 3 MA's), (Start: 124 @23426 has 1 MA's), (132, 23378), (179, 23186), (199, 23075), (211, 23015), (214, 23003), (228, 22940), (238, 22910), (249, 22877), (258, 22856), (268, 22826), (272, 22811), (275, 22805), (282, 22757), (290, 22724), (304, 22667), (317, 22628), (318, 22622), (348, 22526), (356, 22493), (362, 22472), (364, 22463), (404, 22301),

Gene: PickleBack\_30 Start: 25546, Stop: 24107, Start Num: 109

Candidate Starts for PickleBack\_30:

(Start: 98 @25600 has 76 MA's), (Start: 105 @25567 has 1 MA's), (Start: 106 @25564 has 3 MA's), (Start: 109 @25546 has 4 MA's), (Start: 124 @25465 has 1 MA's), (155, 25321), (163, 25294), (174, 25246), (205, 25081), (210, 25057), (211, 25054), (215, 25033), (275, 24844), (317, 24673), (350,

24538), (361, 24496), (364, 24484), (386, 24400), (391, 24385), (394, 24370), (435, 24193), (455, 24163), (466, 24130),

Gene: Pipcraft\_33 Start: 26646, Stop: 25123, Start Num: 83

Candidate Starts for Pipcraft\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Pixelle\_52 Start: 38117, Stop: 39577, Start Num: 97

Candidate Starts for Pixelle\_52:

(58, 38054), (Start: 89 @38108 has 107 MA's), (Start: 97 @38117 has 18 MA's), (133, 38303), (141, 38336), (173, 38474), (176, 38486), (194, 38585), (203, 38636), (226, 38729), (316, 39062), (383, 39305), (459, 39563),

Gene: Pocahontas\_34 Start: 27226, Stop: 25718, Start Num: 98

Candidate Starts for Pocahontas\_34:

(Start: 90 @27241 has 2 MA's), (Start: 98 @27226 has 76 MA's), (Start: 99 @27220 has 3 MA's), (Start: 100 @27217 has 1 MA's), (130, 27049), (132, 27043), (162, 26926), (176, 26866), (197, 26749), (205, 26710), (211, 26683), (214, 26671), (241, 26536), (287, 26383), (309, 26293), (321, 26254), (350, 26164), (361, 26122), (364, 26110), (375, 26065), (380, 26044), (431, 25831), (440, 25810),

Gene: Popcicle\_34 Start: 27226, Stop: 25718, Start Num: 98

Candidate Starts for Popcicle\_34:

(Start: 90 @27241 has 2 MA's), (Start: 98 @27226 has 76 MA's), (Start: 99 @27220 has 3 MA's), (Start: 100 @27217 has 1 MA's), (130, 27049), (132, 27043), (162, 26926), (176, 26866), (197, 26749), (205, 26710), (211, 26683), (214, 26671), (241, 26536), (287, 26383), (309, 26293), (321, 26254), (350, 26164), (361, 26122), (364, 26110), (375, 26065), (380, 26044), (431, 25831), (440, 25810),

Gene: Powerpuff\_52 Start: 36416, Stop: 37834, Start Num: 94

Candidate Starts for Powerpuff\_52:

(82, 36398), (92, 36413), (Start: 94 @36416 has 34 MA's), (Start: 98 @36425 has 76 MA's), (119, 36539), (Start: 124 @36563 has 1 MA's), (140, 36647), (170, 36758), (174, 36770), (176, 36779), (194, 36878), (213, 36971), (215, 36983), (222, 37010), (280, 37169), (362, 37490), (365, 37502), (374, 37535), (412, 37673),

Gene: Prin Ashe11\_31 Start: 25691, Stop: 24252, Start Num: 109

Candidate Starts for Prin Ashe11\_31:

(Start: 98 @25745 has 76 MA's), (Start: 105 @25712 has 1 MA's), (Start: 106 @25709 has 3 MA's), (Start: 109 @25691 has 4 MA's), (Start: 124 @25610 has 1 MA's), (155, 25466), (163, 25439), (174, 25391), (205, 25226), (210, 25202), (211, 25199), (215, 25178), (275, 24989), (306, 24848), (317, 24818), (361, 24641), (364, 24629), (386, 24545), (391, 24530), (394, 24515), (435, 24338), (455, 24308), (466, 24275),

Gene: Pumbaa\_33 Start: 26690, Stop: 25128, Start Num: 57

Candidate Starts for Pumbaa\_33:

(Start: 57 @26690 has 10 MA's), (Start: 98 @26624 has 76 MA's), (Start: 102 @26606 has 3 MA's), (112, 26549), (114, 26531), (122, 26501), (Start: 124 @26489 has 1 MA's), (148, 26363), (157, 26342), (164, 26312), (173, 26273), (197, 26144), (210, 26084), (223, 26030), (268, 25892), (327, 25661), (348, 25571), (357, 25535), (364, 25508), (377, 25454), (379, 25445), (429, 25235), (435, 25217), (445, 25205), (451, 25196),

Gene: Pumpkins\_48 Start: 35749, Stop: 37167, Start Num: 94

Candidate Starts for Pumpkins\_48:

(82, 35731), (92, 35746), (Start: 94 @35749 has 34 MA's), (Start: 98 @35758 has 76 MA's), (140, 35980), (170, 36091), (174, 36103), (176, 36112), (194, 36211), (201, 36253), (213, 36304), (245, 36400), (342, 36748), (356, 36802), (357, 36805), (362, 36823), (365, 36835),

Gene: QuinnKiro\_33 Start: 27229, Stop: 25721, Start Num: 98

Candidate Starts for QuinnKiro\_33:

(Start: 90 @27244 has 2 MA's), (Start: 98 @27229 has 76 MA's), (Start: 99 @27223 has 3 MA's), (Start: 100 @27220 has 1 MA's), (130, 27052), (132, 27046), (162, 26929), (176, 26869), (197, 26752), (205, 26713), (211, 26686), (214, 26674), (241, 26539), (287, 26386), (309, 26296), (321, 26257), (350, 26167), (361, 26125), (364, 26113), (375, 26068), (380, 26047), (431, 25834), (440, 25813),

Gene: RER2\_22 Start: 20508, Stop: 19012, Start Num: 83

Candidate Starts for RER2\_22:

(Start: 83 @20508 has 47 MA's), (Start: 98 @20487 has 76 MA's), (Start: 99 @20481 has 3 MA's), (Start: 124 @20352 has 1 MA's), (132, 20304), (151, 20217), (179, 20112), (199, 20001), (211, 19941), (214, 19929), (228, 19866), (238, 19836), (249, 19803), (258, 19782), (268, 19752), (275, 19731), (281, 19686), (282, 19683), (283, 19677), (304, 19593), (317, 19554), (318, 19548), (348, 19452), (356, 19419), (362, 19398), (364, 19389), (404, 19227),

Gene: RGL3\_22 Start: 20966, Stop: 19488, Start Num: 98

Candidate Starts for RGL3\_22:

(59, 21038), (Start: 83 @20987 has 47 MA's), (Start: 98 @20966 has 76 MA's), (Start: 99 @20960 has 3 MA's), (Start: 124 @20831 has 1 MA's), (126, 20819), (152, 20690), (163, 20657), (173, 20612), (191, 20528), (199, 20477), (214, 20408), (223, 20369), (226, 20360), (233, 20324), (252, 20279), (269, 20228), (274, 20213), (275, 20210), (283, 20159), (288, 20141), (298, 20102), (304, 20078), (306, 20069), (308, 20063), (317, 20039), (320, 20021), (331, 20000), (347, 19946), (350, 19934), (402, 19727), (403, 19721), (404, 19718), (416, 19661), (424, 19622), (425, 19619), (433, 19595), (435, 19589),

Gene: Rana\_51 Start: 35146, Stop: 36723, Start Num: 46

Candidate Starts for Rana\_51:

(Start: 28 @35080 has 7 MA's), (Start: 46 @35146 has 23 MA's), (Start: 102 @35266 has 3 MA's), (Start: 124 @35383 has 1 MA's), (132, 35434), (154, 35515), (156, 35518), (170, 35590), (173, 35599), (174, 35602), (175, 35605), (179, 35623), (202, 35755), (215, 35812), (216, 35815), (218, 35824), (225, 35848), (242, 35917), (288, 36043), (290, 36052), (310, 36118), (317, 36148), (346, 36247), (351, 36271), (353, 36280), (359, 36304), (376, 36376), (421, 36565), (433, 36604), (442, 36628), (449, 36643), (453, 36658),

Gene: Rasputin\_29 Start: 23605, Stop: 22109, Start Num: 83

Candidate Starts for Rasputin\_29:

(Start: 83 @23605 has 47 MA's), (Start: 98 @23584 has 76 MA's), (Start: 99 @23578 has 3 MA's), (Start: 124 @23449 has 1 MA's), (132, 23401), (179, 23209), (186, 23170), (199, 23098), (211, 23038), (214, 23026), (238, 22933), (249, 22900), (258, 22879), (263, 22861), (268, 22849), (272, 22834), (275, 22828), (282, 22780), (290, 22747), (304, 22690), (317, 22651), (318, 22645), (348, 22549), (356, 22516), (362, 22495), (364, 22486), (404, 22324),

Gene: Rebeuca\_35 Start: 27045, Stop: 25537, Start Num: 98

Candidate Starts for Rebeuca\_35:

(Start: 98 @27045 has 76 MA's), (Start: 99 @27039 has 3 MA's), (Start: 102 @27027 has 3 MA's), (103, 27021), (119, 26934), (Start: 124 @26910 has 1 MA's), (162, 26745), (197, 26568), (205, 26529), (207, 26517), (210, 26505), (211, 26502), (214, 26490), (278, 26244), (282, 26223), (307, 26121),

(321, 26073), (347, 25995), (351, 25980), (357, 25956), (361, 25941), (375, 25884), (380, 25863), (440, 25629),

Gene: RedBear\_51 Start: 36343, Stop: 37929, Start Num: 45

Candidate Starts for RedBear\_51:

(Start: 28 @36286 has 7 MA's), (Start: 45 @36343 has 5 MA's), (Start: 46 @36352 has 23 MA's), (Start: 102 @36472 has 3 MA's), (Start: 124 @36589 has 1 MA's), (132, 36640), (154, 36721), (156, 36724), (170, 36796), (173, 36805), (174, 36808), (202, 36961), (205, 36970), (215, 37018), (218, 37030), (225, 37054), (242, 37123), (244, 37126), (290, 37258), (310, 37324), (317, 37354), (346, 37453), (349, 37468), (351, 37477), (353, 37486), (359, 37510), (376, 37582), (421, 37771), (433, 37810), (438, 37825), (442, 37834), (449, 37849),

Gene: Reedo\_49 Start: 33722, Stop: 35224, Start Num: 66

Candidate Starts for Reedo\_49:

(Start: 66 @33722 has 3 MA's), (Start: 86 @33761 has 1 MA's), (Start: 97 @33779 has 18 MA's), (133, 33959), (138, 33983), (153, 34046), (167, 34082), (180, 34160), (235, 34430), (240, 34469), (247, 34481), (255, 34499), (264, 34526), (278, 34571), (395, 34985), (408, 35045), (415, 35078), (441, 35162),

Gene: Relief\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Relief\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: ResDef\_34 Start: 27229, Stop: 25721, Start Num: 98

Candidate Starts for ResDef\_34:

(Start: 90 @27244 has 2 MA's), (Start: 98 @27229 has 76 MA's), (Start: 99 @27223 has 3 MA's), (Start: 100 @27220 has 1 MA's), (130, 27052), (132, 27046), (162, 26929), (176, 26869), (197, 26752), (205, 26713), (211, 26686), (214, 26674), (241, 26539), (287, 26386), (309, 26296), (321, 26257), (350, 26167), (361, 26125), (364, 26113), (375, 26068), (380, 26047), (431, 25834), (440, 25813),

Gene: RexFury\_29 Start: 23667, Stop: 22171, Start Num: 83

Candidate Starts for RexFury\_29:

(Start: 83 @23667 has 47 MA's), (Start: 98 @23646 has 76 MA's), (Start: 99 @23640 has 3 MA's), (Start: 124 @23511 has 1 MA's), (132, 23463), (151, 23376), (179, 23271), (199, 23160), (204, 23130), (211, 23100), (214, 23088), (228, 23025), (238, 22995), (249, 22962), (258, 22941), (268, 22911), (272, 22896), (275, 22890), (282, 22842), (290, 22809), (304, 22752), (317, 22713), (318, 22707), (348, 22611), (356, 22578), (362, 22557), (364, 22548), (404, 22386),

Gene: Rhodalysa\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for Rhodalysa\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (179, 23240), (199, 23129), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: RhynO\_35 Start: 27045, Stop: 25519, Start Num: 98

Candidate Starts for RhynO\_35:

(Start: 90 @27060 has 2 MA's), (Start: 98 @27045 has 76 MA's), (Start: 124 @26910 has 1 MA's), (205, 26529), (211, 26502), (214, 26490), (277, 26250), (282, 26223), (294, 26178), (299, 26151),

(309, 26112), (321, 26073), (347, 25995), (357, 25956), (361, 25941), (375, 25884), (380, 25863), (402, 25776), (424, 25671), (431, 25650), (433, 25644), (462, 25575),

Gene: Roary\_30 Start: 24978, Stop: 23476, Start Num: 89

Candidate Starts for Roary\_30:

(54, 25047), (Start: 67 @25020 has 1 MA's), (Start: 71 @25014 has 1 MA's), (Start: 89 @24978 has 107 MA's), (Start: 124 @24828 has 1 MA's), (144, 24723), (163, 24657), (165, 24639), (171, 24597), (172, 24594), (189, 24507), (210, 24393), (213, 24381), (234, 24288), (245, 24240), (262, 24198), (280, 24138), (304, 24036), (342, 23901), (361, 23829), (366, 23811), (388, 23724), (397, 23688), (404, 23649), (423, 23565), (448, 23517),

Gene: RockScotty\_42 Start: 31328, Stop: 32767, Start Num: 97

Candidate Starts for RockScotty\_42:

(Start: 97 @31328 has 18 MA's), (118, 31439), (120, 31448), (133, 31511), (138, 31535), (141, 31544), (174, 31694), (176, 31703), (203, 31859), (205, 31865), (211, 31892), (280, 32126), (282, 32141), (314, 32249), (390, 32519), (436, 32696), (443, 32711), (444, 32714),

Gene: RockieBear\_32 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for RockieBear\_32:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Romney\_33 Start: 26646, Stop: 25123, Start Num: 83

Candidate Starts for Romney\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (213, 26037), (215, 26025), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Roosevelt\_33 Start: 26639, Stop: 25125, Start Num: 89

Candidate Starts for Roosevelt\_33:

(Start: 67 @26681 has 1 MA's), (Start: 83 @26648 has 47 MA's), (Start: 89 @26639 has 107 MA's), (126, 26477), (138, 26411), (142, 26393), (163, 26318), (166, 26294), (171, 26255), (172, 26252), (189, 26165), (210, 26051), (213, 26039), (262, 25856), (291, 25745), (304, 25694), (342, 25565), (346, 25556), (364, 25481), (366, 25475), (397, 25352), (404, 25313), (457, 25163), (462, 25148),

Gene: Rosa24\_32 Start: 26548, Stop: 25127, Start Num: 112

Candidate Starts for Rosa24\_32:

(43, 26737), (Start: 57 @26689 has 10 MA's), (Start: 91 @26632 has 1 MA's), (Start: 98 @26623 has 76 MA's), (Start: 102 @26605 has 3 MA's), (112, 26548), (114, 26530), (122, 26500), (Start: 124 @26488 has 1 MA's), (148, 26362), (157, 26341), (164, 26311), (173, 26272), (181, 26233), (197, 26143), (210, 26083), (223, 26029), (268, 25891), (308, 25723), (327, 25660), (348, 25570), (357, 25534), (364, 25507), (377, 25453), (379, 25444), (429, 25234), (435, 25216), (445, 25204), (451, 25195),

Gene: Rowdy\_38 Start: 26956, Stop: 25430, Start Num: 98

Candidate Starts for Rowdy\_38:

(Start: 90 @26971 has 2 MA's), (Start: 98 @26956 has 76 MA's), (Start: 124 @26821 has 1 MA's), (205, 26440), (211, 26413), (214, 26401), (277, 26161), (282, 26134), (299, 26062), (309, 26023), (321, 25984), (347, 25906), (357, 25867), (361, 25852), (375, 25795), (380, 25774), (402, 25687), (424, 25582), (431, 25561), (433, 25555), (462, 25486),

Gene: Ruin\_33 Start: 26633, Stop: 25119, Start Num: 89

Candidate Starts for Ruin\_33:

(Start: 67 @26675 has 1 MA's), (Start: 83 @26642 has 47 MA's), (Start: 89 @26633 has 107 MA's), (126, 26471), (138, 26405), (142, 26387), (163, 26312), (166, 26288), (171, 26249), (172, 26246), (189, 26159), (210, 26045), (213, 26033), (262, 25850), (291, 25739), (304, 25688), (342, 25559), (346, 25550), (364, 25475), (366, 25469), (397, 25346), (404, 25307), (457, 25157), (462, 25142),

Gene: Rummer\_36 Start: 27306, Stop: 25738, Start Num: 89

Candidate Starts for Rummer\_36:

(33, 27456), (41, 27441), (Start: 71 @27342 has 1 MA's), (Start: 89 @27306 has 107 MA's), (144, 27051), (150, 27027), (165, 26967), (171, 26919), (172, 26916), (189, 26829), (193, 26817), (194, 26796), (199, 26772), (213, 26703), (229, 26634), (230, 26625), (262, 26520), (275, 26475), (304, 26343), (329, 26259), (345, 26202), (397, 25995), (425, 25854),

Gene: Sabertooth\_33 Start: 26636, Stop: 25122, Start Num: 89

Candidate Starts for Sabertooth\_33:

(Start: 67 @26678 has 1 MA's), (Start: 83 @26645 has 47 MA's), (Start: 89 @26636 has 107 MA's), (126, 26474), (138, 26408), (142, 26390), (163, 26315), (166, 26291), (171, 26252), (172, 26249), (189, 26162), (210, 26048), (213, 26036), (262, 25853), (291, 25742), (304, 25691), (342, 25562), (346, 25553), (364, 25478), (366, 25472), (397, 25349), (404, 25310), (457, 25160), (462, 25145),

Gene: Sabourin\_43 Start: 31408, Stop: 32847, Start Num: 97

Candidate Starts for Sabourin\_43:

(Start: 97 @31408 has 18 MA's), (118, 31519), (120, 31528), (133, 31591), (138, 31615), (141, 31624), (174, 31774), (176, 31783), (203, 31939), (205, 31945), (211, 31972), (226, 32032), (280, 32206), (282, 32221), (314, 32329), (367, 32512), (436, 32776), (443, 32791), (444, 32794),

Gene: Samora\_58 Start: 39277, Stop: 40836, Start Num: 104

Candidate Starts for Samora\_58:

(Start: 62 @39181 has 1 MA's), (81, 39226), (Start: 88 @39235 has 4 MA's), (Start: 98 @39247 has 76 MA's), (Start: 104 @39277 has 3 MA's), (139, 39463), (140, 39466), (146, 39499), (148, 39508), (161, 39547), (163, 39553), (168, 39583), (172, 39613), (174, 39625), (175, 39628), (185, 39682), (186, 39685), (190, 39703), (192, 39712), (202, 39781), (267, 40039), (270, 40051), (278, 40096), (288, 40141), (292, 40156), (305, 40213), (306, 40219), (317, 40249), (334, 40294), (360, 40408), (361, 40414), (380, 40492), (423, 40681), (424, 40684), (452, 40759), (454, 40771),

Gene: SarahRose\_50 Start: 36181, Stop: 37794, Start Num: 46

Candidate Starts for SarahRose\_50:

(Start: 28 @36115 has 7 MA's), (Start: 45 @36172 has 5 MA's), (Start: 46 @36181 has 23 MA's), (Start: 102 @36328 has 3 MA's), (120, 36427), (Start: 124 @36445 has 1 MA's), (132, 36496), (154, 36577), (156, 36580), (170, 36652), (173, 36661), (174, 36664), (197, 36790), (202, 36817), (218, 36886), (229, 36931), (250, 37000), (263, 37027), (280, 37075), (290, 37123), (302, 37162), (310, 37189), (317, 37219), (351, 37342), (366, 37402), (376, 37447), (410, 37576), (419, 37627), (421, 37636), (433, 37675), (442, 37699), (449, 37714), (453, 37729), (458, 37744),

Gene: Scamp\_33 Start: 26639, Stop: 25125, Start Num: 89

Candidate Starts for Scamp\_33:

(Start: 67 @26681 has 1 MA's), (Start: 83 @26648 has 47 MA's), (Start: 89 @26639 has 107 MA's), (126, 26477), (138, 26411), (142, 26393), (163, 26318), (166, 26294), (171, 26255), (172, 26252), (189, 26165), (210, 26051), (213, 26039), (215, 26027), (262, 25856), (291, 25745), (304, 25694), (342, 25565), (346, 25556), (364, 25481), (366, 25475), (397, 25352), (404, 25313), (457, 25163), (462, 25148),

Gene: Schaffner\_49 Start: 35742, Stop: 37160, Start Num: 94

Candidate Starts for Schaffner\_49:

(82, 35724), (92, 35739), (Start: 94 @35742 has 34 MA's), (Start: 98 @35751 has 76 MA's), (140, 35973), (170, 36084), (174, 36096), (176, 36105), (195, 36207), (201, 36246), (213, 36297), (342, 36741), (357, 36798), (362, 36816), (365, 36828), (413, 37002),

Gene: Scorpia\_32 Start: 25388, Stop: 23907, Start Num: 98

Candidate Starts for Scorpia\_32:

(75, 25415), (Start: 98 @25388 has 76 MA's), (Start: 106 @25352 has 3 MA's), (Start: 124 @25253 has 1 MA's), (140, 25169), (148, 25127), (158, 25103), (164, 25076), (173, 25037), (179, 25013), (205, 24869), (284, 24575), (289, 24557), (297, 24530), (304, 24500), (310, 24476), (317, 24461), (335, 24401), (348, 24350), (350, 24341), (364, 24287), (372, 24254), (391, 24188), (435, 23996), (471, 23918),

Gene: SenorClean\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for SenorClean\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Shaka\_33 Start: 26646, Stop: 25123, Start Num: 83

Candidate Starts for Shaka\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Shapes\_38 Start: 26956, Stop: 25430, Start Num: 98

Candidate Starts for Shapes\_38:

(Start: 90 @26971 has 2 MA's), (Start: 98 @26956 has 76 MA's), (Start: 124 @26821 has 1 MA's), (205, 26440), (211, 26413), (214, 26401), (277, 26161), (282, 26134), (299, 26062), (309, 26023), (321, 25984), (347, 25906), (357, 25867), (361, 25852), (375, 25795), (380, 25774), (402, 25687), (424, 25582), (431, 25561), (433, 25555), (462, 25486),

Gene: SheaKeira\_35 Start: 26656, Stop: 25103, Start Num: 98

Candidate Starts for SheaKeira\_35:

(50, 26761), (52, 26755), (Start: 98 @26656 has 76 MA's), (113, 26575), (Start: 124 @26521 has 1 MA's), (163, 26350), (210, 26116), (215, 26092), (268, 25924), (282, 25858), (304, 25771), (306, 25762), (312, 25741), (325, 25681), (364, 25531), (391, 25432), (392, 25423), (429, 25258), (435, 25240), (460, 25192), (463, 25183),

Gene: Sheen\_34 Start: 28925, Stop: 27417, Start Num: 98

Candidate Starts for Sheen\_34:

(Start: 90 @28940 has 2 MA's), (Start: 98 @28925 has 76 MA's), (126, 28778), (162, 28625), (176, 28565), (197, 28448), (205, 28409), (210, 28385), (211, 28382), (214, 28370), (241, 28235), (278, 28124), (282, 28103), (287, 28082), (309, 27992), (320, 27956), (321, 27953), (345, 27887), (350, 27863), (357, 27836), (361, 27821), (364, 27809), (372, 27776), (380, 27743), (424, 27551), (431, 27530), (440, 27509), (462, 27455),

Gene: Shuman\_29 Start: 23649, Stop: 22141, Start Num: 83

Candidate Starts for Shuman\_29:

(Start: 83 @23649 has 47 MA's), (Start: 98 @23628 has 76 MA's), (Start: 99 @23622 has 3 MA's), (Start: 124 @23493 has 1 MA's), (132, 23445), (151, 23358), (179, 23253), (199, 23142), (211, 23082), (214, 23070), (228, 23007), (238, 22977), (249, 22944), (258, 22923), (268, 22893), (272, 22878), (275, 22872), (282, 22824), (290, 22791), (304, 22734), (317, 22695), (318, 22689), (362, 22539), (404, 22368), (471, 22152),

Gene: Shygu2\_33 Start: 26631, Stop: 25117, Start Num: 89

Candidate Starts for Shygu2\_33:

(Start: 67 @26673 has 1 MA's), (Start: 83 @26640 has 47 MA's), (Start: 89 @26631 has 107 MA's), (Start: 105 @26586 has 1 MA's), (126, 26469), (138, 26403), (142, 26385), (163, 26310), (166, 26286), (171, 26247), (172, 26244), (189, 26157), (210, 26043), (213, 26031), (262, 25848), (279, 25791), (291, 25737), (304, 25686), (342, 25557), (346, 25548), (364, 25473), (366, 25467), (394, 25353), (397, 25344), (404, 25305), (457, 25155), (462, 25140),

Gene: Simpson\_52 Start: 35322, Stop: 36740, Start Num: 94

Candidate Starts for Simpson\_52:

(82, 35304), (92, 35319), (Start: 94 @35322 has 34 MA's), (Start: 98 @35331 has 76 MA's), (119, 35445), (Start: 124 @35469 has 1 MA's), (140, 35553), (170, 35664), (174, 35676), (176, 35685), (194, 35784), (213, 35877), (215, 35889), (222, 35916), (264, 36021), (280, 36075), (362, 36396), (365, 36408), (374, 36441), (412, 36579),

Gene: Skelbel\_49 Start: 35962, Stop: 37383, Start Num: 94

Candidate Starts for Skelbel\_49:

(82, 35944), (92, 35959), (Start: 94 @35962 has 34 MA's), (Start: 98 @35971 has 76 MA's), (119, 36085), (Start: 124 @36109 has 1 MA's), (140, 36193), (149, 36226), (154, 36241), (170, 36304), (174, 36316), (176, 36325), (194, 36424), (201, 36466), (213, 36517), (222, 36556), (255, 36634), (264, 36661), (280, 36715), (357, 37021), (360, 37030), (362, 37039), (365, 37051), (412, 37222), (435, 37309),

Gene: Skipitt\_33 Start: 26634, Stop: 25120, Start Num: 89

Candidate Starts for Skipitt\_33:

(Start: 67 @26676 has 1 MA's), (Start: 83 @26643 has 47 MA's), (Start: 89 @26634 has 107 MA's), (126, 26472), (138, 26406), (142, 26388), (163, 26313), (166, 26289), (171, 26250), (172, 26247), (189, 26160), (210, 26046), (213, 26034), (262, 25851), (291, 25740), (304, 25689), (342, 25560), (346, 25551), (364, 25476), (366, 25470), (397, 25347), (404, 25308), (457, 25158), (462, 25143),

Gene: Smeadley\_30 Start: 25011, Stop: 23509, Start Num: 89

Candidate Starts for Smeadley\_30:

(54, 25080), (Start: 67 @25053 has 1 MA's), (Start: 71 @25047 has 1 MA's), (Start: 89 @25011 has 107 MA's), (Start: 124 @24861 has 1 MA's), (144, 24756), (163, 24690), (165, 24672), (171, 24630), (172, 24627), (189, 24540), (194, 24507), (213, 24414), (234, 24321), (245, 24273), (262, 24231), (280, 24171), (304, 24069), (361, 23862), (388, 23757), (397, 23721), (404, 23682), (423, 23598), (448, 23550),

Gene: Snek\_51 Start: 34577, Stop: 36082, Start Num: 66

Candidate Starts for Snek\_51:

(Start: 66 @34577 has 3 MA's), (Start: 86 @34616 has 1 MA's), (Start: 97 @34634 has 18 MA's), (133, 34820), (180, 35021), (195, 35102), (264, 35387), (303, 35516), (351, 35681), (395, 35843), (439, 36014), (441, 36020),

Gene: Snorlax\_50 Start: 36206, Stop: 37819, Start Num: 46

Candidate Starts for Snorlax\_50:

(Start: 28 @36140 has 7 MA's), (Start: 45 @36197 has 5 MA's), (Start: 46 @36206 has 23 MA's), (Start: 102 @36353 has 3 MA's), (120, 36452), (Start: 124 @36470 has 1 MA's), (132, 36521), (154, 36602), (156, 36605), (170, 36677), (173, 36686), (174, 36689), (197, 36815), (202, 36842), (218, 36911), (229, 36956), (250, 37025), (263, 37052), (280, 37100), (290, 37148), (302, 37187), (310, 37214), (317, 37244), (348, 37355), (351, 37367), (366, 37427), (376, 37472), (400, 37562), (410, 37601), (419, 37652), (421, 37661), (433, 37700), (442, 37724), (449, 37739), (453, 37754), (458, 37769),

Gene: Sooty\_43 Start: 31423, Stop: 32862, Start Num: 97

Candidate Starts for Sooty\_43:

(Start: 97 @31423 has 18 MA's), (118, 31534), (120, 31543), (133, 31606), (138, 31630), (141, 31639), (174, 31789), (176, 31798), (203, 31954), (205, 31960), (211, 31987), (226, 32047), (280, 32221), (282, 32236), (314, 32344), (367, 32527), (436, 32791), (443, 32806), (444, 32809),

Gene: SororFago\_38 Start: 28571, Stop: 26961, Start Num: 89

Candidate Starts for SororFago\_38:

(31, 28712), (37, 28688), (48, 28649), (Start: 83 @28580 has 47 MA's), (Start: 89 @28571 has 107 MA's), (Start: 124 @28421 has 1 MA's), (144, 28316), (163, 28250), (164, 28244), (172, 28178), (173, 28169), (178, 28148), (210, 27977), (215, 27953), (220, 27932), (222, 27926), (229, 27896), (243, 27830), (245, 27824), (262, 27782), (275, 27764), (278, 27740), (291, 27683), (315, 27593), (351, 27479), (353, 27470), (364, 27428), (374, 27386), (385, 27347), (397, 27299), (413, 27230), (423, 27167), (432, 27146), (435, 27137), (450, 27113), (474, 27050), (479, 27011),

Gene: Soshari\_38 Start: 27305, Stop: 25737, Start Num: 89

Candidate Starts for Soshari\_38:

(33, 27455), (41, 27440), (Start: 71 @27341 has 1 MA's), (Start: 89 @27305 has 107 MA's), (144, 27050), (150, 27026), (165, 26966), (171, 26918), (172, 26915), (189, 26828), (193, 26816), (194, 26795), (199, 26771), (213, 26702), (229, 26633), (230, 26624), (262, 26519), (275, 26474), (304, 26342), (329, 26258), (345, 26201), (397, 25994), (425, 25853),

Gene: South40\_50 Start: 36352, Stop: 37929, Start Num: 46

Candidate Starts for South40\_50:

(Start: 28 @36286 has 7 MA's), (Start: 45 @36343 has 5 MA's), (Start: 46 @36352 has 23 MA's), (Start: 102 @36472 has 3 MA's), (Start: 124 @36589 has 1 MA's), (132, 36640), (154, 36721), (156, 36724), (170, 36796), (173, 36805), (174, 36808), (202, 36961), (205, 36970), (215, 37018), (218, 37030), (225, 37054), (242, 37123), (244, 37126), (290, 37258), (310, 37324), (317, 37354), (346, 37453), (349, 37468), (351, 37477), (353, 37486), (359, 37510), (376, 37582), (421, 37771), (433, 37810), (438, 37825), (442, 37834), (449, 37849),

Gene: SpecialK\_43 Start: 31407, Stop: 32846, Start Num: 97

Candidate Starts for SpecialK\_43:

(Start: 97 @31407 has 18 MA's), (118, 31518), (120, 31527), (133, 31590), (138, 31614), (141, 31623), (174, 31773), (176, 31782), (203, 31938), (205, 31944), (211, 31971), (280, 32205), (314, 32328), (436, 32775), (443, 32790), (444, 32793),

Gene: Spike509\_36 Start: 27306, Stop: 25738, Start Num: 89

Candidate Starts for Spike509\_36:

(33, 27456), (41, 27441), (Start: 71 @27342 has 1 MA's), (Start: 89 @27306 has 107 MA's), (144, 27051), (150, 27027), (165, 26967), (171, 26919), (172, 26916), (189, 26829), (193, 26817), (194, 26796), (199, 26772), (213, 26703), (229, 26634), (230, 26625), (262, 26520), (275, 26475), (304, 26343), (329, 26259), (345, 26202), (397, 25995), (425, 25854),

Gene: Spino\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Spino\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: StCroix\_29 Start: 23649, Stop: 22141, Start Num: 83

Candidate Starts for StCroix\_29:

(Start: 83 @23649 has 47 MA's), (Start: 98 @23628 has 76 MA's), (Start: 99 @23622 has 3 MA's), (Start: 124 @23493 has 1 MA's), (132, 23445), (151, 23358), (179, 23253), (199, 23142), (211, 23082), (214, 23070), (228, 23007), (238, 22977), (249, 22944), (258, 22923), (268, 22893), (272, 22878), (275, 22872), (282, 22824), (290, 22791), (304, 22734), (317, 22695), (318, 22689), (362, 22539), (404, 22368), (471, 22152),

Gene: Stasia\_34 Start: 27079, Stop: 25547, Start Num: 89

Candidate Starts for Stasia\_34:

(55, 27148), (Start: 67 @27121 has 1 MA's), (Start: 83 @27088 has 47 MA's), (Start: 89 @27079 has 107 MA's), (126, 26917), (138, 26851), (142, 26833), (163, 26758), (171, 26695), (172, 26692), (196, 26563), (213, 26479), (229, 26410), (240, 26347), (245, 26338), (262, 26296), (279, 26239), (291, 26185), (304, 26134), (325, 26053), (326, 26041), (342, 25987), (346, 25978), (364, 25903), (366, 25897), (397, 25774), (404, 25735), (457, 25585),

Gene: SteMason\_32 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for SteMason\_32:

(Start: 67 @26679 has 1 MA's), (Start: 71 @26673 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Stephig9\_30 Start: 24993, Stop: 23491, Start Num: 89

Candidate Starts for Stephig9\_30:

(54, 25062), (Start: 67 @25035 has 1 MA's), (Start: 71 @25029 has 1 MA's), (Start: 89 @24993 has 107 MA's), (Start: 124 @24843 has 1 MA's), (144, 24738), (163, 24672), (165, 24654), (171, 24612), (172, 24609), (189, 24522), (213, 24396), (234, 24303), (245, 24255), (262, 24213), (280, 24153), (304, 24051), (361, 23844), (388, 23739), (397, 23703), (404, 23664), (423, 23580), (448, 23532),

Gene: Stink\_34 Start: 27306, Stop: 25744, Start Num: 57

Candidate Starts for Stink\_34:

(Start: 57 @27306 has 10 MA's), (Start: 91 @27249 has 1 MA's), (Start: 98 @27240 has 76 MA's), (Start: 102 @27222 has 3 MA's), (112, 27165), (122, 27117), (Start: 124 @27105 has 1 MA's), (148, 26979), (157, 26958), (158, 26955), (164, 26928), (173, 26889), (197, 26760), (210, 26700), (268, 26508), (306, 26346), (357, 26151), (364, 26124), (377, 26070), (379, 26061), (429, 25851), (435, 25833), (445, 25821), (451, 25812), (457, 25794),

Gene: Stuu\_43 Start: 31520, Stop: 32959, Start Num: 97

Candidate Starts for Stuu\_43:

(Start: 97 @31520 has 18 MA's), (118, 31631), (120, 31640), (133, 31703), (138, 31727), (141, 31736), (174, 31886), (176, 31895), (205, 32057), (211, 32084), (280, 32318), (282, 32333), (314, 32441), (390, 32711), (436, 32888), (443, 32903), (444, 32906),

Gene: Subaru\_49 Start: 35958, Stop: 37379, Start Num: 94

Candidate Starts for Subaru\_49:

(82, 35940), (92, 35955), (Start: 94 @35958 has 34 MA's), (Start: 98 @35967 has 76 MA's), (119, 36081), (Start: 124 @36105 has 1 MA's), (140, 36189), (149, 36222), (154, 36237), (170, 36300), (174, 36312), (176, 36321), (194, 36420), (201, 36462), (213, 36513), (222, 36552), (255, 36630), (264, 36657), (357, 37017), (360, 37026), (362, 37035), (365, 37047), (412, 37218), (435, 37305),

Gene: Sujidade\_50 Start: 35406, Stop: 36983, Start Num: 46

Candidate Starts for Sujidade\_50:

(Start: 28 @35340 has 7 MA's), (Start: 46 @35406 has 23 MA's), (Start: 102 @35526 has 3 MA's), (120, 35625), (Start: 124 @35643 has 1 MA's), (132, 35694), (154, 35775), (156, 35778), (170, 35850), (173, 35859), (174, 35862), (202, 36015), (215, 36072), (216, 36075), (218, 36084), (290, 36312), (310, 36378), (317, 36408), (346, 36507), (351, 36531), (353, 36540), (359, 36564), (376, 36636), (421, 36825), (433, 36864), (442, 36888), (449, 36903), (453, 36918),

Gene: Sultana\_33 Start: 26638, Stop: 25124, Start Num: 89

Candidate Starts for Sultana\_33:

(Start: 67 @26680 has 1 MA's), (Start: 83 @26647 has 47 MA's), (Start: 89 @26638 has 107 MA's), (126, 26476), (138, 26410), (142, 26392), (163, 26317), (166, 26293), (171, 26254), (172, 26251), (189, 26164), (210, 26050), (213, 26038), (262, 25855), (291, 25744), (304, 25693), (342, 25564), (346, 25555), (364, 25480), (366, 25474), (397, 25351), (404, 25312), (457, 25162), (462, 25147),

Gene: Swann\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for Swann\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (179, 23240), (199, 23129), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: Swirley\_30 Start: 25753, Stop: 24260, Start Num: 98

Candidate Starts for Swirley\_30:

(Start: 98 @25753 has 76 MA's), (Start: 105 @25720 has 1 MA's), (Start: 106 @25717 has 3 MA's), (Start: 109 @25699 has 4 MA's), (Start: 124 @25618 has 1 MA's), (155, 25474), (163, 25447), (174, 25399), (205, 25234), (210, 25210), (211, 25207), (215, 25186), (275, 24997), (306, 24856), (317, 24826), (361, 24649), (364, 24637), (386, 24553), (391, 24538), (394, 24523), (435, 24346), (455, 24316), (466, 24283),

Gene: SydNat\_30 Start: 26035, Stop: 24545, Start Num: 98

Candidate Starts for SydNat\_30:

(Start: 98 @26035 has 76 MA's), (Start: 105 @26002 has 1 MA's), (Start: 106 @25999 has 3 MA's), (Start: 109 @25981 has 4 MA's), (Start: 124 @25900 has 1 MA's), (147, 25780), (155, 25756), (163, 25729), (174, 25681), (205, 25519), (210, 25495), (211, 25492), (215, 25471), (229, 25414), (275, 25282), (306, 25141), (317, 25111), (350, 24976), (361, 24934), (364, 24922), (386, 24838), (391, 24823), (394, 24808), (435, 24631), (455, 24601),

Gene: TWAMP\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for TWAMP\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (179, 23240), (199, 23129), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: TagePighter\_52 Start: 36182, Stop: 37795, Start Num: 46

Candidate Starts for TagePhighter\_52:

(Start: 28 @36116 has 7 MA's), (Start: 45 @36173 has 5 MA's), (Start: 46 @36182 has 23 MA's), (Start: 102 @36329 has 3 MA's), (120, 36428), (Start: 124 @36446 has 1 MA's), (132, 36497), (154, 36578), (156, 36581), (170, 36653), (173, 36662), (174, 36665), (197, 36791), (202, 36818), (218, 36887), (229, 36932), (250, 37001), (263, 37028), (280, 37076), (290, 37124), (302, 37163), (310, 37190), (317, 37220), (351, 37343), (366, 37403), (376, 37448), (410, 37577), (419, 37628), (421, 37637), (433, 37676), (442, 37700), (449, 37715), (453, 37730), (458, 37745),

Gene: Tailonex\_27 Start: 24965, Stop: 23526, Start Num: 98

Candidate Starts for Tailonex\_27:

(Start: 98 @24965 has 76 MA's), (119, 24854), (135, 24767), (173, 24614), (263, 24260), (284, 24170), (300, 24098), (317, 24059), (323, 24038), (328, 24026), (330, 24023), (350, 23951), (351, 23948), (362, 23906), (413, 23711), (416, 23684), (424, 23645), (458, 23570), (471, 23534),

Gene: Takoda\_29 Start: 23587, Stop: 22100, Start Num: 98

Candidate Starts for Takoda\_29:

(Start: 83 @23608 has 47 MA's), (Start: 98 @23587 has 76 MA's), (Start: 99 @23581 has 3 MA's), (Start: 124 @23452 has 1 MA's), (132, 23404), (151, 23317), (179, 23212), (199, 23101), (211, 23041), (214, 23029), (238, 22936), (249, 22903), (258, 22882), (268, 22852), (272, 22837), (275, 22831), (282, 22783), (290, 22750), (304, 22693), (317, 22654), (318, 22648), (362, 22498), (399, 22357), (404, 22327), (434, 22201), (462, 22135),

Gene: Tallboi\_49 Start: 36309, Stop: 37727, Start Num: 94

Candidate Starts for Tallboi\_49:

(82, 36291), (92, 36306), (Start: 94 @36309 has 34 MA's), (Start: 98 @36318 has 76 MA's), (119, 36432), (140, 36540), (149, 36573), (154, 36588), (170, 36651), (174, 36663), (176, 36672), (193, 36750), (194, 36771), (201, 36813), (211, 36855), (213, 36864), (222, 36903), (255, 36981), (283, 37083), (357, 37365), (362, 37383), (365, 37395), (412, 37566),

Gene: Taquarus\_33 Start: 26640, Stop: 25126, Start Num: 89

Candidate Starts for Taquarus\_33:

(Start: 67 @26682 has 1 MA's), (Start: 83 @26649 has 47 MA's), (Start: 89 @26640 has 107 MA's), (126, 26478), (138, 26412), (142, 26394), (163, 26319), (166, 26295), (171, 26256), (172, 26253), (189, 26166), (210, 26052), (213, 26040), (262, 25857), (291, 25746), (304, 25695), (342, 25566), (346, 25557), (364, 25482), (366, 25476), (397, 25353), (404, 25314), (457, 25164), (462, 25149),

Gene: Tarynearal\_29 Start: 25775, Stop: 24282, Start Num: 98

Candidate Starts for Tarynearal\_29:

(Start: 98 @25775 has 76 MA's), (Start: 105 @25742 has 1 MA's), (Start: 106 @25739 has 3 MA's), (Start: 109 @25721 has 4 MA's), (Start: 124 @25640 has 1 MA's), (155, 25496), (163, 25469), (174, 25421), (205, 25256), (210, 25232), (211, 25229), (215, 25208), (275, 25019), (306, 24878), (317, 24848), (361, 24671), (364, 24659), (386, 24575), (391, 24560), (394, 24545), (435, 24368), (455, 24338), (466, 24305),

Gene: Tbone\_50 Start: 35812, Stop: 37287, Start Num: 94

Candidate Starts for Tbone\_50:

(Start: 88 @35803 has 4 MA's), (Start: 94 @35812 has 34 MA's), (122, 35941), (167, 36133), (185, 36238), (195, 36298), (228, 36457), (264, 36586), (280, 36637), (317, 36778), (383, 37015),

Gene: Texage\_33 Start: 27224, Stop: 25722, Start Num: 99

Candidate Starts for Texage\_33:

(Start: 90 @27245 has 2 MA's), (Start: 98 @27230 has 76 MA's), (Start: 99 @27224 has 3 MA's), (Start: 100 @27221 has 1 MA's), (130, 27053), (132, 27047), (162, 26930), (176, 26870), (197, 26753),

(205, 26714), (211, 26687), (214, 26675), (241, 26540), (287, 26387), (309, 26297), (321, 26258), (350, 26168), (361, 26126), (364, 26114), (375, 26069), (380, 26048), (431, 25835), (440, 25814),

Gene: TforTroy\_50 Start: 35647, Stop: 37065, Start Num: 94

Candidate Starts for TforTroy\_50:

(82, 35629), (92, 35644), (Start: 94 @35647 has 34 MA's), (Start: 98 @35656 has 76 MA's), (Start: 124 @35794 has 1 MA's), (140, 35878), (170, 35989), (174, 36001), (176, 36010), (193, 36088), (194, 36109), (201, 36151), (213, 36202), (222, 36241), (342, 36646), (357, 36703), (362, 36721), (365, 36733), (413, 36907),

Gene: Thanksgivukkah\_33 Start: 26638, Stop: 25124, Start Num: 89

Candidate Starts for Thanksgivukkah\_33:

(Start: 67 @26680 has 1 MA's), (Start: 83 @26647 has 47 MA's), (Start: 89 @26638 has 107 MA's), (126, 26476), (138, 26410), (142, 26392), (163, 26317), (166, 26293), (171, 26254), (172, 26251), (189, 26164), (210, 26050), (213, 26038), (262, 25855), (291, 25744), (304, 25693), (342, 25564), (346, 25555), (364, 25480), (366, 25474), (397, 25351), (404, 25312), (457, 25162), (462, 25147),

Gene: Theia\_28 Start: 25799, Stop: 24306, Start Num: 98

Candidate Starts for Theia\_28:

(Start: 98 @25799 has 76 MA's), (Start: 105 @25766 has 1 MA's), (Start: 106 @25763 has 3 MA's), (Start: 109 @25745 has 4 MA's), (Start: 124 @25664 has 1 MA's), (155, 25520), (163, 25493), (174, 25445), (205, 25280), (210, 25256), (211, 25253), (215, 25232), (275, 25043), (306, 24902), (317, 24872), (361, 24695), (364, 24683), (386, 24599), (391, 24584), (394, 24569), (435, 24392), (455, 24362), (466, 24329),

Gene: Tian\_50 Start: 37772, Stop: 39232, Start Num: 97

Candidate Starts for Tian\_50:

(Start: 89 @37763 has 107 MA's), (Start: 97 @37772 has 18 MA's), (133, 37958), (141, 37991), (173, 38129), (176, 38141), (194, 38240), (203, 38291), (226, 38384), (316, 38717), (383, 38960), (459, 39218),

Gene: Tiger\_30 Start: 25677, Stop: 24184, Start Num: 98

Candidate Starts for Tiger\_30:

(Start: 98 @25677 has 76 MA's), (Start: 105 @25644 has 1 MA's), (Start: 106 @25641 has 3 MA's), (Start: 109 @25623 has 4 MA's), (Start: 124 @25542 has 1 MA's), (155, 25398), (163, 25371), (174, 25323), (205, 25158), (210, 25134), (211, 25131), (215, 25110), (275, 24921), (317, 24750), (350, 24615), (361, 24573), (364, 24561), (386, 24477), (391, 24462), (394, 24447), (435, 24270), (455, 24240), (466, 24207),

Gene: Timshel\_34 Start: 29292, Stop: 27832, Start Num: 98

Candidate Starts for Timshel\_34:

(12, 29691), (17, 29562), (39, 29445), (72, 29340), (79, 29325), (Start: 98 @29292 has 76 MA's), (Start: 99 @29286 has 3 MA's), (Start: 102 @29274 has 3 MA's), (103, 29268), (123, 29163), (Start: 124 @29157 has 1 MA's), (129, 29121), (152, 29019), (163, 28986), (172, 28950), (179, 28917), (214, 28737), (259, 28587), (274, 28542), (306, 28398), (320, 28350), (350, 28269), (353, 28257), (355, 28251), (364, 28215), (377, 28161), (386, 28131), (471, 27843),

Gene: TinyPebbles\_36 Start: 27311, Stop: 25743, Start Num: 89

Candidate Starts for TinyPebbles\_36:

(33, 27461), (41, 27446), (Start: 71 @27347 has 1 MA's), (Start: 89 @27311 has 107 MA's), (144, 27056), (150, 27032), (165, 26972), (171, 26924), (172, 26921), (189, 26834), (193, 26822), (194, 26801), (199, 26777), (213, 26708), (229, 26639), (230, 26630), (262, 26525), (275, 26480), (304, 26348), (329, 26264), (345, 26207), (397, 26000), (425, 25859),

Gene: Tinybot\_32 Start: 26607, Stop: 25129, Start Num: 102

Candidate Starts for Tinybot\_32:

(43, 26739), (Start: 57 @26691 has 10 MA's), (Start: 91 @26634 has 1 MA's), (Start: 98 @26625 has 76 MA's), (Start: 102 @26607 has 3 MA's), (112, 26550), (114, 26532), (122, 26502), (Start: 124 @26490 has 1 MA's), (148, 26364), (157, 26343), (164, 26313), (173, 26274), (197, 26145), (210, 26085), (223, 26031), (268, 25893), (278, 25848), (327, 25662), (357, 25536), (364, 25509), (377, 25455), (379, 25446), (429, 25236), (435, 25218), (445, 25206), (451, 25197),

Gene: TiroTheta9\_33 Start: 26634, Stop: 25120, Start Num: 89

Candidate Starts for TiroTheta9\_33:

(Start: 67 @26676 has 1 MA's), (Start: 83 @26643 has 47 MA's), (Start: 89 @26634 has 107 MA's), (126, 26472), (138, 26406), (142, 26388), (163, 26313), (166, 26289), (171, 26250), (172, 26247), (189, 26160), (210, 26046), (213, 26034), (262, 25851), (291, 25740), (304, 25689), (342, 25560), (346, 25551), (364, 25476), (366, 25470), (397, 25347), (404, 25308), (457, 25158), (462, 25143),

Gene: Todacoro\_34 Start: 27223, Stop: 25721, Start Num: 99

Candidate Starts for Todacoro\_34:

(Start: 90 @27244 has 2 MA's), (Start: 98 @27229 has 76 MA's), (Start: 99 @27223 has 3 MA's), (Start: 100 @27220 has 1 MA's), (130, 27052), (132, 27046), (162, 26929), (176, 26869), (197, 26752), (205, 26713), (211, 26686), (214, 26674), (241, 26539), (287, 26386), (309, 26296), (321, 26257), (350, 26167), (361, 26125), (364, 26113), (375, 26068), (380, 26047), (431, 25834), (440, 25813),

Gene: Toma\_50 Start: 35070, Stop: 36713, Start Num: 28

Candidate Starts for Toma\_50:

(Start: 28 @35070 has 7 MA's), (Start: 46 @35136 has 23 MA's), (Start: 102 @35256 has 3 MA's), (120, 35355), (Start: 124 @35373 has 1 MA's), (132, 35424), (154, 35505), (156, 35508), (170, 35580), (173, 35589), (174, 35592), (215, 35802), (216, 35805), (218, 35814), (290, 36042), (310, 36108), (317, 36138), (346, 36237), (351, 36261), (353, 36270), (359, 36294), (376, 36366), (421, 36555), (430, 36585), (433, 36594), (442, 36618), (449, 36633), (453, 36648),

Gene: Topanga\_34 Start: 26894, Stop: 25461, Start Num: 88

Candidate Starts for Topanga\_34:

(Start: 88 @26894 has 4 MA's), (114, 26792), (Start: 124 @26750 has 1 MA's), (151, 26615), (157, 26603), (158, 26600), (174, 26531), (179, 26510), (194, 26423), (195, 26420), (199, 26399), (214, 26330), (278, 26144), (348, 25901), (350, 25892), (364, 25838), (391, 25739), (433, 25553),

Gene: Toro\_35 Start: 28870, Stop: 27362, Start Num: 98

Candidate Starts for Toro\_35:

(Start: 90 @28885 has 2 MA's), (Start: 98 @28870 has 76 MA's), (126, 28723), (162, 28570), (176, 28510), (197, 28393), (205, 28354), (210, 28330), (211, 28327), (214, 28315), (241, 28180), (278, 28069), (282, 28048), (287, 28027), (309, 27937), (320, 27901), (321, 27898), (345, 27832), (350, 27808), (357, 27781), (361, 27766), (364, 27754), (372, 27721), (380, 27688), (424, 27496), (431, 27475), (440, 27454), (462, 27400),

Gene: Tote\_34 Start: 27141, Stop: 28268, Start Num: 177

Candidate Starts for Tote\_34:

(3, 26229), (7, 26322), (10, 26370), (16, 26487), (20, 26514), (26, 26568), (44, 26634), (64, 26700), (77, 26727), (125, 26916), (133, 26961), (157, 27045), (Start: 177 @27141 has 1 MA's), (179, 27150), (180, 27159), (199, 27261), (200, 27267), (205, 27288), (207, 27300), (213, 27324), (222, 27366), (260, 27495), (279, 27555), (293, 27612), (301, 27639), (310, 27666), (311, 27669), (314, 27681), (341, 27783), (343, 27789), (351, 27822), (352, 27825), (371, 27903), (376, 27918), (379, 27933), (402, 28023), (426, 28137), (462, 28236), (472, 28260),

Gene: Trike\_31 Start: 25248, Stop: 23752, Start Num: 98

Candidate Starts for Trike\_31:

(43, 25362), (Start: 57 @25314 has 10 MA's), (Start: 89 @25260 has 107 MA's), (Start: 98 @25248 has 76 MA's), (112, 25173), (Start: 124 @25113 has 1 MA's), (148, 24987), (157, 24966), (164, 24936), (173, 24897), (204, 24735), (210, 24708), (223, 24654), (268, 24516), (317, 24324), (357, 24159), (364, 24132), (366, 24126), (424, 23874), (431, 23853), (433, 23847), (435, 23841), (445, 23829), (451, 23820), (455, 23808),

Gene: Triste\_51 Start: 36115, Stop: 37794, Start Num: 28

Candidate Starts for Triste\_51:

(Start: 28 @36115 has 7 MA's), (Start: 45 @36172 has 5 MA's), (Start: 46 @36181 has 23 MA's), (Start: 102 @36328 has 3 MA's), (120, 36427), (Start: 124 @36445 has 1 MA's), (132, 36496), (154, 36577), (156, 36580), (170, 36652), (173, 36661), (174, 36664), (197, 36790), (202, 36817), (218, 36886), (229, 36931), (250, 37000), (263, 37027), (280, 37075), (290, 37123), (302, 37162), (310, 37189), (317, 37219), (351, 37342), (366, 37402), (376, 37447), (410, 37576), (419, 37627), (421, 37636), (433, 37675), (442, 37699), (449, 37714), (453, 37729), (458, 37744),

Gene: TuanPN\_49 Start: 36125, Stop: 37747, Start Num: 45

Candidate Starts for TuanPN\_49:

(Start: 28 @36068 has 7 MA's), (Start: 45 @36125 has 5 MA's), (Start: 46 @36134 has 23 MA's), (Start: 102 @36281 has 3 MA's), (120, 36380), (Start: 124 @36398 has 1 MA's), (132, 36449), (154, 36530), (156, 36533), (170, 36605), (173, 36614), (174, 36617), (197, 36743), (202, 36770), (218, 36839), (229, 36884), (250, 36953), (263, 36980), (280, 37028), (290, 37076), (302, 37115), (317, 37172), (351, 37295), (366, 37355), (376, 37400), (410, 37529), (419, 37580), (421, 37589), (433, 37628), (442, 37652), (449, 37667), (453, 37682), (458, 37697),

Gene: Tuck\_53 Start: 37345, Stop: 38829, Start Num: 88

Candidate Starts for Tuck\_53:

(Start: 88 @37345 has 4 MA's), (Start: 94 @37354 has 34 MA's), (167, 37675), (217, 37954), (264, 38128), (317, 38320), (383, 38557), (424, 38719),

Gene: Turab\_47 Start: 34417, Stop: 35835, Start Num: 94

Candidate Starts for Turab\_47:

(82, 34399), (92, 34414), (Start: 94 @34417 has 34 MA's), (Start: 98 @34426 has 76 MA's), (119, 34540), (140, 34648), (149, 34681), (154, 34696), (170, 34759), (174, 34771), (176, 34780), (194, 34879), (201, 34921), (213, 34972), (222, 35011), (264, 35116), (357, 35473), (362, 35491), (365, 35503), (412, 35674),

Gene: Tutumahutu\_51 Start: 35299, Stop: 36717, Start Num: 94

Candidate Starts for Tutumahutu\_51:

(82, 35281), (92, 35296), (Start: 94 @35299 has 34 MA's), (Start: 98 @35308 has 76 MA's), (119, 35422), (Start: 124 @35446 has 1 MA's), (140, 35530), (170, 35641), (174, 35653), (176, 35662), (194, 35761), (213, 35854), (215, 35866), (222, 35893), (280, 36052), (362, 36373), (365, 36385), (374, 36418), (412, 36556),

Gene: Tweety19\_52 Start: 34578, Stop: 36083, Start Num: 66

Candidate Starts for Tweety19\_52:

(Start: 66 @34578 has 3 MA's), (Start: 86 @34617 has 1 MA's), (Start: 97 @34635 has 18 MA's), (133, 34821), (180, 35022), (195, 35103), (264, 35388), (303, 35517), (351, 35682), (395, 35844), (439, 36015), (441, 36021),

Gene: Twigg\_30 Start: 25694, Stop: 24255, Start Num: 109

Candidate Starts for Twigg\_30:

(Start: 98 @25748 has 76 MA's), (Start: 105 @25715 has 1 MA's), (Start: 106 @25712 has 3 MA's), (Start: 109 @25694 has 4 MA's), (Start: 124 @25613 has 1 MA's), (155, 25469), (163, 25442), (174, 25394), (205, 25229), (210, 25205), (211, 25202), (215, 25181), (275, 24992), (306, 24851), (317, 24821), (361, 24644), (364, 24632), (386, 24548), (391, 24533), (394, 24518), (435, 24341), (455, 24311), (466, 24278),

Gene: Twister\_34 Start: 26802, Stop: 25369, Start Num: 88

Candidate Starts for Twister\_34:

(Start: 88 @26802 has 4 MA's), (114, 26700), (Start: 124 @26658 has 1 MA's), (151, 26523), (157, 26511), (158, 26508), (174, 26439), (179, 26418), (194, 26331), (195, 26328), (199, 26307), (214, 26238), (278, 26052), (348, 25809), (350, 25800), (364, 25746), (391, 25647), (433, 25461),

Gene: TygerBlood\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for TygerBlood\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: UhSalsa\_29 Start: 23636, Stop: 22140, Start Num: 83

Candidate Starts for UhSalsa\_29:

(Start: 83 @23636 has 47 MA's), (Start: 98 @23615 has 76 MA's), (Start: 99 @23609 has 3 MA's), (Start: 124 @23480 has 1 MA's), (132, 23432), (151, 23345), (179, 23240), (199, 23129), (204, 23099), (211, 23069), (214, 23057), (228, 22994), (238, 22964), (249, 22931), (258, 22910), (268, 22880), (272, 22865), (275, 22859), (282, 22811), (290, 22778), (304, 22721), (317, 22682), (318, 22676), (348, 22580), (356, 22547), (362, 22526), (364, 22517), (404, 22355),

Gene: Ulysses\_32 Start: 26359, Stop: 24863, Start Num: 98

Candidate Starts for Ulysses\_32:

(Start: 57 @26425 has 10 MA's), (Start: 98 @26359 has 76 MA's), (Start: 102 @26341 has 3 MA's), (112, 26284), (114, 26266), (122, 26236), (Start: 124 @26224 has 1 MA's), (148, 26098), (157, 26077), (164, 26047), (173, 26008), (197, 25879), (210, 25819), (223, 25765), (268, 25627), (327, 25396), (348, 25306), (357, 25270), (364, 25243), (377, 25189), (379, 25180), (429, 24970), (435, 24952), (445, 24940), (451, 24931),

Gene: UnionJack\_31 Start: 25014, Stop: 23569, Start Num: 106

Candidate Starts for UnionJack\_31:

(75, 25077), (Start: 98 @25050 has 76 MA's), (Start: 106 @25014 has 3 MA's), (Start: 124 @24915 has 1 MA's), (140, 24831), (148, 24789), (158, 24765), (164, 24738), (173, 24699), (179, 24675), (205, 24531), (265, 24324), (284, 24237), (297, 24192), (304, 24162), (310, 24138), (317, 24123), (348, 24012), (350, 24003), (364, 23949), (372, 23916), (391, 23850), (404, 23787), (435, 23658), (471, 23580),

Gene: VResidence\_50 Start: 34666, Stop: 36156, Start Num: 85

Candidate Starts for VResidence\_50:

(Start: 85 @34666 has 1 MA's), (122, 34810), (167, 35002), (179, 35071), (203, 35215), (264, 35455), (280, 35506), (317, 35647), (383, 35884), (407, 35974),

Gene: Vanseggelen\_57 Start: 36594, Stop: 38177, Start Num: 46

Candidate Starts for Vanseggelen\_57:

(27, 36522), (29, 36531), (30, 36537), (Start: 46 @36594 has 23 MA's), (116, 36804), (118, 36810), (119, 36813), (120, 36819), (Start: 124 @36837 has 1 MA's), (149, 36954), (156, 36972), (173, 37053),

(174, 37056), (206, 37218), (229, 37320), (250, 37386), (271, 37428), (280, 37458), (310, 37572), (317, 37602), (346, 37701), (349, 37716), (351, 37725), (357, 37752), (358, 37755), (368, 37797), (376, 37830), (396, 37899), (413, 37965), (414, 37977), (421, 38019), (430, 38049), (433, 38058), (442, 38082), (449, 38097),

Gene: Vash\_53 Start: 39034, Stop: 40593, Start Num: 104

Candidate Starts for Vash\_53:

(Start: 62 @38938 has 1 MA's), (81, 38983), (Start: 88 @38992 has 4 MA's), (Start: 98 @39004 has 76 MA's), (Start: 104 @39034 has 3 MA's), (139, 39220), (140, 39223), (146, 39256), (148, 39265), (161, 39304), (168, 39340), (172, 39370), (174, 39382), (185, 39439), (186, 39442), (190, 39460), (192, 39469), (202, 39538), (216, 39598), (267, 39796), (270, 39808), (275, 39826), (278, 39853), (288, 39898), (305, 39970), (308, 39982), (317, 40006), (334, 40051), (345, 40105), (360, 40165), (380, 40249), (409, 40366), (412, 40372), (423, 40438), (424, 40441), (454, 40528),

Gene: Veracruz\_33 Start: 27223, Stop: 25721, Start Num: 99

Candidate Starts for Veracruz\_33:

(Start: 90 @27244 has 2 MA's), (Start: 98 @27229 has 76 MA's), (Start: 99 @27223 has 3 MA's), (Start: 100 @27220 has 1 MA's), (130, 27052), (132, 27046), (162, 26929), (176, 26869), (197, 26752), (205, 26713), (211, 26686), (214, 26674), (241, 26539), (287, 26386), (309, 26296), (321, 26257), (350, 26167), (361, 26125), (364, 26113), (375, 26068), (380, 26047), (431, 25834), (440, 25813),

Gene: WalterMcMickey\_34 Start: 26802, Stop: 25369, Start Num: 88

Candidate Starts for WalterMcMickey\_34:

(Start: 88 @26802 has 4 MA's), (114, 26700), (Start: 124 @26658 has 1 MA's), (151, 26523), (157, 26511), (158, 26508), (174, 26439), (179, 26418), (194, 26331), (195, 26328), (199, 26307), (214, 26238), (278, 26052), (348, 25809), (350, 25800), (364, 25746), (391, 25647), (433, 25461),

Gene: Wander\_33 Start: 26637, Stop: 25123, Start Num: 89

Candidate Starts for Wander\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (210, 26049), (213, 26037), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Warda\_50 Start: 35363, Stop: 36781, Start Num: 94

Candidate Starts for Warda\_50:

(82, 35345), (92, 35360), (Start: 94 @35363 has 34 MA's), (Start: 98 @35372 has 76 MA's), (119, 35486), (140, 35594), (154, 35642), (170, 35705), (174, 35717), (176, 35726), (194, 35825), (213, 35918), (215, 35930), (228, 35984), (280, 36116), (348, 36383), (357, 36419), (362, 36437), (365, 36449), (374, 36482), (412, 36620),

Gene: Werner\_50 Start: 36179, Stop: 37792, Start Num: 46

Candidate Starts for Werner\_50:

(Start: 28 @36113 has 7 MA's), (Start: 45 @36170 has 5 MA's), (Start: 46 @36179 has 23 MA's), (Start: 102 @36326 has 3 MA's), (120, 36425), (Start: 124 @36443 has 1 MA's), (132, 36494), (154, 36575), (156, 36578), (170, 36650), (173, 36659), (174, 36662), (197, 36788), (202, 36815), (218, 36884), (229, 36929), (250, 36998), (263, 37025), (280, 37073), (290, 37121), (302, 37160), (310, 37187), (317, 37217), (351, 37340), (366, 37400), (376, 37445), (410, 37574), (419, 37625), (421, 37634), (433, 37673), (442, 37697), (449, 37712), (453, 37727), (458, 37742),

Gene: Whatever\_50 Start: 36205, Stop: 37818, Start Num: 46

Candidate Starts for Whatever\_50:

(Start: 28 @36139 has 7 MA's), (Start: 45 @36196 has 5 MA's), (Start: 46 @36205 has 23 MA's), (Start: 102 @36352 has 3 MA's), (120, 36451), (Start: 124 @36469 has 1 MA's), (132, 36520), (154, 36601), (156, 36604), (170, 36676), (173, 36685), (174, 36688), (197, 36814), (202, 36841), (218, 36910), (229, 36955), (250, 37024), (263, 37051), (280, 37099), (290, 37147), (302, 37186), (310, 37213), (317, 37243), (351, 37366), (366, 37426), (376, 37471), (410, 37600), (419, 37651), (421, 37660), (433, 37699), (442, 37723), (449, 37738), (453, 37753), (458, 37768),

Gene: Wilbur\_33 Start: 26646, Stop: 25123, Start Num: 83

Candidate Starts for Wilbur\_33:

(Start: 67 @26679 has 1 MA's), (Start: 83 @26646 has 47 MA's), (Start: 89 @26637 has 107 MA's), (126, 26475), (138, 26409), (142, 26391), (163, 26316), (166, 26292), (171, 26253), (172, 26250), (189, 26163), (213, 26037), (215, 26025), (262, 25854), (291, 25743), (304, 25692), (342, 25563), (346, 25554), (364, 25479), (366, 25473), (397, 25350), (404, 25311), (457, 25161), (462, 25146),

Gene: Wildwest\_49 Start: 35283, Stop: 36758, Start Num: 94

Candidate Starts for Wildwest\_49:

(Start: 88 @35274 has 4 MA's), (Start: 94 @35283 has 34 MA's), (167, 35604), (203, 35817), (264, 36057), (280, 36108), (317, 36249), (348, 36345), (383, 36486), (384, 36489), (439, 36690),

Gene: Wile\_33 Start: 26657, Stop: 25143, Start Num: 89

Candidate Starts for Wile\_33:

(Start: 67 @26699 has 1 MA's), (Start: 83 @26666 has 47 MA's), (Start: 89 @26657 has 107 MA's), (126, 26495), (138, 26429), (142, 26411), (163, 26336), (171, 26273), (172, 26270), (189, 26183), (213, 26057), (262, 25874), (279, 25817), (291, 25763), (304, 25712), (342, 25583), (346, 25574), (364, 25499), (366, 25493), (394, 25379), (397, 25370), (404, 25331), (457, 25181), (462, 25166),

Gene: Wizard007\_33 Start: 26642, Stop: 25128, Start Num: 89

Candidate Starts for Wizard007\_33:

(Start: 67 @26684 has 1 MA's), (Start: 83 @26651 has 47 MA's), (Start: 89 @26642 has 107 MA's), (126, 26480), (138, 26414), (142, 26396), (163, 26321), (166, 26297), (171, 26258), (172, 26255), (189, 26168), (210, 26054), (213, 26042), (262, 25859), (291, 25748), (304, 25697), (342, 25568), (346, 25559), (364, 25484), (366, 25478), (397, 25355), (404, 25316), (457, 25166), (462, 25151),

Gene: Xena\_33 Start: 26644, Stop: 25130, Start Num: 89

Candidate Starts for Xena\_33:

(Start: 67 @26686 has 1 MA's), (Start: 83 @26653 has 47 MA's), (Start: 89 @26644 has 107 MA's), (126, 26482), (138, 26416), (142, 26398), (163, 26323), (171, 26260), (172, 26257), (189, 26170), (213, 26044), (262, 25861), (279, 25804), (291, 25750), (304, 25699), (342, 25570), (346, 25561), (364, 25486), (366, 25480), (394, 25366), (397, 25357), (404, 25318), (457, 25168), (462, 25153),

Gene: Yang\_49 Start: 35473, Stop: 36891, Start Num: 94

Candidate Starts for Yang\_49:

(82, 35455), (92, 35470), (Start: 94 @35473 has 34 MA's), (Start: 98 @35482 has 76 MA's), (140, 35704), (170, 35815), (174, 35827), (176, 35836), (194, 35935), (201, 35977), (213, 36028), (222, 36067), (342, 36472), (357, 36529), (362, 36547), (365, 36559),

Gene: Yasdnii\_50 Start: 36231, Stop: 37844, Start Num: 46

Candidate Starts for Yasdnii\_50:

(Start: 28 @36165 has 7 MA's), (Start: 45 @36222 has 5 MA's), (Start: 46 @36231 has 23 MA's), (Start: 102 @36378 has 3 MA's), (120, 36477), (Start: 124 @36495 has 1 MA's), (132, 36546), (154, 36627), (156, 36630), (170, 36702), (173, 36711), (174, 36714), (197, 36840), (202, 36867), (218, 36936), (229, 36981), (250, 37050), (263, 37077), (280, 37125), (290, 37173), (302, 37212), (310, 37239), (317, 37269), (351, 37392), (366, 37452), (376, 37497), (410, 37626), (419, 37677), (421,

37686), (433, 37725), (442, 37749), (449, 37764), (453, 37779), (458, 37794),

Gene: YesChef\_50 Start: 35275, Stop: 36693, Start Num: 94

Candidate Starts for YesChef\_50:

(82, 35257), (92, 35272), (Start: 94 @35275 has 34 MA's), (Start: 98 @35284 has 76 MA's), (119, 35398), (Start: 124 @35422 has 1 MA's), (140, 35506), (170, 35617), (174, 35629), (176, 35638), (194, 35737), (213, 35830), (215, 35842), (222, 35869), (280, 36028), (362, 36349), (365, 36361), (374, 36394), (412, 36532),

Gene: YoSam321\_33 Start: 26634, Stop: 25120, Start Num: 89

Candidate Starts for YoSam321\_33:

(Start: 67 @26676 has 1 MA's), (Start: 83 @26643 has 47 MA's), (Start: 89 @26634 has 107 MA's), (126, 26472), (138, 26406), (142, 26388), (163, 26313), (166, 26289), (171, 26250), (172, 26247), (189, 26160), (210, 26046), (213, 26034), (262, 25851), (291, 25740), (304, 25689), (342, 25560), (346, 25551), (364, 25476), (366, 25470), (397, 25347), (404, 25308), (457, 25158), (462, 25143),

Gene: Yogi\_29 Start: 23610, Stop: 22114, Start Num: 83

Candidate Starts for Yogi\_29:

(Start: 83 @23610 has 47 MA's), (Start: 98 @23589 has 76 MA's), (Start: 99 @23583 has 3 MA's), (Start: 124 @23454 has 1 MA's), (132, 23406), (151, 23319), (179, 23214), (199, 23103), (211, 23043), (214, 23031), (238, 22938), (249, 22905), (258, 22884), (268, 22854), (272, 22839), (275, 22833), (282, 22785), (304, 22695), (317, 22656), (318, 22650), (348, 22554), (356, 22521), (362, 22500), (364, 22491), (404, 22329),

Gene: Yoncess\_29 Start: 23611, Stop: 22115, Start Num: 83

Candidate Starts for Yoncess\_29:

(Start: 83 @23611 has 47 MA's), (Start: 98 @23590 has 76 MA's), (Start: 99 @23584 has 3 MA's), (Start: 124 @23455 has 1 MA's), (132, 23407), (151, 23320), (179, 23215), (199, 23104), (211, 23044), (214, 23032), (228, 22969), (238, 22939), (249, 22906), (258, 22885), (268, 22855), (275, 22834), (281, 22789), (282, 22786), (283, 22780), (304, 22696), (317, 22657), (318, 22651), (356, 22522), (362, 22501), (364, 22492), (404, 22330),

Gene: ZamZam\_55 Start: 37058, Stop: 38557, Start Num: 90

Candidate Starts for ZamZam\_55:

(11, 36689), (Start: 28 @36902 has 7 MA's), (Start: 46 @36968 has 23 MA's), (Start: 90 @37058 has 2 MA's), (Start: 102 @37094 has 3 MA's), (116, 37178), (118, 37184), (Start: 124 @37211 has 1 MA's), (135, 37274), (142, 37307), (149, 37328), (156, 37346), (173, 37427), (174, 37430), (175, 37433), (218, 37652), (228, 37694), (229, 37697), (233, 37715), (250, 37766), (263, 37790), (271, 37808), (310, 37952), (311, 37955), (312, 37958), (317, 37982), (346, 38081), (356, 38126), (357, 38132), (376, 38210), (419, 38390), (421, 38399), (427, 38420), (433, 38438), (442, 38462), (449, 38477), (458, 38507),

Gene: Zemlya\_51 Start: 35100, Stop: 36743, Start Num: 28

Candidate Starts for Zemlya\_51:

(Start: 28 @35100 has 7 MA's), (Start: 46 @35166 has 23 MA's), (Start: 102 @35286 has 3 MA's), (118, 35376), (Start: 124 @35403 has 1 MA's), (132, 35454), (154, 35535), (156, 35538), (170, 35610), (173, 35619), (174, 35622), (202, 35775), (215, 35832), (216, 35835), (218, 35844), (225, 35868), (242, 35937), (290, 36072), (310, 36138), (317, 36168), (346, 36267), (351, 36291), (353, 36300), (359, 36324), (376, 36396), (421, 36585), (430, 36615), (433, 36624), (442, 36648), (449, 36663), (453, 36678),

Gene: Zeta1847\_52 Start: 36962, Stop: 38524, Start Num: 71

Candidate Starts for Zeta1847\_52:

(Start: 71 @36962 has 1 MA's), (81, 36986), (Start: 86 @36992 has 1 MA's), (Start: 100 @37022 has 1 MA's), (133, 37193), (141, 37226), (180, 37394), (194, 37469), (203, 37523), (205, 37529), (273, 37790), (285, 37856), (310, 37946), (367, 38147), (415, 38342), (456, 38483),

Gene: Zolita\_29 Start: 26039, Stop: 24546, Start Num: 98

Candidate Starts for Zolita\_29:

(Start: 98 @26039 has 76 MA's), (Start: 105 @26006 has 1 MA's), (Start: 106 @26003 has 3 MA's), (Start: 109 @25985 has 4 MA's), (Start: 124 @25904 has 1 MA's), (147, 25784), (155, 25760), (163, 25733), (174, 25685), (205, 25520), (210, 25496), (211, 25493), (215, 25472), (229, 25415), (275, 25283), (306, 25142), (317, 25112), (350, 24977), (361, 24935), (364, 24923), (386, 24839), (391, 24824), (394, 24809), (435, 24632), (455, 24602),