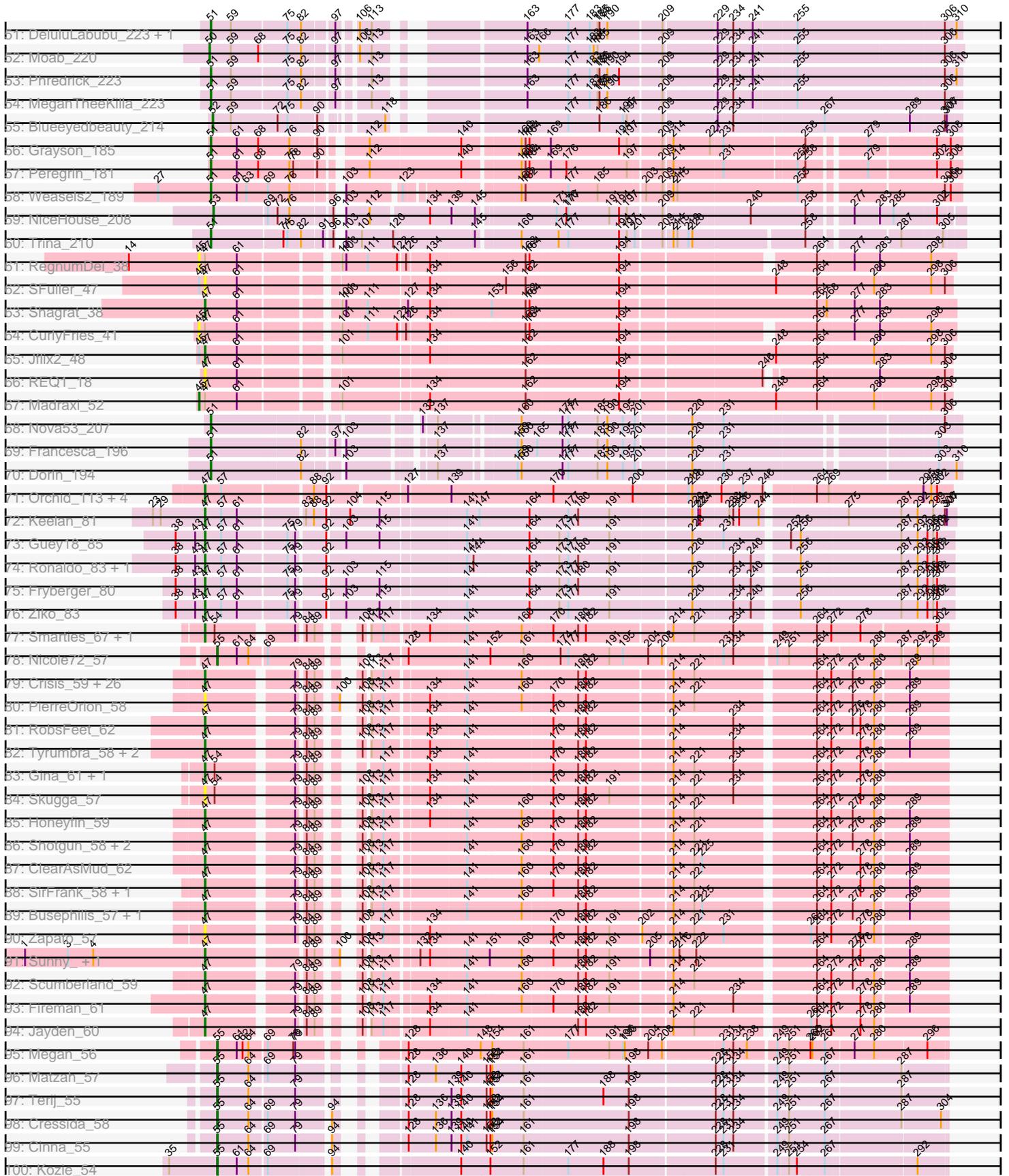


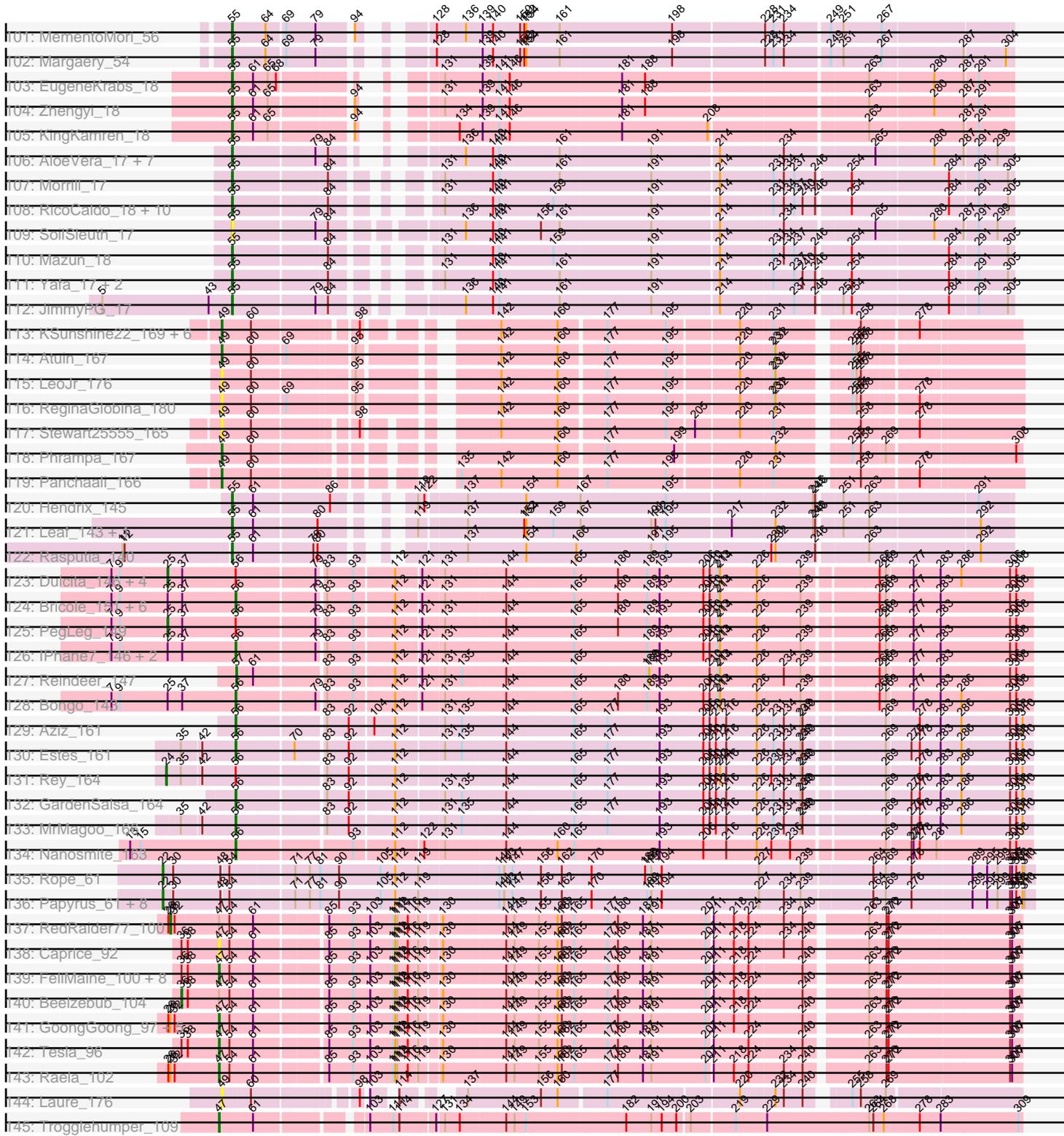
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1: Indulamithi_150	6	13	33	58	86	102	124	147	162	170	171	190	219	226	234	238	261	285	280	310	316
2: Fowimouth_54	21	44	58	86	71	102	123	141	151	163	173	189	210	229	234	246	252	285	301	310	316
3: Cuke_50	21	39	44	58	86	71	102	141	149	159	173	189	210	229	234	246	252	285	301	310	316
4: Miniyagi_53				51		75		91	103	112		131		228		244		289		310	
5: Teutsch_2+8	16	29			89	75		91	103	112		131		228		244		289		310	
6: PinkiePie_3+13	20	29	36		89	75	87	91	103	112		131		228		244		289		310	
7: Jay2Jay_5+30	20	29		51		75	87	91	103	112		131		228		244		289		310	
8: Watermoore_2+17						75	87	91	103	112		131		228		244		289		310	
9: Lululemon_243+3	20	29				75	87	91	103	112		131		228		244		289		310	
10: EGole_256+1				51		75	87	91	103	112		131		228		244		289		310	
11: Cursive_2+1						75		91	103	112		131		228		244		289		310	
12: Imored21_236+3	20	29			89	75		91	103	112		131		228		244		289		310	
13: FreddyDReo_3+3				51		89	75	91	103	112		131		228		244		289		310	
14: Bnoc_2+1	10	29			89	75		91	103	112		131		228		244		289		310	
15: Shuckie_250+1					89	75		91	103	112		131		228		244		289		310	
16: Marsus_259+1					89	75		91	103	112		131		228		244		289		310	
17: LiliMartin_257+3	20	29			89	75	87	91	103	112		131		228		244		289		310	
18: Targaryen_3+16	20	29			89	75		91	103	112		131		228		244		289		310	
19: Navo_244+1					89	75	87	91	103	112		131		228		244		289		310	
20: Anedea_267+3	20	29			89	75		91	103	112		131		228		244		289		310	
21: Davielle_2+5					89	75		91	103	112		131		228		244		289		310	
22: Angela_259+1	20	29			89	75		91	103	112		131		228		244		289		310	
23: Scheme_25d+3					89	75		91	103	112		131		228		244		289		310	
24: Cadmus_250+1			41		89	75		91	103	112		131		228		244		289		310	
25: LiiSaint_256+0	20	29			89	75		91	103	112		131		228		244		289		310	
26: Peebs_2+1			51		89	75		91	103	112		131		228		244		289		310	
27: LiiSaint_3	20	29			89	75	87	91	103	112		131		228		244		289		310	
28: Jonison_260+16	34				89	75		91	103	112		131		228		244		289		310	
29: Solertia_260+11	20				89	75	87	91	103	112		131		228		244		289		310	
30: JimJam_271+20	20				89	75	87	91	103	112		131		228		244		289		310	
31: Wipeout_2+1	19	34			89	75		91	103	112		131		228		244		289		310	
32: Mugiwara_239	19	34			89	75		91	103	112		131		228		244		289		310	
33: LukeCage_3+1	19	34			89	75		91	103	112		131		228		244		289		310	
34: StarPlatinum_2	19	34			89	75		91	103	112		131		228		244		289		310	
35: Woford_3+1	19	34			89	75		91	103	112		131		228		244		289		310	
36: Eimer_3+1	19	34			89	75		91	103	112		131		228		244		289		310	
37: Gibbi_273+1	19	34			89	75		91	103	112		131		228		244		289		310	
38: Mugiwara_2	19	34			89	75		91	103	112		131		228		244		289		310	
39: Enygma_2+1	19	34			89	75	87	91	103	112		131		228		244		289		310	
40: TomSawyer_2+1	34				89	75		91	103	112		131		228		244		289		310	
41: Tomas_3+1					89	75		91	103	112		131		228		244		289		310	
42: TunaTantare_218+1					89	75	82	91	103	112		131		228		244		289		310	
43: Kenrey_224					89	75	82	91	103	112		131		228		244		289		310	
44: Comrade_215+5					89	75		91	103	112		131		228		244		289		310	
45: Limpid_212+1					89	75		91	103	112		131		228		244		289		310	
46: Maupel_221+3					89	75		91	103	112		131		228		244		289		310	
47: Pateigo_221					89	75		91	103	112		131		228		244		289		310	
48: Beuffer_213					89	75		91	103	112		131		228		244		289		310	
49: Francob_223					89	75		91	103	112		131		228		244		289		310	
50: Faus_215+1					89	75		91	103	112		131		228		244		289		310	

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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 290732 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290732 has 381 members, 41 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi\_50
- Track 2 : Fowlmouth\_54
- Track 3 : Cuke\_50
- Track 4 : MrMiyagi\_53
- Track 5 : Teutsch\_2, Larnav\_252, Teutsch\_249, Tribute\_2, Samisti12\_2, Larnav\_2, Tribute\_248, Samisti12\_253, Sushi23\_253, Sushi23\_2
- Track 6 : PinkiePie\_3, Paradiddles\_3, NootNoot\_3, PinkiePie\_253, Bartholomune\_3, Bartholomune\_253, Braelyn\_248, NootNoot\_248, Liandry\_3, Squillium\_255, Braelyn\_3, Squillium\_3, Paradiddles\_244, Liandry\_252
- Track 7 : Jay2Jay\_5, Warpy\_257, Jay2Jay\_260, Warpy\_5
- Track 8 : Watermoore\_2, Watermoore\_249, Leo04\_253, Cross\_2, Leo04\_2, BlueOtter\_250, Coogler\_2, Coogler\_248, HangryHippo\_2, Cross\_250, BlueOtter\_2, HangryHippo\_250
- Track 9 : Lululemon\_249, PacManQ\_2, Lululemon\_2, PacManQ\_249
- Track 10 : EGole\_256, EGole\_2
- Track 11 : Cursive\_2, Cursive\_256
- Track 12 : Mildred21\_266, Mildred21\_3
- Track 13 : FreddyDRoo\_3, Eliot67\_3, FreddyDRoo\_256, Eliot67\_254
- Track 14 : Bmoc\_2, Bmoc\_258
- Track 15 : Shuckle\_250, Shuckle\_2
- Track 16 : Marsus\_259, Marsus\_2
- Track 17 : LilMartin\_254, MulchMansion\_258, LilMartin\_2, MulchMansion\_2
- Track 18 : Targaryen\_2, Targaryen\_253, Evy\_2, Evy\_240
- Track 19 : Navo\_244, Navo\_2
- Track 20 : Anedea\_267, Anedea\_2, Riptide\_257, Riptide\_2
- Track 21 : Davielle\_2, Persimmon\_2, WhereRU\_251, Davielle\_251, WhereRU\_2, Persimmon\_253
- Track 22 : Angela\_259, Angela\_2
- Track 23 : Scheme\_256, Scheme\_3, Pepperwood\_3, Pepperwood\_252
- Track 24 : Cadmus\_250, Cadmus\_2
- Track 25 : LilSaint\_256
- Track 26 : Peebs\_2, Peebs\_249
- Track 27 : LilSaint\_3
- Track 28 : Jollison\_260, Starbow\_260, CeilingFan\_268, KentuckyRacer\_270, Jollison\_3, Karimac\_261, Battuta\_3, KentuckyRacer\_2, CeilingFan\_2, SaltySpitoon\_3, SaltySpitoon\_263, IchabodCrane\_2, Battuta\_260, Karimac\_3, Starbow\_3, Brizzy\_260, IchabodCrane\_255

- Track 29 : Sollertia\_260, Yaboi\_4, Yaboi\_265, AngryGiraffe\_4, Sollertia\_4, BoomerJR\_259, Stanimal\_4, AngryGiraffe\_260, Genie2\_259, Stanimal\_259, Genie2\_4, BoomerJR\_4
- Track 30 : JimJam\_271, Amabiko\_3, Rikishi\_264, Spilled\_2, Rikishi\_2, Bordeaux\_260, Amabiko\_267, JimJam\_3, MindFlayer\_2, Brizzy\_2, PumpkinSpice\_3, Quaran19\_264, AcciDwight\_273, Spilled\_270, Spelly\_3, Quaran19\_3, AcciDwight\_3, Spelly\_269, MindFlayer\_254, PumpkinSpice\_267, Bordeaux\_3
- Track 31 : Wipeout\_2, Wipeout\_255
- Track 32 : Mugiwara\_269
- Track 33 : LukeCage\_2, LukeCage\_265
- Track 34 : StarPlatinum\_2, StarPlatinum\_272
- Track 35 : Wofford\_3, Wofford\_261
- Track 36 : Elmer\_3, Elmer\_270
- Track 37 : Gibbi\_273, Gibbi\_2
- Track 38 : Mugiwara\_2
- Track 39 : Enygma\_2, Enygma\_270
- Track 40 : TomSawyer\_2, TomSawyer\_267
- Track 41 : Tomas\_3, Tomas\_258
- Track 42 : TunaTartare\_218, Sham\_210
- Track 43 : Kenrey\_224
- Track 44 : Comrade\_215, Stigma\_217, SparkleGoddess\_218, Westy\_222, Belfort\_218, Karp\_214
- Track 45 : Limpid\_212, Annadreamy\_205
- Track 46 : MaupeI\_221, Emma1919\_221, Gilson\_218, Jada\_220
- Track 47 : Patelgo\_221
- Track 48 : Beuffert\_213
- Track 49 : Francob\_223
- Track 50 : Faust\_215, SeresaTree\_219
- Track 51 : DeluluLabubu\_223, Forrest\_221
- Track 52 : Moab\_220
- Track 53 : Phredrick\_223
- Track 54 : MeganTheeKilla\_223
- Track 55 : Blueeyedbeauty\_214
- Track 56 : Grayson\_185
- Track 57 : Peregrin\_181
- Track 58 : Weasels2\_189
- Track 59 : NiceHouse\_208
- Track 60 : Trina\_210
- Track 61 : RegnumDei\_38
- Track 62 : SFuller\_47
- Track 63 : Shagrat\_38
- Track 64 : CurlyFries\_41
- Track 65 : Jflix2\_48
- Track 66 : REQ1\_18
- Track 67 : Madraxi\_52
- Track 68 : Nova53\_207
- Track 69 : Francesca\_196
- Track 70 : Dorin\_194
- Track 71 : Orchid\_113, RobinSparkles\_123, Kampe\_114, Gibbles\_116, PatrickStar\_114
- Track 72 : Keelan\_81
- Track 73 : Guey18\_85
- Track 74 : Ronaldo\_83, Volt\_83

- Track 75 : Fryberger\_80
- Track 76 : Ziko\_83
- Track 77 : Smarties\_67, Ariadne\_67
- Track 78 : Nicole72\_57
- Track 79 : Crisis\_59, Glorp\_59, Hermeonysus\_57, Ganandorf\_57, LittleFortune\_60, Yeti\_59, Pulchra\_60, Kowalski\_57, BeagleBug\_57, Piperis\_59, EarickHC\_59, BrazzalePHS\_57, Lucretia\_58, Selwyn23\_59, Quhwah\_62, Jefe\_58, Antares\_58, Onika\_57, PhedwardCullen\_56, Savannah\_57, Ramiel05\_57, Cranjis\_59, CrazyRich\_57, Rockwell\_57, KaiHaiDragon\_59, Phorgeous\_58, PiperSansNom\_59
- Track 80 : PierreOrion\_58
- Track 81 : RobsFeet\_62
- Track 82 : Tyumbra\_58, Metamorphoo\_61, Shrubaron\_61
- Track 83 : Gina\_61, Teamocil\_61
- Track 84 : Skugga\_57
- Track 85 : Honeyfin\_59
- Track 86 : Shotgun\_58, Jollipop\_59, Paschalis\_58
- Track 87 : ClearAsMud\_62
- Track 88 : SirFrank\_58, NoodlelyBoi\_59
- Track 89 : Busephilis\_57, Phrancesco\_58
- Track 90 : Zapato\_57
- Track 91 : Sunny\_, Merry\_
- Track 92 : Scumberland\_59
- Track 93 : Fireman\_61
- Track 94 : Jayden\_60
- Track 95 : Megan\_56
- Track 96 : Matzah\_57
- Track 97 : Terij\_55
- Track 98 : Cressida\_58
- Track 99 : Cinna\_55
- Track 100 : Kozie\_54
- Track 101 : MementoMori\_56
- Track 102 : Margaery\_54
- Track 103 : EugeneKrabs\_18
- Track 104 : Zhengyi\_18
- Track 105 : KingKamren\_18
- Track 106 : AloeVera\_17, Waterlily\_17, Ashton\_17, Truong\_17, JordanFarm\_17, Barroma\_17, ShyRosie\_17, Akoni\_17
- Track 107 : Morrill\_17
- Track 108 : RicoCaldo\_18, Fullmetal\_18, Keough\_17, Phracted\_18, Phedro\_18, Pharky\_18, StagePhright\_18, Astartes\_18, TrippeS\_17, PhriedRice\_18, Moleficent\_18
- Track 109 : SoilSleuth\_17
- Track 110 : Mazun\_18
- Track 111 : Yafa\_17, ThirteenKH\_17, Atraxi\_17
- Track 112 : JimmyPG\_17
- Track 113 : KSunshine22\_169, BooTeria\_173, WaddleDee\_160, Ellewin\_170, Artu\_166, Emmetator\_167, DunneganBoMo\_164
- Track 114 : Atuin\_167
- Track 115 : LeoJr\_176
- Track 116 : ReginaGlobina\_180
- Track 117 : Stewart25555\_165
- Track 118 : Phrampa\_167
- Track 119 : Panchaali\_166

- Track 120 : Hendrix\_145
- Track 121 : Leaf\_143, Dewdrop\_143
- Track 122 : Rasputia\_140
- Track 123 : Dulcita\_146, Diminimus\_146, Glaske16\_148, Skinny\_152, Izel\_145
- Track 124 : Bricole\_151, SlimJimmy\_146, FreakyGoo\_148, KleverKiS\_151, LilhomieP\_145, RoseMarie\_153, TpudiCK\_149
- Track 125 : PegLeg\_149
- Track 126 : IPhane7\_146, TyDawg\_142, Auspice\_149
- Track 127 : Reindeer\_147
- Track 128 : Bongo\_143
- Track 129 : Aziz\_161
- Track 130 : Estes\_161
- Track 131 : Rey\_164
- Track 132 : GardenSalsa\_164
- Track 133 : MrMagoo\_166
- Track 134 : Nanosmite\_163
- Track 135 : Rope\_61
- Track 136 : Papyrus\_61, MontyDev\_62, Nilo\_63, Candle\_59, Riparian\_63, Zenon\_62, Send513\_61, Yelo\_60, Weiss13\_60
- Track 137 : RedRaider77\_100
- Track 138 : Caprice\_92
- Track 139 : FeliMaine\_100, VasuNzinga\_98, Clarkson\_101, Pringar\_96, Lilbit\_96, Huphlepuuff\_102, Corazon\_95, LittleLaf\_98, Marvin\_94
- Track 140 : Beelzebub\_104
- Track 141 : GoongGoong\_97, Poise\_101, Blackbeetle\_101, MosMoris\_96, JoieB\_101, Gattaca\_99
- Track 142 : Tesla\_96
- Track 143 : Raela\_102
- Track 144 : Laure\_176
- Track 145 : Trogglehumper\_109

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

The start number called the most often in the published annotations is 51, it was called in 141 of the 340 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anedea\_2, Anedea\_267, Angela\_2, Angela\_259, AngryGiraffe\_260, AngryGiraffe\_4, Bartholomune\_253, Bartholomune\_3, Battuta\_260, Battuta\_3, BlueOtter\_2, BlueOtter\_250, Bmoc\_2, Bmoc\_258, BoomerJR\_259, BoomerJR\_4, Braelyn\_248, Braelyn\_3, Brizzy\_260, Cadmus\_2, Cadmus\_250, CeilingFan\_2, CeilingFan\_268, Coogler\_2, Coogler\_248, Cross\_2, Cross\_250, Cursive\_2, Cursive\_256, Davielle\_2, Davielle\_251, DeluluLabubu\_223, Dorin\_194, Elmer\_270, Elmer\_3, Emma1919\_221, Enygma\_2, Enygma\_270, Evy\_2, Evy\_240, Faust\_215, Forrest\_221, Francesca\_196, Genie2\_259, Genie2\_4, Gibbi\_2, Gibbi\_273, Gilson\_218, Grayson\_185, HangryHippo\_2, HangryHippo\_250, IchabodCrane\_2, IchabodCrane\_255, Jada\_220, Jollison\_260, Jollison\_3, Karimac\_261, Karimac\_3, Kenrey\_224, KentuckyRacer\_2, KentuckyRacer\_270, Larnav\_2, Larnav\_252, Leo04\_2, Leo04\_253, Liandry\_252, Liandry\_3, LilMartin\_2, LilMartin\_254, LilSaint\_256, LukeCage\_2, LukeCage\_265, Lululemon\_2, Lululemon\_249, Marsus\_2, Marsus\_259, Maupel\_221,

MeganTheeKilla\_223, Mildred21\_266, Mildred21\_3, Mugiwara\_269, MulchMansion\_2, MulchMansion\_258, Navo\_2, Navo\_244, NootNoot\_248, NootNoot\_3, Nova53\_207, PacManQ\_2, PacManQ\_249, Paradiddles\_244, Paradiddles\_3, Pepperwood\_252, Pepperwood\_3, Peregrin\_181, Persimmon\_2, Persimmon\_253, Phredrick\_223, PinkiePie\_253, PinkiePie\_3, Riptide\_2, Riptide\_257, SaltySpittoon\_263, SaltySpittoon\_3, Samisti12\_2, Samisti12\_253, Scheme\_256, Scheme\_3, SeresaTree\_219, Sham\_210, Shuckle\_2, Shuckle\_250, Sollertia\_260, Sollertia\_4, Squillium\_255, Squillium\_3, Stanimal\_259, Stanimal\_4, StarPlatinum\_2, StarPlatinum\_272, Starbow\_260, Starbow\_3, Sushi23\_2, Sushi23\_253, Targaryen\_2, Targaryen\_253, Teutsch\_2, Teutsch\_249, TomSawyer\_2, TomSawyer\_267, Tomas\_258, Tomas\_3, Tribute\_2, Tribute\_248, Trina\_210, TunaTartare\_218, Watermoore\_2, Watermoore\_249, Weasels2\_189, WhereRU\_2, WhereRU\_251, Wofford\_261, Wofford\_3, Yaboi\_265, Yaboi\_4,

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

- AcciDwight\_273, AcciDwight\_3, Amabiko\_267, Amabiko\_3, Bordeaux\_260, Bordeaux\_3, Brizzy\_2, EGole\_2, EGole\_256, Eliot67\_254, Eliot67\_3, FreddyDRoo\_256, FreddyDRoo\_3, Jay2Jay\_260, Jay2Jay\_5, JimJam\_271, JimJam\_3, LilSaint\_3, MindFlayer\_2, MindFlayer\_254, Mugiwara\_2, Peebs\_2, Peebs\_249, PumpkinSpice\_267, PumpkinSpice\_3, Quarant19\_264, Quarant19\_3, Rikishi\_2, Rikishi\_264, Spelly\_269, Spelly\_3, Spilled\_2, Spilled\_270, Warpy\_257, Warpy\_5, Wipeout\_2, Wipeout\_255,

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

- Akoni\_17, AloeVera\_17, Annadreamy\_205, Antares\_58, Ariadne\_67, Artu\_166, Ashton\_17, Astartes\_18, Atraxi\_17, Atuin\_167, Auspice\_149, Aziz\_161, Barroma\_17, BeagleBug\_57, Beelzebub\_104, Belfort\_218, Beuffert\_213, Blackbeetle\_101, Blueeyedbeauty\_214, Bongo\_143, BooTeria\_173, BrazzalePHS\_57, Bricole\_151, Busephilis\_57, Candle\_59, Caprice\_92, Cinna\_55, Clarkson\_101, ClearAsMud\_62, Comrade\_215, Corazon\_95, Cranjis\_59, CrazyRich\_57, Cressida\_58, Crisis\_59, Cuke\_50, CurlyFries\_41, Dewdrop\_143, Diminimus\_146, Dulcita\_146, DunneganBoMo\_164, EarickHC\_59, Ellewin\_170, Emmetator\_167, Estes\_161, EugeneKrabs\_18, FeliMaine\_100, Fireman\_61, Fowlmouth\_54, Francob\_223, FreakyGoo\_148, Fryberger\_80, Fullmetal\_18, Ganandorf\_57, GardenSalsa\_164, Gattaca\_99, Gibbles\_116, Gina\_61, Glaske16\_148, Glorp\_59, GoongGoong\_97, Guey18\_85, Hendrix\_145, Hermeonysus\_57, Honeyfin\_59, Huphlepuuff\_102, IPhane7\_146, Indulamithi\_50, Izel\_145, Jayden\_60, Jefe\_58, Jflix2\_48, JimmyPG\_17, JoieB\_101, Jollipop\_59, JordanFarm\_17, KSunshine22\_169, KaiHaiDragon\_59, Kampe\_114, Karp\_214, Keelan\_81, Keough\_17, KingKamren\_18, KleverKiS\_151, Kowalski\_57, Kozie\_54, Laure\_176, Leaf\_143, LeoJr\_176, Lilbit\_96, LilhomieP\_145, Limpid\_212, LittleFortune\_60, LittleLaf\_98, Lucretia\_58, Madraxi\_52, Margaery\_54, Marvin\_94, Matzah\_57, Mazun\_18, Megan\_56, MementoMori\_56, Merry\_, Metamorphoo\_61, Moab\_220, Moleficent\_18, MontyDev\_62, Morrill\_17, MosMoris\_96, MrMagoo\_166, MrMiyagi\_53, Nanosmite\_163, NiceHouse\_208, Nicole72\_57, Nilo\_63, NoodlelyBoi\_59, Onika\_57, Orchid\_113, Panchaali\_166, Papyrus\_61, Paschalis\_58, Patelgo\_221, PatrickStar\_114, PegLeg\_149, Pharky\_18, Phedro\_18, PhedwardCullen\_56, Phorgeous\_58, Phracted\_18, Phrampa\_167, Phrancesco\_58, PhriedRice\_18, PierreOrion\_58, PiperSansNom\_59, Piperis\_59, Poise\_101, Pringar\_96, Pulchra\_60, Quhwah\_62, REQ1\_18, Raela\_102, Ramiel05\_57, Rasputia\_140, RedRaider77\_100, ReginaGlobina\_180, RegnumDei\_38, Reindeer\_147, Rey\_164, RicoCaldo\_18, Riparian\_63, RobinSparkles\_123, RobsFeet\_62, Rockwell\_57, Ronaldo\_83, Rope\_61, RoseMarie\_153, SFuller\_47, Savannah\_57, Scumberland\_59, Selwyn23\_59,

Send513\_61, Shagrat\_38, Shotgun\_58, Shrubaron\_61, ShyRosie\_17, SirFrank\_58, Skinny\_152, Skugga\_57, SlimJimmy\_146, Smarties\_67, SoilSleuth\_17, SparkleGoddess\_218, StagePhright\_18, Stewart25555\_165, Stigma\_217, Sunny\_, Teamocil\_61, Terij\_55, Tesla\_96, ThirteenKH\_17, TpudiCK\_149, TrippleS\_17, Trogglehumper\_109, Truong\_17, TyDawg\_142, Tyrumbra\_58, VasuNzinga\_98, Volt\_83, WaddleDee\_160, Waterlily\_17, Weiss13\_60, Westy\_222, Yafa\_17, Yelo\_60, Yeti\_59, Zapato\_57, Zenon\_62, Zhengyi\_18, Ziko\_83,

### Summary by start number:

#### Start 8:

- Found in 14 of 381 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 1 of 340
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Mugiwara\_2 (BE2),

#### Start 9:

- Found in 43 of 381 ( 11.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 9.3% of time when present
- Phage (with cluster) where this start called: Eliot67\_254 (BE1), Eliot67\_3 (BE1), FreddyDRoo\_256 (BE1), FreddyDRoo\_3 (BE1),

#### Start 10:

- Found in 26 of 381 ( 6.8% ) of genes in pham
- Manual Annotations of this start: 4 of 340
- Called 15.4% of time when present
- Phage (with cluster) where this start called: EGole\_2 (BE1), EGole\_256 (BE1), Peebs\_2 (BE1), Peebs\_249 (BE1),

#### Start 20:

- Found in 56 of 381 ( 14.7% ) of genes in pham
- Manual Annotations of this start: 4 of 340
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Jay2Jay\_260 (BE1), Jay2Jay\_5 (BE1), Warpy\_257 (BE1), Warpy\_5 (BE1),

#### Start 21:

- Found in 1 of 381 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 340
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi\_50 (AC),

#### Start 22:

- Found in 13 of 381 ( 3.4% ) of genes in pham
- Manual Annotations of this start: 12 of 340
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Candle\_59 (R), Cuke\_50 (AC), Fowlmouth\_54 (AC), MontyDev\_62 (R), MrMiyagi\_53 (AC), Nilo\_63 (R), Papyrus\_61 (R), Riparian\_63 (R), Rope\_61 (R), Send513\_61 (R), Weiss13\_60 (R), Yelo\_60 (R), Zenon\_62 (R),

#### Start 24:

- Found in 11 of 381 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 1 of 340
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Rey\_164 (M2),

#### Start 25:

- Found in 21 of 381 ( 5.5% ) of genes in pham
- Manual Annotations of this start: 6 of 340
- Called 28.6% of time when present
- Phage (with cluster) where this start called: Diminimus\_146 (M1), Dulcita\_146 (M1), Glaske16\_148 (M1), Izel\_145 (M1), PegLeg\_149 (M1), Skinny\_152 (M1),

#### Start 28:

- Found in 8 of 381 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 340
- Called 12.5% of time when present
- Phage (with cluster) where this start called: RedRaider77\_100 (S),

#### Start 36:

- Found in 12 of 381 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 1 of 340
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Beelzebub\_104 (S),

#### Start 40:

- Found in 42 of 381 ( 11.0% ) of genes in pham
- Manual Annotations of this start: 21 of 340
- Called 54.8% of time when present
- Phage (with cluster) where this start called: AcciDwight\_273 (BE2), AcciDwight\_3 (BE2), Amabiko\_267 (BE2), Amabiko\_3 (BE2), Bordeaux\_260 (BE2), Bordeaux\_3 (BE2), Brizzy\_2 (BE2), JimJam\_271 (BE2), JimJam\_3 (BE2), MindFlayer\_2 (BE2), MindFlayer\_254 (BE2), PumpkinSpice\_267 (BE2), PumpkinSpice\_3 (BE2), Quaran19\_264 (BE2), Quaran19\_3 (BE2), Rikishi\_2 (BE2), Rikishi\_264 (BE2), Spelly\_269 (BE2), Spelly\_3 (BE2), Spilled\_2 (BE2), Spilled\_270 (BE2), Wipeout\_2 (BE2), Wipeout\_255 (BE2),

#### Start 41:

- Found in 2 of 381 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 340
- Called 50.0% of time when present
- Phage (with cluster) where this start called: LilSaint\_3 (BE1),

#### Start 45:

- Found in 5 of 381 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 1 of 340
- Called 60.0% of time when present
- Phage (with cluster) where this start called: CurlyFries\_41 (CF), Madraxi\_52 (CF), RegnumDei\_38 (CF),

#### Start 47:

- Found in 91 of 381 ( 23.9% ) of genes in pham
- Manual Annotations of this start: 75 of 340
- Called 94.5% of time when present

- Phage (with cluster) where this start called: Antares\_58 (EC), Ariadne\_67 (EC), BeagleBug\_57 (EC), Blackbeetle\_101 (S), BrazzalePHS\_57 (EC), Busephilis\_57 (EC), Caprice\_92 (S), Clarkson\_101 (S), ClearAsMud\_62 (EC), Corazon\_95 (S), Cranjis\_59 (EC), CrazyRich\_57 (EC), Crisis\_59 (EC), EarickHC\_59 (EC), FeliMaine\_100 (S), Fireman\_61 (EC), Fryberger\_80 (DP), Ganandorf\_57 (EC), Gattaca\_99 (S), Gibbles\_116 (CX), Gina\_61 (EC), Glorp\_59 (EC), GoongGoong\_97 (S), Guey18\_85 (DP), Hermeonysus\_57 (EC), Honeyfin\_59 (EC), Huphlepuuff\_102 (S), Jayden\_60 (EC), Jefe\_58 (EC), Jflix2\_48 (CF), JoieB\_101 (S), Jollipop\_59 (EC), KaiHaiDragon\_59 (EC), Kampe\_114 (CX), Keelan\_81 (DP), Kowalski\_57 (EC), Lilbit\_96 (S), LittleFortune\_60 (EC), LittleLaf\_98 (S), Lucretia\_58 (EC), Marvin\_94 (S), Merry\_ (EC), Metamorphoo\_61 (EC), MosMoris\_96 (S), NoodlelyBoi\_59 (EC), Onika\_57 (EC), Orchid\_113 (CX), Paschalis\_58 (EC), PatrickStar\_114 (CX), PhedwardCullen\_56 (EC), Phorgeous\_58 (EC), Phrancesco\_58 (EC), PierreOrion\_58 (EC), PiperSansNom\_59 (EC), Piperis\_59 (EC), Poise\_101 (S), Pringar\_96 (S), Pulchra\_60 (EC), Quhwah\_62 (EC), REQ1\_18 (CF), Raela\_102 (S), Ramiel05\_57 (EC), RobinSparkles\_123 (CX), RobsFeet\_62 (EC), Rockwell\_57 (EC), Ronaldo\_83 (DP), SFuller\_47 (CF), Savannah\_57 (EC), Scumberland\_59 (EC), Selwyn23\_59 (EC), Shagrat\_38 (CF), Shotgun\_58 (EC), Shrubaron\_61 (EC), SirFrank\_58 (EC), Skugga\_57 (EC), Smarties\_67 (EC), Sunny\_ (EC), Teamocil\_61 (EC), Tesla\_96 (S), Trogglehumper\_109 (singleton), Tyumbra\_58 (EC), VasuNzinga\_98 (S), Volt\_83 (DP), Yeti\_59 (EC), Zapato\_57 (EC), Ziko\_83 (DP),

#### Start 49:

- Found in 14 of 381 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 5 of 340
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artu\_166 (FC), Atuin\_167 (FC), BooTeria\_173 (FC), DunneganBoMo\_164 (FC), Ellewin\_170 (FC), Emmetator\_167 (FC), KSunshine22\_169 (FC), Laure\_176 (UNK), LeoJr\_176 (FC), Panchaali\_166 (FC), Phrampa\_167 (FC), ReginaGlobina\_180 (FC), Stewart25555\_165 (FC), WaddleDee\_160 (FC),

#### Start 50:

- Found in 9 of 381 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 9 of 340
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belfort\_218 (BK1), Comrade\_215 (BK1), Francob\_223 (BK1), Karp\_214 (BK1), Moab\_220 (BK1), Patelgo\_221 (BK1), SparkleGoddess\_218 (BK1), Stigma\_217 (BK1), Westy\_222 (BK1),

#### Start 51:

- Found in 182 of 381 ( 47.8% ) of genes in pham
- Manual Annotations of this start: 141 of 340
- Called 79.7% of time when present
- Phage (with cluster) where this start called: Anedea\_2 (BE1), Anedea\_267 (BE1), Angela\_2 (BE1), Angela\_259 (BE1), AngryGiraffe\_260 (BE2), AngryGiraffe\_4 (BE2), Bartholomune\_253 (BE1), Bartholomune\_3 (BE1), Battuta\_260 (BE2), Battuta\_3 (BE2), BlueOtter\_2 (BE1), BlueOtter\_250 (BE1), Bmoc\_2 (BE1), Bmoc\_258 (BE1), BoomerJR\_259 (BE2), BoomerJR\_4 (BE2), Braelyn\_248 (BE1), Braelyn\_3 (BE1), Brizzy\_260 (BE2), Cadmus\_2 (BE1), Cadmus\_250 (BE1), CeilingFan\_2 (BE2), CeilingFan\_268 (BE2), Coogler\_2 (BE1), Coogler\_248 (BE1), Cross\_2 (BE1), Cross\_250 (BE1), Cursive\_2 (BE1), Cursive\_256 (BE1), Davielle\_2 (BE1), Davielle\_251 (BE1), DeluluLabubu\_223 (BK1), Dorin\_194 (CG), Elmer\_270 (BE2),

Elmer\_3 (BE2), Emma1919\_221 (BK1), Enygma\_2 (BE2), Enygma\_270 (BE2), Evy\_2 (BE1), Evy\_240 (BE1), Faust\_215 (BK1), Forrest\_221 (BK1), Francesca\_196 (CG), Genie2\_259 (BE2), Genie2\_4 (BE2), Gibbi\_2 (BE2), Gibbi\_273 (BE2), Gilson\_218 (BK1), Grayson\_185 (CB), HangryHippo\_2 (BE1), HangryHippo\_250 (BE1), IchabodCrane\_2 (BE2), IchabodCrane\_255 (BE2), Jada\_220 (BK1), Jollison\_260 (BE2), Jollison\_3 (BE2), Karimac\_261 (BE2), Karimac\_3 (BE2), Kenrey\_224 (BK1), KentuckyRacer\_2 (BE2), KentuckyRacer\_270 (BE2), Larnav\_2 (BE1), Larnav\_252 (BE1), Leo04\_2 (BE1), Leo04\_253 (BE1), Liandry\_252 (BE1), Liandry\_3 (BE1), LilMartin\_2 (BE1), LilMartin\_254 (BE1), LilSaint\_256 (BE1), LukeCage\_2 (BE2), LukeCage\_265 (BE2), Lululemon\_2 (BE1), Lululemon\_249 (BE1), Marsus\_2 (BE1), Marsus\_259 (BE1), Maupel\_221 (BK1), MeganTheeKilla\_223 (BK1), Mildred21\_266 (BE1), Mildred21\_3 (BE1), Mugiwara\_269 (BE2), MulchMansion\_2 (BE1), MulchMansion\_258 (BE1), Navo\_2 (BE1), Navo\_244 (BE1), NootNoot\_248 (BE1), NootNoot\_3 (BE1), Nova53\_207 (CG), PacManQ\_2 (BE1), PacManQ\_249 (BE1), Paradiddles\_244 (BE1), Paradiddles\_3 (BE1), Pepperwood\_252 (BE1), Pepperwood\_3 (BE1), Peregrin\_181 (CB), Persimmon\_2 (BE1), Persimmon\_253 (BE1), Phredrick\_223 (BK1), PinkiePie\_253 (BE1), PinkiePie\_3 (BE1), Riptide\_2 (BE1), Riptide\_257 (BE1), SaltySpittoon\_263 (BE2), SaltySpittoon\_3 (BE2), Samisti12\_2 (BE1), Samisti12\_253 (BE1), Scheme\_256 (BE1), Scheme\_3 (BE1), SeresaTree\_219 (BK1), Sham\_210 (BK1), Shuckle\_2 (BE1), Shuckle\_250 (BE1), Sollertia\_260 (BE2), Sollertia\_4 (BE2), Squillum\_255 (BE1), Squillum\_3 (BE1), Stanimal\_259 (BE2), Stanimal\_4 (BE2), StarPlatinum\_2 (BE2), StarPlatinum\_272 (BE2), Starbow\_260 (BE2), Starbow\_3 (BE2), Sushi23\_2 (BE1), Sushi23\_253 (BE1), Targaryen\_2 (BE1), Targaryen\_253 (BE1), Teutsch\_2 (BE1), Teutsch\_249 (BE1), TomSawyer\_2 (BE2), TomSawyer\_267 (BE2), Tomas\_258 (BE2), Tomas\_3 (BE2), Tribute\_2 (BE1), Tribute\_248 (BE1), Trina\_210 (CE), TunaTartare\_218 (BK1), Watermoore\_2 (BE1), Watermoore\_249 (BE1), Weasels2\_189 (CB), WhereRU\_2 (BE1), WhereRU\_251 (BE1), Wofford\_261 (BE2), Wofford\_3 (BE2), Yaboi\_265 (BE2), Yaboi\_4 (BE2),

#### Start 52:

- Found in 4 of 381 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 4 of 340
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annadreamy\_205 (BK1), Beuffert\_213 (BK1), Blueeyedbeauty\_214 (BK1), Limpid\_212 (BK1),

#### Start 53:

- Found in 1 of 381 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 340
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NiceHouse\_208 (CE),

#### Start 55:

- Found in 42 of 381 ( 11.0% ) of genes in pham
- Manual Annotations of this start: 37 of 340
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Akoni\_17 (EK2), AloeVera\_17 (EK2), Ashton\_17 (EK2), Astartes\_18 (EK2), Atraxi\_17 (EK2), Barroma\_17 (EK2), Cinna\_55 (EI), Cressida\_58 (EI), Dewdrop\_143 (GC), EugeneKrabs\_18 (EK), Fullmetal\_18 (EK2), Hendrix\_145 (GC), JimmyPG\_17 (EK2), JordanFarm\_17 (EK2), Keough\_17 (EK2), KingKamren\_18 (EK), Kozie\_54 (EI), Leaf\_143 (GC), Margaery\_54 (EI), Matzah\_57 (EI), Mazun\_18 (EK2), Megan\_56 (EC), MementoMori\_56 (EI),

Moleficient\_18 (EK2), Morrill\_17 (EK2), Nicole72\_57 (EC), Pharky\_18 (EK2), Phedro\_18 (EK2), Phracted\_18 (EK2), PhriedRice\_18 (EK2), Rasputia\_140 (GC), RicoCaldo\_18 (EK2), ShyRosie\_17 (EK2), SoilSleuth\_17 (EK2), StagePhright\_18 (EK2), Terij\_55 (EI), ThirteenKH\_17 (EK2), TrippleS\_17 (EK2), Truong\_17 (EK2), Waterlily\_17 (EK2), Yafa\_17 (EK2), Zhengyi\_18 (EK),

Start 56:

- Found in 24 of 381 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 13 of 340
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Auspice\_149 (M1), Aziz\_161 (M2), Bongo\_143 (M1), Bricole\_151 (M1), Estes\_161 (M2), FreakyGoo\_148 (M1), GardenSalsa\_164 (M2), IPhane7\_146 (M1), KleverKiS\_151 (M1), LilhomieP\_145 (M1), MrMagoo\_166 (M2), Nanosmite\_163 (M3), RoseMarie\_153 (M1), SlimJimmy\_146 (M1), TpudiCK\_149 (M1), TyDawg\_142 (M1),

Start 57:

- Found in 12 of 381 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 1 of 340
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Reindeer\_147 (M1),

### Summary by clusters:

There are 23 clusters represented in this pham: singleton, M3, FC, M1, CE, M2, DP, AC, EI, EK, CB, CG, CF, EC, S, CX, GC, BK1, UNK, R, BE2, BE1, EK2,

Info for manual annotations of cluster AC:

- Start number 21 was manually annotated 1 time for cluster AC.
- Start number 22 was manually annotated 3 times for cluster AC.

Info for manual annotations of cluster BE1:

- Start number 10 was manually annotated 4 times for cluster BE1.
- Start number 20 was manually annotated 4 times for cluster BE1.
- Start number 41 was manually annotated 1 time for cluster BE1.
- Start number 51 was manually annotated 79 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 8 was manually annotated 1 time for cluster BE2.
- Start number 40 was manually annotated 21 times for cluster BE2.
- Start number 51 was manually annotated 44 times for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 50 was manually annotated 9 times for cluster BK1.
- Start number 51 was manually annotated 11 times for cluster BK1.
- Start number 52 was manually annotated 4 times for cluster BK1.

Info for manual annotations of cluster CB:

- Start number 51 was manually annotated 3 times for cluster CB.

Info for manual annotations of cluster CE:

- Start number 51 was manually annotated 1 time for cluster CE.
- Start number 53 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster CF:

- Start number 45 was manually annotated 1 time for cluster CF.
- Start number 47 was manually annotated 2 times for cluster CF.

Info for manual annotations of cluster CG:

- Start number 51 was manually annotated 3 times for cluster CG.

Info for manual annotations of cluster CX:

- Start number 47 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster DP:

- Start number 47 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster EC:

- Start number 47 was manually annotated 45 times for cluster EC.
- Start number 55 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 55 was manually annotated 7 times for cluster EI.

Info for manual annotations of cluster EK:

- Start number 55 was manually annotated 3 times for cluster EK.

Info for manual annotations of cluster EK2:

- Start number 55 was manually annotated 21 times for cluster EK2.

Info for manual annotations of cluster FC:

- Start number 49 was manually annotated 5 times for cluster FC.

Info for manual annotations of cluster GC:

- Start number 55 was manually annotated 4 times for cluster GC.

Info for manual annotations of cluster M1:

- Start number 25 was manually annotated 6 times for cluster M1.
- Start number 56 was manually annotated 8 times for cluster M1.
- Start number 57 was manually annotated 1 time for cluster M1.

Info for manual annotations of cluster M2:

- Start number 24 was manually annotated 1 time for cluster M2.
- Start number 56 was manually annotated 4 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 56 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster R:

- Start number 22 was manually annotated 9 times for cluster R.

Info for manual annotations of cluster S:

- Start number 28 was manually annotated 1 time for cluster S.
- Start number 36 was manually annotated 1 time for cluster S.
- Start number 47 was manually annotated 16 times for cluster S.

**Gene Information:**

Gene: AcciDwight\_273 Start: 122747, Stop: 121707, Start Num: 40

Candidate Starts for AcciDwight\_273:

(Start: 40 @122747 has 21 MA's), (Start: 51 @122702 has 141 MA's), (75, 122591), (87, 122558), (103, 122525), (110, 122513), (113, 122504), (137, 122456), (138, 122438), (139, 122435), (171, 122291), (175, 122282), (183, 122240), (191, 122210), (201, 122171), (205, 122153), (214, 122123), (229, 122060), (258, 121928), (274, 121868), (282, 121820), (293, 121763), (306, 121727),

Gene: AcciDwight\_3 Start: 2651, Stop: 1611, Start Num: 40

Candidate Starts for AcciDwight\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: Akoni\_17 Start: 12296, Stop: 11307, Start Num: 55

Candidate Starts for Akoni\_17:

(Start: 55 @12296 has 37 MA's), (79, 12182), (84, 12167), (136, 12053), (140, 12014), (141, 12005), (161, 11921), (191, 11792), (214, 11699), (234, 11612), (265, 11492), (280, 11414), (287, 11372), (291, 11354), (299, 11327),

Gene: AloeVera\_17 Start: 12296, Stop: 11307, Start Num: 55

Candidate Starts for AloeVera\_17:

(Start: 55 @12296 has 37 MA's), (79, 12182), (84, 12167), (136, 12053), (140, 12014), (141, 12005), (161, 11921), (191, 11792), (214, 11699), (234, 11612), (265, 11492), (280, 11414), (287, 11372), (291, 11354), (299, 11327),

Gene: Amabiko\_3 Start: 2651, Stop: 1611, Start Num: 40

Candidate Starts for Amabiko\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: Amabiko\_267 Start: 121477, Stop: 120437, Start Num: 40

Candidate Starts for Amabiko\_267:

(Start: 40 @121477 has 21 MA's), (Start: 51 @121432 has 141 MA's), (75, 121321), (87, 121288), (103, 121255), (110, 121243), (113, 121234), (137, 121186), (138, 121168), (139, 121165), (171, 121021), (175, 121012), (183, 120970), (191, 120940), (201, 120901), (205, 120883), (214, 120853), (229, 120790), (258, 120658), (274, 120598), (282, 120550), (293, 120493), (306, 120457),

Gene: Anedea\_267 Start: 125337, Stop: 124315, Start Num: 51

Candidate Starts for Anedea\_267:

(Start: 51 @125337 has 141 MA's), (69, 125256), (75, 125226), (87, 125193), (91, 125178), (97, 125166), (99, 125160), (112, 125121), (137, 125067), (158, 124956), (159, 124953), (171, 124902), (182, 124857), (191, 124821), (201, 124782), (205, 124764), (214, 124734), (229, 124671), (233, 124653), (250, 124575), (258, 124542), (282, 124434), (285, 124416), (293, 124377),

Gene: Anedea\_2 Start: 2288, Stop: 1266, Start Num: 51

Candidate Starts for Anedea\_2:

(Start: 51 @2288 has 141 MA's), (69, 2207), (75, 2177), (87, 2144), (91, 2129), (97, 2117), (99, 2111), (112, 2072), (137, 2018), (158, 1907), (159, 1904), (171, 1853), (182, 1808), (191, 1772), (201, 1733), (205, 1715), (214, 1685), (229, 1622), (233, 1604), (250, 1526), (258, 1493), (282, 1385), (285, 1367), (293, 1328),

Gene: Angela\_259 Start: 124677, Stop: 123661, Start Num: 51

Candidate Starts for Angela\_259:

(46, 124689), (Start: 51 @124677 has 141 MA's), (69, 124596), (75, 124566), (91, 124518), (96, 124509), (97, 124506), (99, 124500), (106, 124476), (112, 124461), (137, 124407), (158, 124296), (171, 124242), (191, 124161), (201, 124122), (205, 124104), (214, 124074), (229, 124011), (250, 123915), (258, 123882), (274, 123822), (282, 123774), (285, 123756), (293, 123717),

Gene: Angela\_2 Start: 2274, Stop: 1258, Start Num: 51

Candidate Starts for Angela\_2:

(46, 2286), (Start: 51 @2274 has 141 MA's), (69, 2193), (75, 2163), (91, 2115), (96, 2106), (97, 2103), (99, 2097), (106, 2073), (112, 2058), (137, 2004), (158, 1893), (171, 1839), (191, 1758), (201, 1719), (205, 1701), (214, 1671), (229, 1608), (250, 1512), (258, 1479), (274, 1419), (282, 1371), (285, 1353), (293, 1314),

Gene: AngryGiraffe\_4 Start: 2628, Stop: 1627, Start Num: 51

Candidate Starts for AngryGiraffe\_4:

(31, 2694), (34, 2685), (Start: 51 @2628 has 141 MA's), (75, 2517), (113, 2430), (165, 2238), (171, 2217), (175, 2208), (183, 2166), (191, 2136), (201, 2097), (205, 2079), (214, 2049), (229, 1986), (258, 1854), (274, 1794), (282, 1746), (285, 1728), (293, 1689),

Gene: AngryGiraffe\_260 Start: 120971, Stop: 119970, Start Num: 51

Candidate Starts for AngryGiraffe\_260:

(31, 121037), (34, 121028), (Start: 51 @120971 has 141 MA's), (75, 120860), (113, 120773), (165, 120581), (171, 120560), (175, 120551), (183, 120509), (191, 120479), (201, 120440), (205, 120422), (214, 120392), (229, 120329), (258, 120197), (274, 120137), (282, 120089), (285, 120071), (293, 120032),

Gene: Annadreamy\_205 Start: 103409, Stop: 104425, Start Num: 52

Candidate Starts for Annadreamy\_205:

(Start: 52 @103409 has 4 MA's), (59, 103436), (72, 103508), (75, 103523), (90, 103562), (118, 103631), (138, 103676), (177, 103850), (186, 103898), (195, 103934), (197, 103940), (209, 103985), (229, 104060), (234, 104084), (267, 104219), (289, 104348), (290, 104354), (302, 104387), (306, 104399), (307, 104402),

Gene: Antares\_58 Start: 37535, Stop: 38530, Start Num: 47

Candidate Starts for Antares\_58:

(Start: 47 @37535 has 75 MA's), (79, 37655), (84, 37664), (89, 37676), (108, 37709), (113, 37715), (117, 37733), (141, 37844), (160, 37925), (180, 38003), (182, 38015), (214, 38138), (221, 38168), (264, 38339), (272, 38360), (276, 38390), (280, 38423), (289, 38471),

Gene: Ariadne\_67 Start: 39139, Stop: 40134, Start Num: 47

Candidate Starts for Ariadne\_67:

(Start: 47 @39139 has 75 MA's), (54, 39154), (79, 39259), (84, 39268), (89, 39280), (108, 39313), (113, 39319), (117, 39337), (134, 39394), (141, 39448), (160, 39529), (170, 39571), (180, 39607), (182, 39619), (214, 39742), (221, 39772), (234, 39832), (264, 39943), (272, 39964), (278, 40006), (302, 40117),

Gene: Artu\_166 Start: 112919, Stop: 113896, Start Num: 49

Candidate Starts for Artu\_166:

(Start: 49 @112919 has 5 MA's), (60, 112961), (98, 113087), (142, 113222), (160, 113303), (177, 113366), (195, 113450), (220, 113540), (231, 113585), (258, 113684), (278, 113759),

Gene: Ashton\_17 Start: 12300, Stop: 11311, Start Num: 55

Candidate Starts for Ashton\_17:

(Start: 55 @12300 has 37 MA's), (79, 12186), (84, 12171), (136, 12057), (140, 12018), (141, 12009), (161, 11925), (191, 11796), (214, 11703), (234, 11616), (265, 11496), (280, 11418), (287, 11376), (291, 11358), (299, 11331),

Gene: Astartes\_18 Start: 12572, Stop: 11568, Start Num: 55

Candidate Starts for Astartes\_18:

(Start: 55 @12572 has 37 MA's), (84, 12443), (131, 12347), (140, 12278), (141, 12269), (159, 12194), (191, 12056), (214, 11963), (231, 11891), (234, 11876), (237, 11861), (240, 11849), (246, 11831), (254, 11786), (284, 11654), (291, 11615), (305, 11573),

Gene: Atraxi\_17 Start: 12329, Stop: 11325, Start Num: 55

Candidate Starts for Atraxi\_17:

(Start: 55 @12329 has 37 MA's), (84, 12200), (131, 12104), (140, 12035), (141, 12026), (161, 11942), (191, 11813), (214, 11720), (231, 11648), (237, 11618), (240, 11606), (246, 11588), (254, 11543), (284, 11411), (291, 11372), (305, 11330),

Gene: Atuin\_167 Start: 115486, Stop: 116493, Start Num: 49

Candidate Starts for Atuin\_167:

(Start: 49 @115486 has 5 MA's), (60, 115528), (69, 115573), (95, 115660), (142, 115816), (160, 115897), (177, 115960), (195, 116044), (220, 116134), (231, 116179), (232, 116182), (255, 116266), (257, 116272), (258, 116278),

Gene: Auspice\_149 Start: 75730, Stop: 74657, Start Num: 56

Candidate Starts for Auspice\_149:

(7, 75907), (9, 75895), (Start: 25 @75826 has 6 MA's), (37, 75805), (Start: 56 @75730 has 13 MA's), (79, 75625), (83, 75616), (93, 75580), (112, 75526), (121, 75493), (131, 75463), (144, 75379), (165, 75283), (189, 75184), (193, 75166), (206, 75103), (210, 75094), (213, 75082), (214, 75079), (226, 75028), (239, 74968), (266, 74869), (269, 74860), (277, 74824), (283, 74785), (306, 74689), (308, 74680),

Gene: Aziz\_161 Start: 77655, Stop: 76582, Start Num: 56

Candidate Starts for Aziz\_161:

(Start: 56 @77655 has 13 MA's), (83, 77541), (92, 77511), (104, 77481), (112, 77451), (131, 77388), (135, 77364), (144, 77304), (165, 77208), (177, 77166), (193, 77091), (206, 77028), (210, 77019), (212, 77010), (216, 76995), (226, 76953), (231, 76932), (234, 76917), (239, 76893), (240, 76890), (269, 76785), (278, 76740), (283, 76710), (286, 76683), (306, 76614), (308, 76605), (310, 76596),

Gene: Barroma\_17 Start: 12296, Stop: 11307, Start Num: 55

Candidate Starts for Barroma\_17:

(Start: 55 @12296 has 37 MA's), (79, 12182), (84, 12167), (136, 12053), (140, 12014), (141, 12005), (161, 11921), (191, 11792), (214, 11699), (234, 11612), (265, 11492), (280, 11414), (287, 11372), (291, 11354), (299, 11327),

Gene: Bartholomune\_3 Start: 2417, Stop: 1404, Start Num: 51

Candidate Starts for Bartholomune\_3:

(9, 2567), (16, 2531), (Start: 20 @2510 has 4 MA's), (29, 2492), (Start: 51 @2417 has 141 MA's), (69, 2336), (75, 2306), (97, 2246), (106, 2216), (112, 2201), (113, 2198), (137, 2150), (158, 2039), (171, 1985), (182, 1940), (191, 1904), (201, 1865), (205, 1847), (214, 1817), (250, 1658), (258, 1625), (274, 1565), (282, 1517), (285, 1499), (293, 1460),

Gene: Bartholomune\_253 Start: 123516, Stop: 122503, Start Num: 51

Candidate Starts for Bartholomune\_253:

(9, 123666), (16, 123630), (Start: 20 @123609 has 4 MA's), (29, 123591), (Start: 51 @123516 has 141 MA's), (69, 123435), (75, 123405), (97, 123345), (106, 123315), (112, 123300), (113, 123297), (137, 123249), (158, 123138), (171, 123084), (182, 123039), (191, 123003), (201, 122964), (205, 122946), (214, 122916), (250, 122757), (258, 122724), (274, 122664), (282, 122616), (285, 122598), (293, 122559),

Gene: Battuta\_3 Start: 2606, Stop: 1611, Start Num: 51

Candidate Starts for Battuta\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: Battuta\_260 Start: 120761, Stop: 119766, Start Num: 51

Candidate Starts for Battuta\_260:

(Start: 40 @120806 has 21 MA's), (Start: 51 @120761 has 141 MA's), (75, 120650), (87, 120617), (103, 120584), (110, 120572), (113, 120563), (137, 120515), (138, 120497), (139, 120494), (171, 120350), (175, 120341), (183, 120299), (191, 120269), (201, 120230), (205, 120212), (214, 120182), (229, 120119), (258, 119987), (274, 119927), (282, 119879), (293, 119822), (306, 119786),

Gene: BeagleBug\_57 Start: 37316, Stop: 38311, Start Num: 47

Candidate Starts for BeagleBug\_57:

(Start: 47 @37316 has 75 MA's), (79, 37436), (84, 37445), (89, 37457), (108, 37490), (113, 37496), (117, 37514), (141, 37625), (160, 37706), (180, 37784), (182, 37796), (214, 37919), (221, 37949), (264, 38120), (272, 38141), (276, 38171), (280, 38204), (289, 38252),

Gene: Beelzebub\_104 Start: 58128, Stop: 57004, Start Num: 36

Candidate Starts for Beelzebub\_104:

(Start: 36 @58128 has 1 MA's), (38, 58119), (Start: 47 @58074 has 75 MA's), (54, 58059), (61, 58026), (85, 57933), (93, 57900), (103, 57876), (111, 57843), (112, 57840), (113, 57837), (116, 57822), (119, 57810), (130, 57783), (144, 57696), (149, 57684), (155, 57651), (160, 57624), (162, 57618), (165, 57600), (177, 57558), (180, 57543), (187, 57507), (191, 57495), (207, 57417), (211, 57411), (218, 57384), (224, 57363), (240, 57288), (263, 57213), (270, 57192), (272, 57189), (306, 57021), (307, 57018),

Gene: Belfort\_218 Start: 108041, Stop: 109063, Start Num: 50

Candidate Starts for Belfort\_218:

(Start: 50 @108041 has 9 MA's), (59, 108071), (75, 108152), (82, 108170), (97, 108212), (106, 108230), (113, 108248), (163, 108428), (177, 108491), (183, 108524), (185, 108536), (186, 108539), (190, 108551), (209, 108626), (229, 108701), (234, 108725), (241, 108755), (255, 108818), (306, 109037),

Gene: Beuffert\_213 Start: 107581, Stop: 108594, Start Num: 52

Candidate Starts for Beuffert\_213:

(Start: 52 @107581 has 4 MA's), (59, 107608), (72, 107680), (75, 107695), (90, 107734), (118, 107803), (138, 107848), (177, 108022), (195, 108106), (197, 108112), (209, 108157), (229, 108232),

(234, 108256), (267, 108391), (289, 108520), (306, 108571), (307, 108574),

Gene: Blackbeetle\_101 Start: 57574, Stop: 56504, Start Num: 47

Candidate Starts for Blackbeetle\_101:

(26, 57646), (Start: 28 @57643 has 1 MA's), (32, 57637), (Start: 47 @57574 has 75 MA's), (54, 57559), (61, 57526), (85, 57433), (93, 57400), (103, 57376), (111, 57343), (112, 57340), (113, 57337), (116, 57322), (119, 57310), (130, 57283), (144, 57196), (149, 57184), (155, 57151), (160, 57124), (162, 57118), (165, 57100), (177, 57058), (180, 57043), (187, 57007), (191, 56995), (207, 56917), (211, 56911), (218, 56884), (224, 56863), (240, 56788), (263, 56713), (270, 56692), (272, 56689), (306, 56521), (307, 56518),

Gene: BlueOtter\_250 Start: 123312, Stop: 122299, Start Num: 51

Candidate Starts for BlueOtter\_250:

(Start: 10 @123459 has 4 MA's), (Start: 20 @123405 has 4 MA's), (29, 123387), (Start: 51 @123312 has 141 MA's), (75, 123201), (87, 123168), (97, 123141), (103, 123132), (106, 123111), (112, 123096), (137, 123045), (158, 122934), (171, 122880), (191, 122799), (201, 122760), (205, 122742), (214, 122712), (229, 122649), (247, 122565), (250, 122553), (258, 122520), (274, 122460), (282, 122412), (285, 122394), (293, 122355),

Gene: BlueOtter\_2 Start: 2225, Stop: 1212, Start Num: 51

Candidate Starts for BlueOtter\_2:

(Start: 10 @2372 has 4 MA's), (Start: 20 @2318 has 4 MA's), (29, 2300), (Start: 51 @2225 has 141 MA's), (75, 2114), (87, 2081), (97, 2054), (103, 2045), (106, 2024), (112, 2009), (137, 1958), (158, 1847), (171, 1793), (191, 1712), (201, 1673), (205, 1655), (214, 1625), (229, 1562), (247, 1478), (250, 1466), (258, 1433), (274, 1373), (282, 1325), (285, 1307), (293, 1268),

Gene: Blueeyedbeauty\_214 Start: 107117, Stop: 108130, Start Num: 52

Candidate Starts for Blueeyedbeauty\_214:

(Start: 52 @107117 has 4 MA's), (59, 107144), (72, 107216), (75, 107231), (90, 107270), (118, 107339), (177, 107558), (186, 107606), (195, 107642), (197, 107648), (209, 107693), (229, 107768), (234, 107792), (267, 107927), (289, 108056), (306, 108107), (307, 108110),

Gene: Bmoc\_2 Start: 2308, Stop: 1286, Start Num: 51

Candidate Starts for Bmoc\_2:

(Start: 51 @2308 has 141 MA's), (69, 2227), (75, 2197), (91, 2149), (97, 2137), (99, 2131), (112, 2092), (137, 2038), (158, 1927), (159, 1924), (171, 1873), (182, 1828), (191, 1792), (201, 1753), (205, 1735), (214, 1705), (229, 1642), (233, 1624), (250, 1546), (258, 1513), (282, 1405), (285, 1387), (293, 1348),

Gene: Bmoc\_258 Start: 124130, Stop: 123108, Start Num: 51

Candidate Starts for Bmoc\_258:

(Start: 51 @124130 has 141 MA's), (69, 124049), (75, 124019), (91, 123971), (97, 123959), (99, 123953), (112, 123914), (137, 123860), (158, 123749), (159, 123746), (171, 123695), (182, 123650), (191, 123614), (201, 123575), (205, 123557), (214, 123527), (229, 123464), (233, 123446), (250, 123368), (258, 123335), (282, 123227), (285, 123209), (293, 123170),

Gene: Bongo\_143 Start: 74587, Stop: 73514, Start Num: 56

Candidate Starts for Bongo\_143:

(7, 74764), (9, 74752), (Start: 25 @74683 has 6 MA's), (37, 74662), (Start: 56 @74587 has 13 MA's), (79, 74482), (83, 74473), (93, 74437), (112, 74383), (121, 74350), (131, 74320), (144, 74236), (165, 74140), (180, 74083), (189, 74041), (193, 74023), (206, 73960), (210, 73951), (213, 73939), (214, 73936), (226, 73885), (239, 73825), (266, 73726), (269, 73717), (277, 73681), (283, 73642), (286, 73615), (306, 73546), (308, 73537),

Gene: BooTeria\_173 Start: 113088, Stop: 114065, Start Num: 49

Candidate Starts for BooTeria\_173:

(Start: 49 @113088 has 5 MA's), (60, 113130), (98, 113256), (142, 113391), (160, 113472), (177, 113535), (195, 113619), (220, 113709), (231, 113754), (258, 113853), (278, 113928),

Gene: BoomerJR\_259 Start: 121416, Stop: 120415, Start Num: 51

Candidate Starts for BoomerJR\_259:

(31, 121482), (34, 121473), (Start: 51 @121416 has 141 MA's), (75, 121305), (113, 121218), (165, 121026), (171, 121005), (175, 120996), (183, 120954), (191, 120924), (201, 120885), (205, 120867), (214, 120837), (229, 120774), (258, 120642), (274, 120582), (282, 120534), (285, 120516), (293, 120477),

Gene: BoomerJR\_4 Start: 2628, Stop: 1627, Start Num: 51

Candidate Starts for BoomerJR\_4:

(31, 2694), (34, 2685), (Start: 51 @2628 has 141 MA's), (75, 2517), (113, 2430), (165, 2238), (171, 2217), (175, 2208), (183, 2166), (191, 2136), (201, 2097), (205, 2079), (214, 2049), (229, 1986), (258, 1854), (274, 1794), (282, 1746), (285, 1728), (293, 1689),

Gene: Bordeaux\_260 Start: 121389, Stop: 120349, Start Num: 40

Candidate Starts for Bordeaux\_260:

(Start: 40 @121389 has 21 MA's), (Start: 51 @121344 has 141 MA's), (75, 121233), (87, 121200), (103, 121167), (110, 121155), (113, 121146), (137, 121098), (138, 121080), (139, 121077), (171, 120933), (175, 120924), (183, 120882), (191, 120852), (201, 120813), (205, 120795), (214, 120765), (229, 120702), (258, 120570), (274, 120510), (282, 120462), (293, 120405), (306, 120369),

Gene: Bordeaux\_3 Start: 2651, Stop: 1611, Start Num: 40

Candidate Starts for Bordeaux\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: Braelyn\_248 Start: 122839, Stop: 121826, Start Num: 51

Candidate Starts for Braelyn\_248:

(9, 122989), (16, 122953), (Start: 20 @122932 has 4 MA's), (29, 122914), (Start: 51 @122839 has 141 MA's), (69, 122758), (75, 122728), (97, 122668), (106, 122638), (112, 122623), (113, 122620), (137, 122572), (158, 122461), (171, 122407), (182, 122362), (191, 122326), (201, 122287), (205, 122269), (214, 122239), (250, 122080), (258, 122047), (274, 121987), (282, 121939), (285, 121921), (293, 121882),

Gene: Braelyn\_3 Start: 2429, Stop: 1416, Start Num: 51

Candidate Starts for Braelyn\_3:

(9, 2579), (16, 2543), (Start: 20 @2522 has 4 MA's), (29, 2504), (Start: 51 @2429 has 141 MA's), (69, 2348), (75, 2318), (97, 2258), (106, 2228), (112, 2213), (113, 2210), (137, 2162), (158, 2051), (171, 1997), (182, 1952), (191, 1916), (201, 1877), (205, 1859), (214, 1829), (250, 1670), (258, 1637), (274, 1577), (282, 1529), (285, 1511), (293, 1472),

Gene: BrazzalePHS\_57 Start: 37331, Stop: 38326, Start Num: 47

Candidate Starts for BrazzalePHS\_57:

(Start: 47 @37331 has 75 MA's), (79, 37451), (84, 37460), (89, 37472), (108, 37505), (113, 37511), (117, 37529), (141, 37640), (160, 37721), (180, 37799), (182, 37811), (214, 37934), (221, 37964), (264, 38135), (272, 38156), (276, 38186), (280, 38219), (289, 38267),

Gene: Bricole\_151 Start: 75493, Stop: 74420, Start Num: 56

Candidate Starts for Bricole\_151:

(7, 75670), (9, 75658), (Start: 25 @75589 has 6 MA's), (37, 75568), (Start: 56 @75493 has 13 MA's), (79, 75388), (83, 75379), (93, 75343), (112, 75289), (121, 75256), (131, 75226), (144, 75142), (165, 75046), (180, 74989), (189, 74947), (193, 74929), (206, 74866), (210, 74857), (213, 74845), (214, 74842), (226, 74791), (239, 74731), (266, 74632), (269, 74623), (277, 74587), (283, 74548), (306, 74452), (308, 74443),

Gene: Brizzy\_2 Start: 2240, Stop: 1200, Start Num: 40

Candidate Starts for Brizzy\_2:

(Start: 40 @2240 has 21 MA's), (Start: 51 @2195 has 141 MA's), (75, 2084), (87, 2051), (103, 2018), (110, 2006), (113, 1997), (137, 1949), (138, 1931), (139, 1928), (171, 1784), (175, 1775), (183, 1733), (191, 1703), (201, 1664), (205, 1646), (214, 1616), (229, 1553), (258, 1421), (274, 1361), (282, 1313), (293, 1256), (306, 1220),

Gene: Brizzy\_260 Start: 121463, Stop: 120468, Start Num: 51

Candidate Starts for Brizzy\_260:

(Start: 40 @121508 has 21 MA's), (Start: 51 @121463 has 141 MA's), (75, 121352), (87, 121319), (103, 121286), (110, 121274), (113, 121265), (137, 121217), (138, 121199), (139, 121196), (171, 121052), (175, 121043), (183, 121001), (191, 120971), (201, 120932), (205, 120914), (214, 120884), (229, 120821), (258, 120689), (274, 120629), (282, 120581), (293, 120524), (306, 120488),

Gene: Busephilis\_57 Start: 37241, Stop: 38236, Start Num: 47

Candidate Starts for Busephilis\_57:

(Start: 47 @37241 has 75 MA's), (79, 37361), (84, 37370), (89, 37382), (108, 37415), (113, 37421), (117, 37439), (141, 37550), (160, 37631), (180, 37709), (182, 37721), (214, 37844), (221, 37874), (225, 37886), (264, 38045), (272, 38066), (276, 38096), (280, 38129), (289, 38177),

Gene: Cadmus\_250 Start: 124744, Stop: 123731, Start Num: 51

Candidate Starts for Cadmus\_250:

(46, 124756), (Start: 51 @124744 has 141 MA's), (69, 124663), (75, 124633), (99, 124567), (112, 124528), (137, 124477), (158, 124366), (159, 124363), (171, 124312), (175, 124303), (177, 124294), (191, 124231), (201, 124192), (205, 124174), (214, 124144), (229, 124081), (247, 123997), (250, 123985), (258, 123952), (274, 123892), (282, 123844), (285, 123826), (294, 123784),

Gene: Cadmus\_2 Start: 2263, Stop: 1250, Start Num: 51

Candidate Starts for Cadmus\_2:

(46, 2275), (Start: 51 @2263 has 141 MA's), (69, 2182), (75, 2152), (99, 2086), (112, 2047), (137, 1996), (158, 1885), (159, 1882), (171, 1831), (175, 1822), (177, 1813), (191, 1750), (201, 1711), (205, 1693), (214, 1663), (229, 1600), (247, 1516), (250, 1504), (258, 1471), (274, 1411), (282, 1363), (285, 1345), (294, 1303),

Gene: Candle\_59 Start: 44716, Stop: 45912, Start Num: 22

Candidate Starts for Candle\_59:

(Start: 22 @44716 has 12 MA's), (30, 44731), (48, 44797), (54, 44806), (71, 44887), (77, 44908), (81, 44923), (90, 44950), (105, 45010), (112, 45031), (119, 45064), (141, 45175), (143, 45181), (147, 45193), (156, 45232), (162, 45262), (170, 45301), (189, 45379), (191, 45385), (194, 45400), (227, 45538), (234, 45571), (239, 45595), (264, 45688), (269, 45706), (276, 45739), (289, 45823), (295, 45844), (299, 45859), (306, 45877), (307, 45880), (308, 45886), (310, 45895), (311, 45898),

Gene: Caprice\_92 Start: 57512, Stop: 56442, Start Num: 47

Candidate Starts for Caprice\_92:

(Start: 36 @57566 has 1 MA's), (38, 57557), (Start: 47 @57512 has 75 MA's), (54, 57497), (61, 57464), (85, 57371), (93, 57338), (103, 57314), (111, 57281), (112, 57278), (113, 57275), (116, 57260), (119, 57248), (130, 57221), (144, 57134), (149, 57122), (155, 57089), (160, 57062), (162, 57056), (165, 57038), (177, 56996), (180, 56981), (187, 56945), (191, 56933), (207, 56855), (211, 56849), (218, 56822), (224, 56801), (234, 56753), (240, 56726), (263, 56651), (270, 56630), (272, 56627), (306, 56459), (307, 56456),

Gene: CeilingFan\_268 Start: 122824, Stop: 121829, Start Num: 51

Candidate Starts for CeilingFan\_268:

(Start: 40 @122869 has 21 MA's), (Start: 51 @122824 has 141 MA's), (75, 122713), (87, 122680), (103, 122647), (110, 122635), (113, 122626), (137, 122578), (138, 122560), (139, 122557), (171, 122413), (175, 122404), (183, 122362), (191, 122332), (201, 122293), (205, 122275), (214, 122245), (229, 122182), (258, 122050), (274, 121990), (282, 121942), (293, 121885), (306, 121849),

Gene: CeilingFan\_2 Start: 2217, Stop: 1222, Start Num: 51

Candidate Starts for CeilingFan\_2:

(Start: 40 @2262 has 21 MA's), (Start: 51 @2217 has 141 MA's), (75, 2106), (87, 2073), (103, 2040), (110, 2028), (113, 2019), (137, 1971), (138, 1953), (139, 1950), (171, 1806), (175, 1797), (183, 1755), (191, 1725), (201, 1686), (205, 1668), (214, 1638), (229, 1575), (258, 1443), (274, 1383), (282, 1335), (293, 1278), (306, 1242),

Gene: Cinna\_55 Start: 38481, Stop: 39482, Start Num: 55

Candidate Starts for Cinna\_55:

(Start: 55 @38481 has 37 MA's), (64, 38529), (69, 38553), (79, 38595), (94, 38637), (128, 38697), (136, 38736), (139, 38760), (140, 38775), (141, 38784), (150, 38811), (152, 38817), (154, 38820), (161, 38868), (198, 39027), (228, 39150), (231, 39162), (234, 39177), (249, 39237), (251, 39252), (267, 39306),

Gene: Clarkson\_101 Start: 57755, Stop: 56685, Start Num: 47

Candidate Starts for Clarkson\_101:

(Start: 36 @57809 has 1 MA's), (38, 57800), (Start: 47 @57755 has 75 MA's), (54, 57740), (61, 57707), (85, 57614), (93, 57581), (103, 57557), (111, 57524), (112, 57521), (113, 57518), (116, 57503), (119, 57491), (130, 57464), (144, 57377), (149, 57365), (155, 57332), (160, 57305), (162, 57299), (165, 57281), (177, 57239), (180, 57224), (187, 57188), (191, 57176), (207, 57098), (211, 57092), (218, 57065), (224, 57044), (240, 56969), (263, 56894), (270, 56873), (272, 56870), (306, 56702), (307, 56699),

Gene: ClearAsMud\_62 Start: 37812, Stop: 38807, Start Num: 47

Candidate Starts for ClearAsMud\_62:

(Start: 47 @37812 has 75 MA's), (79, 37932), (84, 37941), (89, 37953), (108, 37986), (113, 37992), (117, 38010), (141, 38121), (160, 38202), (170, 38244), (180, 38280), (182, 38292), (214, 38415), (221, 38445), (225, 38457), (264, 38616), (272, 38637), (278, 38679), (280, 38700), (289, 38748),

Gene: Comrade\_215 Start: 108241, Stop: 109263, Start Num: 50

Candidate Starts for Comrade\_215:

(Start: 50 @108241 has 9 MA's), (59, 108271), (75, 108352), (82, 108370), (97, 108412), (106, 108430), (113, 108448), (163, 108628), (177, 108691), (183, 108724), (185, 108736), (186, 108739), (190, 108751), (209, 108826), (229, 108901), (234, 108925), (241, 108955), (255, 109018), (306, 109237),

Gene: Coogler\_2 Start: 2225, Stop: 1212, Start Num: 51

Candidate Starts for Coogler\_2:

(Start: 10 @2372 has 4 MA's), (Start: 20 @2318 has 4 MA's), (29, 2300), (Start: 51 @2225 has 141 MA's), (75, 2114), (87, 2081), (97, 2054), (103, 2045), (106, 2024), (112, 2009), (137, 1958), (158, 1847), (171, 1793), (191, 1712), (201, 1673), (205, 1655), (214, 1625), (229, 1562), (247, 1478), (250, 1466), (258, 1433), (274, 1373), (282, 1325), (285, 1307), (293, 1268),

Gene: Coogler\_248 Start: 123737, Stop: 122724, Start Num: 51

Candidate Starts for Coogler\_248:

(Start: 10 @123884 has 4 MA's), (Start: 20 @123830 has 4 MA's), (29, 123812), (Start: 51 @123737 has 141 MA's), (75, 123626), (87, 123593), (97, 123566), (103, 123557), (106, 123536), (112, 123521), (137, 123470), (158, 123359), (171, 123305), (191, 123224), (201, 123185), (205, 123167), (214, 123137), (229, 123074), (247, 122990), (250, 122978), (258, 122945), (274, 122885), (282, 122837), (285, 122819), (293, 122780),

Gene: Corazon\_95 Start: 57949, Stop: 56879, Start Num: 47

Candidate Starts for Corazon\_95:

(Start: 36 @58003 has 1 MA's), (38, 57994), (Start: 47 @57949 has 75 MA's), (54, 57934), (61, 57901), (85, 57808), (93, 57775), (103, 57751), (111, 57718), (112, 57715), (113, 57712), (116, 57697), (119, 57685), (130, 57658), (144, 57571), (149, 57559), (155, 57526), (160, 57499), (162, 57493), (165, 57475), (177, 57433), (180, 57418), (187, 57382), (191, 57370), (207, 57292), (211, 57286), (218, 57259), (224, 57238), (240, 57163), (263, 57088), (270, 57067), (272, 57064), (306, 56896), (307, 56893),

Gene: Cranjis\_59 Start: 37490, Stop: 38485, Start Num: 47

Candidate Starts for Cranjis\_59:

(Start: 47 @37490 has 75 MA's), (79, 37610), (84, 37619), (89, 37631), (108, 37664), (113, 37670), (117, 37688), (141, 37799), (160, 37880), (180, 37958), (182, 37970), (214, 38093), (221, 38123), (264, 38294), (272, 38315), (276, 38345), (280, 38378), (289, 38426),

Gene: CrazyRich\_57 Start: 37299, Stop: 38294, Start Num: 47

Candidate Starts for CrazyRich\_57:

(Start: 47 @37299 has 75 MA's), (79, 37419), (84, 37428), (89, 37440), (108, 37473), (113, 37479), (117, 37497), (141, 37608), (160, 37689), (180, 37767), (182, 37779), (214, 37902), (221, 37932), (264, 38103), (272, 38124), (276, 38154), (280, 38187), (289, 38235),

Gene: Cressida\_58 Start: 38132, Stop: 39133, Start Num: 55

Candidate Starts for Cressida\_58:

(Start: 55 @38132 has 37 MA's), (64, 38180), (69, 38204), (79, 38246), (94, 38288), (128, 38348), (136, 38387), (139, 38411), (140, 38426), (150, 38462), (152, 38468), (154, 38471), (161, 38519), (198, 38678), (228, 38801), (231, 38813), (234, 38828), (249, 38888), (251, 38903), (267, 38957), (287, 39068), (304, 39125),

Gene: Crisis\_59 Start: 37290, Stop: 38285, Start Num: 47

Candidate Starts for Crisis\_59:

(Start: 47 @37290 has 75 MA's), (79, 37410), (84, 37419), (89, 37431), (108, 37464), (113, 37470), (117, 37488), (141, 37599), (160, 37680), (180, 37758), (182, 37770), (214, 37893), (221, 37923), (264, 38094), (272, 38115), (276, 38145), (280, 38178), (289, 38226),

Gene: Cross\_2 Start: 2225, Stop: 1212, Start Num: 51

Candidate Starts for Cross\_2:

(Start: 10 @2372 has 4 MA's), (Start: 20 @2318 has 4 MA's), (29, 2300), (Start: 51 @2225 has 141 MA's), (75, 2114), (87, 2081), (97, 2054), (103, 2045), (106, 2024), (112, 2009), (137, 1958), (158, 1847), (171, 1793), (191, 1712), (201, 1673), (205, 1655), (214, 1625), (229, 1562), (247, 1478), (250, 1466), (258, 1433), (274, 1373), (282, 1325), (285, 1307), (293, 1268),

Gene: Cross\_250 Start: 123957, Stop: 122944, Start Num: 51

Candidate Starts for Cross\_250:

(Start: 10 @124104 has 4 MA's), (Start: 20 @124050 has 4 MA's), (29, 124032), (Start: 51 @123957 has 141 MA's), (75, 123846), (87, 123813), (97, 123786), (103, 123777), (106, 123756), (112, 123741), (137, 123690), (158, 123579), (171, 123525), (191, 123444), (201, 123405), (205, 123387), (214, 123357), (229, 123294), (247, 123210), (250, 123198), (258, 123165), (274, 123105), (282, 123057), (285, 123039), (293, 123000),

Gene: Cuke\_50 Start: 34724, Stop: 35866, Start Num: 22

Candidate Starts for Cuke\_50:

(Start: 22 @34724 has 12 MA's), (44, 34790), (Start: 56 @34826 has 13 MA's), (58, 34832), (66, 34874), (77, 34925), (102, 34988), (129, 35075), (141, 35126), (149, 35147), (155, 35180), (160, 35207), (162, 35213), (164, 35219), (170, 35252), (173, 35261), (189, 35330), (195, 35357), (210, 35420), (229, 35498), (244, 35561), (246, 35567), (261, 35636), (269, 35663), (271, 35666), (273, 35675), (276, 35696), (285, 35753), (287, 35765), (288, 35774), (301, 35816), (310, 35849),

Gene: CurlyFries\_41 Start: 30554, Stop: 29493, Start Num: 45

Candidate Starts for CurlyFries\_41:

(Start: 45 @30554 has 1 MA's), (Start: 47 @30545 has 75 MA's), (61, 30497), (101, 30368), (111, 30329), (122, 30284), (126, 30275), (134, 30242), (162, 30101), (164, 30095), (194, 29963), (264, 29699), (277, 29645), (283, 29606), (298, 29531),

Gene: Cursive\_2 Start: 2225, Stop: 1212, Start Num: 51

Candidate Starts for Cursive\_2:

(Start: 51 @2225 has 141 MA's), (75, 2114), (87, 2081), (97, 2054), (103, 2045), (106, 2024), (112, 2009), (137, 1958), (158, 1847), (171, 1793), (191, 1712), (201, 1673), (205, 1655), (214, 1625), (229, 1562), (247, 1478), (250, 1466), (258, 1433), (274, 1373), (282, 1325), (285, 1307), (293, 1268),

Gene: Cursive\_256 Start: 124234, Stop: 123221, Start Num: 51

Candidate Starts for Cursive\_256:

(Start: 51 @124234 has 141 MA's), (75, 124123), (87, 124090), (97, 124063), (103, 124054), (106, 124033), (112, 124018), (137, 123967), (158, 123856), (171, 123802), (191, 123721), (201, 123682), (205, 123664), (214, 123634), (229, 123571), (247, 123487), (250, 123475), (258, 123442), (274, 123382), (282, 123334), (285, 123316), (293, 123277),

Gene: Davielle\_2 Start: 2215, Stop: 1202, Start Num: 51

Candidate Starts for Davielle\_2:

(9, 2365), (16, 2329), (Start: 20 @2308 has 4 MA's), (29, 2290), (Start: 51 @2215 has 141 MA's), (69, 2134), (75, 2104), (97, 2044), (106, 2014), (112, 1999), (113, 1996), (137, 1948), (158, 1837), (171, 1783), (182, 1738), (191, 1702), (201, 1663), (205, 1645), (214, 1615), (250, 1456), (258, 1423), (274, 1363), (282, 1315), (285, 1297), (293, 1258),

Gene: Davielle\_251 Start: 123375, Stop: 122362, Start Num: 51

Candidate Starts for Davielle\_251:

(9, 123525), (16, 123489), (Start: 20 @123468 has 4 MA's), (29, 123450), (Start: 51 @123375 has 141 MA's), (69, 123294), (75, 123264), (97, 123204), (106, 123174), (112, 123159), (113, 123156), (137, 123108), (158, 122997), (171, 122943), (182, 122898), (191, 122862), (201, 122823), (205, 122805), (214, 122775), (250, 122616), (258, 122583), (274, 122523), (282, 122475), (285, 122457), (293, 122418),

Gene: DeluluLabubu\_223 Start: 108278, Stop: 109300, Start Num: 51

Candidate Starts for DeluluLabubu\_223:

(Start: 51 @108278 has 141 MA's), (59, 108308), (75, 108389), (82, 108407), (97, 108449), (106, 108467), (113, 108485), (163, 108665), (177, 108728), (183, 108761), (185, 108773), (186, 108776), (190, 108788), (209, 108863), (229, 108938), (234, 108962), (241, 108992), (255, 109055), (306, 109277), (310, 109292),

Gene: Dewdrop\_143 Start: 85445, Stop: 86449, Start Num: 55

Candidate Starts for Dewdrop\_143:

(Start: 55 @85445 has 37 MA's), (61, 85475), (80, 85562), (119, 85640), (137, 85703), (152, 85781), (154, 85784), (159, 85823), (167, 85859), (191, 85961), (192, 85967), (195, 85982), (217, 86069), (232, 86129), (245, 86183), (246, 86186), (251, 86216), (263, 86252), (292, 86402),

Gene: Diminimus\_146 Start: 74499, Stop: 73330, Start Num: 25

Candidate Starts for Diminimus\_146:

(7, 74580), (9, 74568), (Start: 25 @74499 has 6 MA's), (37, 74478), (Start: 56 @74403 has 13 MA's), (79, 74298), (83, 74289), (93, 74253), (112, 74199), (121, 74166), (131, 74136), (144, 74052), (165, 73956), (180, 73899), (189, 73857), (193, 73839), (206, 73776), (210, 73767), (213, 73755), (214, 73752), (226, 73701), (239, 73641), (266, 73542), (269, 73533), (277, 73497), (283, 73458), (286, 73431), (306, 73362), (308, 73353),

Gene: Dorin\_194 Start: 106517, Stop: 107539, Start Num: 51

Candidate Starts for Dorin\_194:

(Start: 51 @106517 has 141 MA's), (82, 106646), (103, 106697), (137, 106805), (159, 106910), (160, 106916), (175, 106979), (177, 106988), (185, 107033), (190, 107048), (195, 107072), (201, 107087), (220, 107162), (231, 107207), (303, 107507), (310, 107531),

Gene: Dulcita\_146 Start: 74500, Stop: 73331, Start Num: 25

Candidate Starts for Dulcita\_146:

(7, 74581), (9, 74569), (Start: 25 @74500 has 6 MA's), (37, 74479), (Start: 56 @74404 has 13 MA's), (79, 74299), (83, 74290), (93, 74254), (112, 74200), (121, 74167), (131, 74137), (144, 74053), (165, 73957), (180, 73900), (189, 73858), (193, 73840), (206, 73777), (210, 73768), (213, 73756), (214, 73753), (226, 73702), (239, 73642), (266, 73543), (269, 73534), (277, 73498), (283, 73459), (286, 73432), (306, 73363), (308, 73354),

Gene: DunneganBoMo\_164 Start: 112270, Stop: 113247, Start Num: 49

Candidate Starts for DunneganBoMo\_164:

(Start: 49 @112270 has 5 MA's), (60, 112312), (98, 112438), (142, 112573), (160, 112654), (177, 112717), (195, 112801), (220, 112891), (231, 112936), (258, 113035), (278, 113110),

Gene: EGole\_256 Start: 127107, Stop: 125947, Start Num: 10

Candidate Starts for EGole\_256:

(Start: 10 @127107 has 4 MA's), (Start: 20 @127053 has 4 MA's), (29, 127035), (Start: 51 @126960 has 141 MA's), (75, 126849), (87, 126816), (97, 126789), (103, 126780), (106, 126759), (112, 126744), (137, 126693), (158, 126582), (159, 126579), (171, 126528), (191, 126447), (201, 126408), (205, 126390), (214, 126360), (229, 126297), (233, 126279), (250, 126201), (258, 126168), (274, 126108), (282, 126060),

Gene: EGole\_2 Start: 2795, Stop: 1635, Start Num: 10

Candidate Starts for EGole\_2:

(Start: 10 @2795 has 4 MA's), (Start: 20 @2741 has 4 MA's), (29, 2723), (Start: 51 @2648 has 141 MA's), (75, 2537), (87, 2504), (97, 2477), (103, 2468), (106, 2447), (112, 2432), (137, 2381), (158, 2270), (159, 2267), (171, 2216), (191, 2135), (201, 2096), (205, 2078), (214, 2048), (229, 1985), (233, 1967), (250, 1889), (258, 1856), (274, 1796), (282, 1748),

Gene: EarickHC\_59 Start: 37213, Stop: 38208, Start Num: 47

Candidate Starts for EarickHC\_59:

(Start: 47 @37213 has 75 MA's), (79, 37333), (84, 37342), (89, 37354), (108, 37387), (113, 37393), (117, 37411), (141, 37522), (160, 37603), (180, 37681), (182, 37693), (214, 37816), (221, 37846), (264, 38017), (272, 38038), (276, 38068), (280, 38101), (289, 38149),

Gene: Eliot67\_3 Start: 2567, Stop: 1404, Start Num: 9

Candidate Starts for Eliot67\_3:

(9, 2567), (16, 2531), (Start: 20 @2510 has 4 MA's), (29, 2492), (Start: 51 @2417 has 141 MA's), (69, 2336), (75, 2306), (97, 2246), (106, 2216), (112, 2201), (113, 2198), (137, 2150), (158, 2039), (171, 1985), (182, 1940), (191, 1904), (201, 1865), (205, 1847), (214, 1817), (250, 1658), (258, 1625), (274, 1565), (282, 1517), (285, 1499), (293, 1460),

Gene: Eliot67\_254 Start: 123381, Stop: 122218, Start Num: 9

Candidate Starts for Eliot67\_254:

(9, 123381), (16, 123345), (Start: 20 @123324 has 4 MA's), (29, 123306), (Start: 51 @123231 has 141 MA's), (69, 123150), (75, 123120), (97, 123060), (106, 123030), (112, 123015), (113, 123012), (137, 122964), (158, 122853), (171, 122799), (182, 122754), (191, 122718), (201, 122679), (205, 122661), (214, 122631), (250, 122472), (258, 122439), (274, 122379), (282, 122331), (285, 122313), (293, 122274),

Gene: Ellewin\_170 Start: 112375, Stop: 113352, Start Num: 49

Candidate Starts for Ellewin\_170:

(Start: 49 @112375 has 5 MA's), (60, 112417), (98, 112543), (142, 112678), (160, 112759), (177, 112822), (195, 112906), (220, 112996), (231, 113041), (258, 113140), (278, 113215),

Gene: Elmer\_3 Start: 2485, Stop: 1490, Start Num: 51

Candidate Starts for Elmer\_3:

(Start: 8 @2632 has 1 MA's), (16, 2593), (17, 2581), (Start: 25 @2560 has 6 MA's), (34, 2542), (Start: 51 @2485 has 141 MA's), (75, 2374), (110, 2296), (113, 2287), (137, 2239), (138, 2221), (139, 2218), (171, 2074), (175, 2065), (191, 1993), (201, 1954), (205, 1936), (214, 1906), (229, 1843), (242, 1786), (258, 1711), (274, 1651), (278, 1630), (282, 1603), (285, 1585), (306, 1510), (308, 1501),

Gene: Elmer\_270 Start: 124853, Stop: 123858, Start Num: 51

Candidate Starts for Elmer\_270:

(Start: 8 @125000 has 1 MA's), (16, 124961), (17, 124949), (Start: 25 @124928 has 6 MA's), (34, 124910), (Start: 51 @124853 has 141 MA's), (75, 124742), (110, 124664), (113, 124655), (137, 124607), (138, 124589), (139, 124586), (171, 124442), (175, 124433), (191, 124361), (201, 124322), (205, 124304), (214, 124274), (229, 124211), (242, 124154), (258, 124079), (274, 124019), (278, 123998), (282, 123971), (285, 123953), (306, 123878), (308, 123869),

Gene: Emma1919\_221 Start: 106800, Stop: 107822, Start Num: 51

Candidate Starts for Emma1919\_221:

(Start: 51 @106800 has 141 MA's), (59, 106830), (75, 106911), (82, 106929), (97, 106971), (106, 106989), (113, 107007), (163, 107187), (177, 107250), (183, 107283), (185, 107295), (186, 107298), (190, 107310), (209, 107385), (229, 107460), (234, 107484), (235, 107490), (241, 107514), (255, 107577), (306, 107799), (310, 107814),

Gene: Emmetator\_167 Start: 112586, Stop: 113563, Start Num: 49

Candidate Starts for Emmetator\_167:

(Start: 49 @112586 has 5 MA's), (60, 112628), (98, 112754), (142, 112889), (160, 112970), (177, 113033), (195, 113117), (220, 113207), (231, 113252), (258, 113351), (278, 113426),

Gene: Enygma\_2 Start: 2171, Stop: 1176, Start Num: 51

Candidate Starts for Enygma\_2:

(Start: 8 @2315 has 1 MA's), (16, 2276), (18, 2261), (Start: 24 @2246 has 1 MA's), (34, 2228), (Start: 51 @2171 has 141 MA's), (75, 2060), (110, 1982), (113, 1973), (168, 1775), (175, 1751), (178, 1739), (183, 1709), (191, 1679), (201, 1640), (205, 1622), (214, 1592), (229, 1529), (258, 1397), (274, 1337), (282, 1289), (293, 1232), (306, 1196),

Gene: Enygma\_270 Start: 124595, Stop: 123600, Start Num: 51

Candidate Starts for Enygma\_270:

(Start: 8 @124739 has 1 MA's), (16, 124700), (18, 124685), (Start: 24 @124670 has 1 MA's), (34, 124652), (Start: 51 @124595 has 141 MA's), (75, 124484), (110, 124406), (113, 124397), (168, 124199), (175, 124175), (178, 124163), (183, 124133), (191, 124103), (201, 124064), (205, 124046), (214, 124016), (229, 123953), (258, 123821), (274, 123761), (282, 123713), (293, 123656), (306, 123620),

Gene: Estes\_161 Start: 77859, Stop: 76786, Start Num: 56

Candidate Starts for Estes\_161:

(35, 77931), (42, 77904), (Start: 56 @77859 has 13 MA's), (70, 77784), (83, 77745), (92, 77715), (112, 77655), (131, 77592), (135, 77568), (144, 77508), (165, 77412), (177, 77370), (193, 77295), (206, 77232), (210, 77223), (212, 77214), (216, 77199), (226, 77157), (231, 77136), (234, 77121), (239, 77097), (240, 77094), (269, 76989), (276, 76956), (278, 76944), (283, 76914), (286, 76887), (306, 76818), (308, 76809), (310, 76800),

Gene: EugeneKrabs\_18 Start: 13122, Stop: 12133, Start Num: 55

Candidate Starts for EugeneKrabs\_18:

(Start: 55 @13122 has 37 MA's), (61, 13092), (65, 13071), (68, 13059), (131, 12909), (139, 12855), (141, 12831), (146, 12816), (181, 12660), (188, 12627), (263, 12327), (280, 12240), (287, 12198), (291, 12180),

Gene: Evy\_2 Start: 2329, Stop: 1316, Start Num: 51

Candidate Starts for Evy\_2:

(Start: 10 @2467 has 4 MA's), (Start: 20 @2422 has 4 MA's), (29, 2404), (46, 2341), (Start: 51 @2329 has 141 MA's), (69, 2248), (75, 2218), (87, 2185), (99, 2152), (106, 2128), (112, 2113), (137, 2062), (171, 1897), (191, 1816), (201, 1777), (205, 1759), (214, 1729), (229, 1666), (233, 1648), (250, 1570), (258, 1537), (282, 1429), (285, 1411), (293, 1372),

Gene: Evy\_240 Start: 124058, Stop: 123045, Start Num: 51

Candidate Starts for Evy\_240:

(Start: 10 @124196 has 4 MA's), (Start: 20 @124151 has 4 MA's), (29, 124133), (46, 124070), (Start: 51 @124058 has 141 MA's), (69, 123977), (75, 123947), (87, 123914), (99, 123881), (106, 123857), (112, 123842), (137, 123791), (171, 123626), (191, 123545), (201, 123506), (205, 123488), (214, 123458), (229, 123395), (233, 123377), (250, 123299), (258, 123266), (282, 123158), (285, 123140), (293, 123101),

Gene: Faust\_215 Start: 108762, Stop: 109772, Start Num: 51

Candidate Starts for Faust\_215:

(Start: 51 @108762 has 141 MA's), (59, 108792), (69, 108843), (75, 108873), (90, 108912), (118, 108981), (194, 109278), (217, 109362), (229, 109410), (234, 109434), (235, 109440), (253, 109518), (259, 109545), (290, 109704), (302, 109737), (303, 109740), (307, 109752),

Gene: FeliMaine\_100 Start: 57997, Stop: 56927, Start Num: 47

Candidate Starts for FeliMaine\_100:

(Start: 36 @58051 has 1 MA's), (38, 58042), (Start: 47 @57997 has 75 MA's), (54, 57982), (61, 57949), (85, 57856), (93, 57823), (103, 57799), (111, 57766), (112, 57763), (113, 57760), (116, 57745), (119, 57733), (130, 57706), (144, 57619), (149, 57607), (155, 57574), (160, 57547), (162, 57541), (165, 57523), (177, 57481), (180, 57466), (187, 57430), (191, 57418), (207, 57340), (211, 57334), (218, 57307), (224, 57286), (240, 57211), (263, 57136), (270, 57115), (272, 57112), (306, 56944), (307, 56941),

Gene: Fireman\_61 Start: 39216, Stop: 40211, Start Num: 47

Candidate Starts for Fireman\_61:

(Start: 47 @39216 has 75 MA's), (79, 39336), (84, 39345), (89, 39357), (108, 39390), (113, 39396), (117, 39414), (134, 39471), (141, 39525), (160, 39606), (170, 39648), (180, 39684), (182, 39696), (191, 39732), (214, 39819), (234, 39909), (264, 40020), (272, 40041), (278, 40083), (280, 40104), (289, 40152),

Gene: Forrest\_221 Start: 107765, Stop: 108787, Start Num: 51

Candidate Starts for Forrest\_221:

(Start: 51 @107765 has 141 MA's), (59, 107795), (75, 107876), (82, 107894), (97, 107936), (106, 107954), (113, 107972), (163, 108152), (177, 108215), (183, 108248), (185, 108260), (186, 108263), (190, 108275), (209, 108350), (229, 108425), (234, 108449), (241, 108479), (255, 108542), (306, 108764), (310, 108779),

Gene: Fowlmouth\_54 Start: 38133, Stop: 39266, Start Num: 22

Candidate Starts for Fowlmouth\_54:

(Start: 22 @38133 has 12 MA's), (39, 38172), (44, 38199), (58, 38241), (66, 38283), (73, 38319), (77, 38334), (102, 38397), (129, 38475), (141, 38526), (149, 38547), (157, 38595), (162, 38613), (164, 38619), (170, 38652), (173, 38661), (191, 38736), (195, 38757), (197, 38763), (210, 38820), (227, 38889), (229, 38898), (234, 38922), (244, 38961), (246, 38967), (252, 39006), (261, 39036), (269, 39063), (271, 39066), (273, 39075), (275, 39090), (285, 39153), (287, 39165), (288, 39174), (301, 39216), (310, 39249),

Gene: Francesca\_196 Start: 107439, Stop: 108461, Start Num: 51

Candidate Starts for Francesca\_196:

(Start: 51 @107439 has 141 MA's), (82, 107568), (97, 107610), (103, 107619), (137, 107727), (159, 107832), (160, 107838), (165, 107862), (175, 107901), (177, 107910), (185, 107955), (190, 107970), (195, 107994), (201, 108009), (220, 108084), (231, 108129), (303, 108429),

Gene: Francob\_223 Start: 107816, Stop: 108835, Start Num: 50

Candidate Starts for Francob\_223:

(Start: 50 @107816 has 9 MA's), (59, 107843), (75, 107924), (82, 107942), (97, 107984), (106, 108002), (113, 108020), (125, 108053), (163, 108200), (177, 108263), (179, 108269), (183, 108296), (184, 108302), (185, 108308), (186, 108311), (190, 108323), (209, 108398), (229, 108473), (234, 108497), (241, 108527), (255, 108590), (306, 108809),

Gene: FreakyGoo\_148 Start: 75645, Stop: 74572, Start Num: 56

Candidate Starts for FreakyGoo\_148:

(7, 75822), (9, 75810), (Start: 25 @75741 has 6 MA's), (37, 75720), (Start: 56 @75645 has 13 MA's), (79, 75540), (83, 75531), (93, 75495), (112, 75441), (121, 75408), (131, 75378), (144, 75294), (165, 75198), (180, 75141), (189, 75099), (193, 75081), (206, 75018), (210, 75009), (213, 74997), (214, 74994), (226, 74943), (239, 74883), (266, 74784), (269, 74775), (277, 74739), (283, 74700), (306, 74604), (308, 74595),

Gene: FreddyDRoo\_3 Start: 2567, Stop: 1404, Start Num: 9

Candidate Starts for FreddyDRoo\_3:

(9, 2567), (16, 2531), (Start: 20 @2510 has 4 MA's), (29, 2492), (Start: 51 @2417 has 141 MA's), (69, 2336), (75, 2306), (97, 2246), (106, 2216), (112, 2201), (113, 2198), (137, 2150), (158, 2039), (171, 1985), (182, 1940), (191, 1904), (201, 1865), (205, 1847), (214, 1817), (250, 1658), (258, 1625), (274, 1565), (282, 1517), (285, 1499), (293, 1460),

Gene: FreddyDRoo\_256 Start: 123381, Stop: 122218, Start Num: 9

Candidate Starts for FreddyDRoo\_256:

(9, 123381), (16, 123345), (Start: 20 @123324 has 4 MA's), (29, 123306), (Start: 51 @123231 has 141 MA's), (69, 123150), (75, 123120), (97, 123060), (106, 123030), (112, 123015), (113, 123012), (137, 122964), (158, 122853), (171, 122799), (182, 122754), (191, 122718), (201, 122679), (205, 122661), (214, 122631), (250, 122472), (258, 122439), (274, 122379), (282, 122331), (285, 122313), (293, 122274),

Gene: Fryberger\_80 Start: 42863, Stop: 41793, Start Num: 47

Candidate Starts for Fryberger\_80:

(38, 42908), (43, 42878), (Start: 47 @42863 has 75 MA's), (Start: 57 @42839 has 1 MA's), (61, 42815), (75, 42743), (79, 42731), (92, 42692), (103, 42668), (115, 42617), (141, 42494), (164, 42401), (173, 42359), (177, 42347), (180, 42332), (191, 42284), (220, 42167), (234, 42110), (240, 42083), (256, 42023), (287, 41873), (292, 41849), (296, 41834), (299, 41825), (302, 41819),

Gene: Fullmetal\_18 Start: 12570, Stop: 11566, Start Num: 55

Candidate Starts for Fullmetal\_18:

(Start: 55 @12570 has 37 MA's), (84, 12441), (131, 12345), (140, 12276), (141, 12267), (159, 12192), (191, 12054), (214, 11961), (231, 11889), (234, 11874), (237, 11859), (240, 11847), (246, 11829), (254, 11784), (284, 11652), (291, 11613), (305, 11571),

Gene: Ganandorf\_57 Start: 37323, Stop: 38318, Start Num: 47

Candidate Starts for Ganandorf\_57:

(Start: 47 @37323 has 75 MA's), (79, 37443), (84, 37452), (89, 37464), (108, 37497), (113, 37503), (117, 37521), (141, 37632), (160, 37713), (180, 37791), (182, 37803), (214, 37926), (221, 37956), (264, 38127), (272, 38148), (276, 38178), (280, 38211), (289, 38259),

Gene: GardenSalsa\_164 Start: 78536, Stop: 77463, Start Num: 56

Candidate Starts for GardenSalsa\_164:

(Start: 56 @78536 has 13 MA's), (83, 78422), (92, 78392), (112, 78332), (131, 78269), (135, 78245), (144, 78185), (165, 78089), (177, 78047), (193, 77972), (206, 77909), (210, 77900), (212, 77891), (216, 77876), (226, 77834), (231, 77813), (234, 77798), (239, 77774), (240, 77771), (269, 77666), (276, 77633), (278, 77621), (283, 77591), (286, 77564), (306, 77495), (308, 77486), (310, 77477),

Gene: Gattaca\_99 Start: 57986, Stop: 56916, Start Num: 47

Candidate Starts for Gattaca\_99:

(26, 58058), (Start: 28 @58055 has 1 MA's), (32, 58049), (Start: 47 @57986 has 75 MA's), (54, 57971), (61, 57938), (85, 57845), (93, 57812), (103, 57788), (111, 57755), (112, 57752), (113, 57749), (116, 57734), (119, 57722), (130, 57695), (144, 57608), (149, 57596), (155, 57563), (160, 57536), (162, 57530), (165, 57512), (177, 57470), (180, 57455), (187, 57419), (191, 57407), (207, 57329), (211, 57323), (218, 57296), (224, 57275), (240, 57200), (263, 57125), (270, 57104), (272, 57101), (306, 56933), (307, 56930),

Gene: Genie2\_259 Start: 121529, Stop: 120528, Start Num: 51

Candidate Starts for Genie2\_259:

(31, 121595), (34, 121586), (Start: 51 @121529 has 141 MA's), (75, 121418), (113, 121331), (165, 121139), (171, 121118), (175, 121109), (183, 121067), (191, 121037), (201, 120998), (205, 120980), (214, 120950), (229, 120887), (258, 120755), (274, 120695), (282, 120647), (285, 120629), (293,

120590),

Gene: Genie2\_4 Start: 2628, Stop: 1627, Start Num: 51

Candidate Starts for Genie2\_4:

(31, 2694), (34, 2685), (Start: 51 @2628 has 141 MA's), (75, 2517), (113, 2430), (165, 2238), (171, 2217), (175, 2208), (183, 2166), (191, 2136), (201, 2097), (205, 2079), (214, 2049), (229, 1986), (258, 1854), (274, 1794), (282, 1746), (285, 1728), (293, 1689),

Gene: Gibbi\_273 Start: 122322, Stop: 121321, Start Num: 51

Candidate Starts for Gibbi\_273:

(Start: 8 @122466 has 1 MA's), (16, 122427), (18, 122412), (Start: 24 @122397 has 1 MA's), (31, 122388), (34, 122379), (Start: 51 @122322 has 141 MA's), (75, 122211), (110, 122133), (165, 121932), (168, 121926), (175, 121902), (178, 121890), (191, 121830), (201, 121791), (205, 121773), (214, 121743), (229, 121680), (258, 121548), (274, 121488), (282, 121440), (293, 121383), (308, 121338),

Gene: Gibbi\_2 Start: 2222, Stop: 1221, Start Num: 51

Candidate Starts for Gibbi\_2:

(Start: 8 @2366 has 1 MA's), (16, 2327), (18, 2312), (Start: 24 @2297 has 1 MA's), (31, 2288), (34, 2279), (Start: 51 @2222 has 141 MA's), (75, 2111), (110, 2033), (165, 1832), (168, 1826), (175, 1802), (178, 1790), (191, 1730), (201, 1691), (205, 1673), (214, 1643), (229, 1580), (258, 1448), (274, 1388), (282, 1340), (293, 1283), (308, 1238),

Gene: Gibbles\_116 Start: 78724, Stop: 77663, Start Num: 47

Candidate Starts for Gibbles\_116:

(Start: 47 @78724 has 75 MA's), (Start: 57 @78700 has 1 MA's), (88, 78571), (92, 78553), (127, 78448), (139, 78388), (170, 78238), (200, 78118), (219, 78040), (220, 78034), (230, 77992), (237, 77959), (246, 77929), (264, 77866), (269, 77848), (295, 77707), (298, 77695), (302, 77686),

Gene: Gilson\_218 Start: 106326, Stop: 107348, Start Num: 51

Candidate Starts for Gilson\_218:

(Start: 51 @106326 has 141 MA's), (59, 106356), (75, 106437), (82, 106455), (97, 106497), (106, 106515), (113, 106533), (163, 106713), (177, 106776), (183, 106809), (185, 106821), (186, 106824), (190, 106836), (209, 106911), (229, 106986), (234, 107010), (235, 107016), (241, 107040), (255, 107103), (306, 107325), (310, 107340),

Gene: Gina\_61 Start: 37315, Stop: 38310, Start Num: 47

Candidate Starts for Gina\_61:

(Start: 47 @37315 has 75 MA's), (54, 37330), (79, 37435), (84, 37444), (89, 37456), (117, 37513), (134, 37570), (141, 37624), (170, 37747), (180, 37783), (182, 37795), (214, 37918), (221, 37948), (234, 38008), (264, 38119), (272, 38140), (278, 38182), (280, 38203),

Gene: Glaske16\_148 Start: 75618, Stop: 74449, Start Num: 25

Candidate Starts for Glaske16\_148:

(7, 75699), (9, 75687), (Start: 25 @75618 has 6 MA's), (37, 75597), (Start: 56 @75522 has 13 MA's), (79, 75417), (83, 75408), (93, 75372), (112, 75318), (121, 75285), (131, 75255), (144, 75171), (165, 75075), (180, 75018), (189, 74976), (193, 74958), (206, 74895), (210, 74886), (213, 74874), (214, 74871), (226, 74820), (239, 74760), (266, 74661), (269, 74652), (277, 74616), (283, 74577), (286, 74550), (306, 74481), (308, 74472),

Gene: Glorp\_59 Start: 37324, Stop: 38319, Start Num: 47

Candidate Starts for Glorp\_59:

(Start: 47 @37324 has 75 MA's), (79, 37444), (84, 37453), (89, 37465), (108, 37498), (113, 37504), (117, 37522), (141, 37633), (160, 37714), (180, 37792), (182, 37804), (214, 37927), (221, 37957), (264, 38128), (272, 38149), (276, 38179), (280, 38212), (289, 38260),

Gene: GoongGoong\_97 Start: 57792, Stop: 56722, Start Num: 47

Candidate Starts for GoongGoong\_97:

(26, 57864), (Start: 28 @57861 has 1 MA's), (32, 57855), (Start: 47 @57792 has 75 MA's), (54, 57777), (61, 57744), (85, 57651), (93, 57618), (103, 57594), (111, 57561), (112, 57558), (113, 57555), (116, 57540), (119, 57528), (130, 57501), (144, 57414), (149, 57402), (155, 57369), (160, 57342), (162, 57336), (165, 57318), (177, 57276), (180, 57261), (187, 57225), (191, 57213), (207, 57135), (211, 57129), (218, 57102), (224, 57081), (240, 57006), (263, 56931), (270, 56910), (272, 56907), (306, 56739), (307, 56736),

Gene: Grayson\_185 Start: 96345, Stop: 97394, Start Num: 51

Candidate Starts for Grayson\_185:

(Start: 51 @96345 has 141 MA's), (61, 96384), (68, 96417), (76, 96462), (90, 96498), (112, 96555), (140, 96693), (160, 96774), (162, 96780), (164, 96786), (169, 96819), (194, 96924), (197, 96936), (209, 96981), (214, 96993), (227, 97047), (231, 97065), (258, 97185), (279, 97263), (302, 97359), (308, 97380),

Gene: Guey18\_85 Start: 44196, Stop: 43126, Start Num: 47

Candidate Starts for Guey18\_85:

(38, 44241), (43, 44211), (Start: 47 @44196 has 75 MA's), (Start: 57 @44172 has 1 MA's), (61, 44148), (75, 44076), (79, 44064), (92, 44025), (103, 44001), (115, 43950), (141, 43827), (164, 43734), (173, 43692), (177, 43680), (191, 43617), (220, 43500), (231, 43458), (252, 43371), (256, 43356), (287, 43206), (292, 43182), (296, 43167), (299, 43158), (302, 43152),

Gene: HangryHippo\_2 Start: 2225, Stop: 1212, Start Num: 51

Candidate Starts for HangryHippo\_2:

(Start: 10 @2372 has 4 MA's), (Start: 20 @2318 has 4 MA's), (29, 2300), (Start: 51 @2225 has 141 MA's), (75, 2114), (87, 2081), (97, 2054), (103, 2045), (106, 2024), (112, 2009), (137, 1958), (158, 1847), (171, 1793), (191, 1712), (201, 1673), (205, 1655), (214, 1625), (229, 1562), (247, 1478), (250, 1466), (258, 1433), (274, 1373), (282, 1325), (285, 1307), (293, 1268),

Gene: HangryHippo\_250 Start: 123312, Stop: 122299, Start Num: 51

Candidate Starts for HangryHippo\_250:

(Start: 10 @123459 has 4 MA's), (Start: 20 @123405 has 4 MA's), (29, 123387), (Start: 51 @123312 has 141 MA's), (75, 123201), (87, 123168), (97, 123141), (103, 123132), (106, 123111), (112, 123096), (137, 123045), (158, 122934), (171, 122880), (191, 122799), (201, 122760), (205, 122742), (214, 122712), (229, 122649), (247, 122565), (250, 122553), (258, 122520), (274, 122460), (282, 122412), (285, 122394), (293, 122355),

Gene: Hendrix\_145 Start: 89503, Stop: 90504, Start Num: 55

Candidate Starts for Hendrix\_145:

(Start: 55 @89503 has 37 MA's), (61, 89533), (86, 89635), (119, 89698), (122, 89707), (137, 89761), (154, 89842), (167, 89917), (195, 90040), (245, 90241), (246, 90244), (251, 90274), (263, 90310), (291, 90457),

Gene: Hermeonysus\_57 Start: 37219, Stop: 38214, Start Num: 47

Candidate Starts for Hermeonysus\_57:

(Start: 47 @37219 has 75 MA's), (79, 37339), (84, 37348), (89, 37360), (108, 37393), (113, 37399), (117, 37417), (141, 37528), (160, 37609), (180, 37687), (182, 37699), (214, 37822), (221, 37852), (264, 38023), (272, 38044), (276, 38074), (280, 38107), (289, 38155),

Gene: Honeyfin\_59 Start: 37511, Stop: 38506, Start Num: 47

Candidate Starts for Honeyfin\_59:

(Start: 47 @37511 has 75 MA's), (79, 37631), (84, 37640), (89, 37652), (108, 37685), (113, 37691), (117, 37709), (134, 37766), (141, 37820), (160, 37901), (170, 37943), (180, 37979), (182, 37991), (214, 38114), (221, 38144), (264, 38315), (272, 38336), (276, 38366), (280, 38399), (289, 38447),

Gene: Huphlepuuff\_102 Start: 57560, Stop: 56490, Start Num: 47

Candidate Starts for Huphlepuuff\_102:

(Start: 36 @57614 has 1 MA's), (38, 57605), (Start: 47 @57560 has 75 MA's), (54, 57545), (61, 57512), (85, 57419), (93, 57386), (103, 57362), (111, 57329), (112, 57326), (113, 57323), (116, 57308), (119, 57296), (130, 57269), (144, 57182), (149, 57170), (155, 57137), (160, 57110), (162, 57104), (165, 57086), (177, 57044), (180, 57029), (187, 56993), (191, 56981), (207, 56903), (211, 56897), (218, 56870), (224, 56849), (240, 56774), (263, 56699), (270, 56678), (272, 56675), (306, 56507), (307, 56504),

Gene: IPhane7\_146 Start: 75346, Stop: 74273, Start Num: 56

Candidate Starts for IPhane7\_146:

(7, 75523), (9, 75511), (Start: 25 @75442 has 6 MA's), (37, 75421), (Start: 56 @75346 has 13 MA's), (79, 75241), (83, 75232), (93, 75196), (112, 75142), (121, 75109), (131, 75079), (144, 74995), (165, 74899), (189, 74800), (193, 74782), (206, 74719), (210, 74710), (213, 74698), (214, 74695), (226, 74644), (239, 74584), (266, 74485), (269, 74476), (277, 74440), (283, 74401), (306, 74305), (308, 74296),

Gene: IchabodCrane\_2 Start: 2214, Stop: 1219, Start Num: 51

Candidate Starts for IchabodCrane\_2:

(Start: 40 @2259 has 21 MA's), (Start: 51 @2214 has 141 MA's), (75, 2103), (87, 2070), (103, 2037), (110, 2025), (113, 2016), (137, 1968), (138, 1950), (139, 1947), (171, 1803), (175, 1794), (183, 1752), (191, 1722), (201, 1683), (205, 1665), (214, 1635), (229, 1572), (258, 1440), (274, 1380), (282, 1332), (293, 1275), (306, 1239),

Gene: IchabodCrane\_255 Start: 120757, Stop: 119762, Start Num: 51

Candidate Starts for IchabodCrane\_255:

(Start: 40 @120802 has 21 MA's), (Start: 51 @120757 has 141 MA's), (75, 120646), (87, 120613), (103, 120580), (110, 120568), (113, 120559), (137, 120511), (138, 120493), (139, 120490), (171, 120346), (175, 120337), (183, 120295), (191, 120265), (201, 120226), (205, 120208), (214, 120178), (229, 120115), (258, 119983), (274, 119923), (282, 119875), (293, 119818), (306, 119782),

Gene: Indlulamithi\_50 Start: 39104, Stop: 40291, Start Num: 21

Candidate Starts for Indlulamithi\_50:

(6, 39026), (18, 39098), (Start: 21 @39104 has 1 MA's), (30, 39119), (33, 39128), (58, 39212), (66, 39254), (102, 39371), (124, 39443), (141, 39503), (143, 39509), (147, 39521), (162, 39590), (165, 39608), (170, 39629), (177, 39650), (190, 39710), (216, 39821), (219, 39833), (226, 39863), (234, 39899), (239, 39923), (261, 40010), (285, 40130), (297, 40184), (300, 40190), (312, 40241), (313, 40244), (314, 40262), (315, 40277),

Gene: Izel\_145 Start: 74499, Stop: 73330, Start Num: 25

Candidate Starts for Izel\_145:

(7, 74580), (9, 74568), (Start: 25 @74499 has 6 MA's), (37, 74478), (Start: 56 @74403 has 13 MA's), (79, 74298), (83, 74289), (93, 74253), (112, 74199), (121, 74166), (131, 74136), (144, 74052), (165, 73956), (180, 73899), (189, 73857), (193, 73839), (206, 73776), (210, 73767), (213, 73755), (214, 73752), (226, 73701), (239, 73641), (266, 73542), (269, 73533), (277, 73497), (283, 73458), (286, 73431), (306, 73362), (308, 73353),

Gene: Jada\_220 Start: 107002, Stop: 108024, Start Num: 51

Candidate Starts for Jada\_220:

(Start: 51 @107002 has 141 MA's), (59, 107032), (75, 107113), (82, 107131), (97, 107173), (106, 107191), (113, 107209), (163, 107389), (177, 107452), (183, 107485), (185, 107497), (186, 107500), (190, 107512), (209, 107587), (229, 107662), (234, 107686), (235, 107692), (241, 107716), (255, 107779), (306, 108001), (310, 108016),

Gene: Jay2Jay\_5 Start: 2708, Stop: 1602, Start Num: 20

Candidate Starts for Jay2Jay\_5:

(Start: 20 @2708 has 4 MA's), (29, 2690), (46, 2627), (Start: 51 @2615 has 141 MA's), (69, 2534), (75, 2504), (87, 2471), (99, 2438), (106, 2414), (112, 2399), (137, 2348), (171, 2183), (191, 2102), (201, 2063), (205, 2045), (214, 2015), (229, 1952), (233, 1934), (250, 1856), (258, 1823), (282, 1715), (285, 1697), (293, 1658),

Gene: Jay2Jay\_260 Start: 124801, Stop: 123695, Start Num: 20

Candidate Starts for Jay2Jay\_260:

(Start: 20 @124801 has 4 MA's), (29, 124783), (46, 124720), (Start: 51 @124708 has 141 MA's), (69, 124627), (75, 124597), (87, 124564), (99, 124531), (106, 124507), (112, 124492), (137, 124441), (171, 124276), (191, 124195), (201, 124156), (205, 124138), (214, 124108), (229, 124045), (233, 124027), (250, 123949), (258, 123916), (282, 123808), (285, 123790), (293, 123751),

Gene: Jayden\_60 Start: 37996, Stop: 38991, Start Num: 47

Candidate Starts for Jayden\_60:

(Start: 47 @37996 has 75 MA's), (79, 38116), (84, 38125), (89, 38137), (108, 38170), (113, 38176), (117, 38194), (134, 38251), (141, 38305), (180, 38464), (182, 38476), (214, 38599), (221, 38629), (261, 38791), (264, 38800), (272, 38821), (278, 38863), (280, 38884),

Gene: Jefe\_58 Start: 37277, Stop: 38272, Start Num: 47

Candidate Starts for Jefe\_58:

(Start: 47 @37277 has 75 MA's), (79, 37397), (84, 37406), (89, 37418), (108, 37451), (113, 37457), (117, 37475), (141, 37586), (160, 37667), (180, 37745), (182, 37757), (214, 37880), (221, 37910), (264, 38081), (272, 38102), (276, 38132), (280, 38165), (289, 38213),

Gene: Jflix2\_48 Start: 34302, Stop: 33235, Start Num: 47

Candidate Starts for Jflix2\_48:

(Start: 45 @34311 has 1 MA's), (Start: 47 @34302 has 75 MA's), (61, 34254), (101, 34125), (134, 33999), (162, 33858), (194, 33720), (248, 33495), (264, 33435), (280, 33351), (298, 33267), (306, 33246),

Gene: JimJam\_271 Start: 124187, Stop: 123147, Start Num: 40

Candidate Starts for JimJam\_271:

(Start: 40 @124187 has 21 MA's), (Start: 51 @124142 has 141 MA's), (75, 124031), (87, 123998), (103, 123965), (110, 123953), (113, 123944), (137, 123896), (138, 123878), (139, 123875), (171, 123731), (175, 123722), (183, 123680), (191, 123650), (201, 123611), (205, 123593), (214, 123563), (229, 123500), (258, 123368), (274, 123308), (282, 123260), (293, 123203), (306, 123167),

Gene: JimJam\_3 Start: 2651, Stop: 1611, Start Num: 40

Candidate Starts for JimJam\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: JimmyPG\_17 Start: 12538, Stop: 11522, Start Num: 55

Candidate Starts for JimmyPG\_17:

(5, 12724), (43, 12571), (Start: 55 @12538 has 37 MA's), (79, 12424), (84, 12409), (136, 12268), (140, 12229), (141, 12220), (161, 12136), (191, 12007), (214, 11914), (237, 11812), (246, 11782), (251, 11752), (254, 11740), (284, 11608), (291, 11569), (305, 11527),

Gene: JoieB\_101 Start: 58161, Stop: 57091, Start Num: 47

Candidate Starts for JoieB\_101:

(26, 58233), (Start: 28 @58230 has 1 MA's), (32, 58224), (Start: 47 @58161 has 75 MA's), (54, 58146), (61, 58113), (85, 58020), (93, 57987), (103, 57963), (111, 57930), (112, 57927), (113, 57924), (116, 57909), (119, 57897), (130, 57870), (144, 57783), (149, 57771), (155, 57738), (160, 57711), (162, 57705), (165, 57687), (177, 57645), (180, 57630), (187, 57594), (191, 57582), (207, 57504), (211, 57498), (218, 57471), (224, 57450), (240, 57375), (263, 57300), (270, 57279), (272, 57276), (306, 57108), (307, 57105),

Gene: Jollipop\_59 Start: 37692, Stop: 38687, Start Num: 47

Candidate Starts for Jollipop\_59:

(Start: 47 @37692 has 75 MA's), (79, 37812), (84, 37821), (89, 37833), (108, 37866), (113, 37872), (117, 37890), (141, 38001), (160, 38082), (170, 38124), (180, 38160), (182, 38172), (214, 38295), (221, 38325), (264, 38496), (272, 38517), (276, 38547), (280, 38580), (289, 38628),

Gene: Jollison\_260 Start: 121281, Stop: 120286, Start Num: 51

Candidate Starts for Jollison\_260:

(Start: 40 @121326 has 21 MA's), (Start: 51 @121281 has 141 MA's), (75, 121170), (87, 121137), (103, 121104), (110, 121092), (113, 121083), (137, 121035), (138, 121017), (139, 121014), (171, 120870), (175, 120861), (183, 120819), (191, 120789), (201, 120750), (205, 120732), (214, 120702), (229, 120639), (258, 120507), (274, 120447), (282, 120399), (293, 120342), (306, 120306),

Gene: Jollison\_3 Start: 2606, Stop: 1611, Start Num: 51

Candidate Starts for Jollison\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: JordanFarm\_17 Start: 12296, Stop: 11307, Start Num: 55

Candidate Starts for JordanFarm\_17:

(Start: 55 @12296 has 37 MA's), (79, 12182), (84, 12167), (136, 12053), (140, 12014), (141, 12005), (161, 11921), (191, 11792), (214, 11699), (234, 11612), (265, 11492), (280, 11414), (287, 11372), (291, 11354), (299, 11327),

Gene: KSunshine22\_169 Start: 113333, Stop: 114310, Start Num: 49

Candidate Starts for KSunshine22\_169:

(Start: 49 @113333 has 5 MA's), (60, 113375), (98, 113501), (142, 113636), (160, 113717), (177, 113780), (195, 113864), (220, 113954), (231, 113999), (258, 114098), (278, 114173),

Gene: KaiHaiDragon\_59 Start: 37213, Stop: 38208, Start Num: 47

Candidate Starts for KaiHaiDragon\_59:

(Start: 47 @37213 has 75 MA's), (79, 37333), (84, 37342), (89, 37354), (108, 37387), (113, 37393), (117, 37411), (141, 37522), (160, 37603), (180, 37681), (182, 37693), (214, 37816), (221, 37846), (264, 38017), (272, 38038), (276, 38068), (280, 38101), (289, 38149),

Gene: Kampe\_114 Start: 77930, Stop: 76869, Start Num: 47

Candidate Starts for Kampe\_114:

(Start: 47 @77930 has 75 MA's), (Start: 57 @77906 has 1 MA's), (88, 77777), (92, 77759), (127, 77654), (139, 77594), (170, 77444), (200, 77324), (219, 77246), (220, 77240), (230, 77198), (237, 77165), (246, 77135), (264, 77072), (269, 77054), (295, 76913), (298, 76901), (302, 76892),

Gene: Karimac\_261 Start: 121927, Stop: 120932, Start Num: 51

Candidate Starts for Karimac\_261:

(Start: 40 @121972 has 21 MA's), (Start: 51 @121927 has 141 MA's), (75, 121816), (87, 121783), (103, 121750), (110, 121738), (113, 121729), (137, 121681), (138, 121663), (139, 121660), (171, 121516), (175, 121507), (183, 121465), (191, 121435), (201, 121396), (205, 121378), (214, 121348), (229, 121285), (258, 121153), (274, 121093), (282, 121045), (293, 120988), (306, 120952),

Gene: Karimac\_3 Start: 2608, Stop: 1613, Start Num: 51

Candidate Starts for Karimac\_3:

(Start: 40 @2653 has 21 MA's), (Start: 51 @2608 has 141 MA's), (75, 2497), (87, 2464), (103, 2431), (110, 2419), (113, 2410), (137, 2362), (138, 2344), (139, 2341), (171, 2197), (175, 2188), (183, 2146), (191, 2116), (201, 2077), (205, 2059), (214, 2029), (229, 1966), (258, 1834), (274, 1774), (282, 1726), (293, 1669), (306, 1633),

Gene: Karp\_214 Start: 108408, Stop: 109430, Start Num: 50

Candidate Starts for Karp\_214:

(Start: 50 @108408 has 9 MA's), (59, 108438), (75, 108519), (82, 108537), (97, 108579), (106, 108597), (113, 108615), (163, 108795), (177, 108858), (183, 108891), (185, 108903), (186, 108906), (190, 108918), (209, 108993), (229, 109068), (234, 109092), (241, 109122), (255, 109185), (306, 109404),

Gene: Keelan\_81 Start: 43600, Stop: 42530, Start Num: 47

Candidate Starts for Keelan\_81:

(23, 43678), (29, 43666), (Start: 47 @43600 has 75 MA's), (Start: 57 @43576 has 1 MA's), (61, 43552), (83, 43459), (88, 43447), (92, 43429), (104, 43399), (115, 43354), (141, 43231), (147, 43213), (164, 43138), (177, 43084), (180, 43069), (191, 43021), (220, 42907), (223, 42901), (224, 42898), (233, 42856), (234, 42850), (236, 42841), (244, 42811), (275, 42694), (287, 42613), (292, 42589), (299, 42565), (306, 42547), (307, 42544),

Gene: Kenrey\_224 Start: 107547, Stop: 108569, Start Num: 51

Candidate Starts for Kenrey\_224:

(Start: 51 @107547 has 141 MA's), (59, 107577), (75, 107658), (82, 107676), (97, 107718), (113, 107754), (145, 107862), (163, 107934), (177, 107997), (183, 108030), (185, 108042), (186, 108045), (190, 108057), (194, 108075), (209, 108132), (229, 108207), (234, 108231), (241, 108261), (255, 108324), (306, 108546), (310, 108561),

Gene: KentuckyRacer\_270 Start: 123669, Stop: 122674, Start Num: 51

Candidate Starts for KentuckyRacer\_270:

(Start: 40 @123714 has 21 MA's), (Start: 51 @123669 has 141 MA's), (75, 123558), (87, 123525), (103, 123492), (110, 123480), (113, 123471), (137, 123423), (138, 123405), (139, 123402), (171, 123258), (175, 123249), (183, 123207), (191, 123177), (201, 123138), (205, 123120), (214, 123090), (229, 123027), (258, 122895), (274, 122835), (282, 122787), (293, 122730), (306, 122694),

Gene: KentuckyRacer\_2 Start: 2218, Stop: 1223, Start Num: 51

Candidate Starts for KentuckyRacer\_2:

(Start: 40 @2263 has 21 MA's), (Start: 51 @2218 has 141 MA's), (75, 2107), (87, 2074), (103, 2041), (110, 2029), (113, 2020), (137, 1972), (138, 1954), (139, 1951), (171, 1807), (175, 1798), (183, 1756),

(191, 1726), (201, 1687), (205, 1669), (214, 1639), (229, 1576), (258, 1444), (274, 1384), (282, 1336), (293, 1279), (306, 1243),

Gene: Keough\_17 Start: 12298, Stop: 11294, Start Num: 55

Candidate Starts for Keough\_17:

(Start: 55 @12298 has 37 MA's), (84, 12169), (131, 12073), (140, 12004), (141, 11995), (159, 11920), (191, 11782), (214, 11689), (231, 11617), (234, 11602), (237, 11587), (240, 11575), (246, 11557), (254, 11512), (284, 11380), (291, 11341), (305, 11299),

Gene: KingKamren\_18 Start: 13027, Stop: 12038, Start Num: 55

Candidate Starts for KingKamren\_18:

(Start: 55 @13027 has 37 MA's), (61, 12997), (65, 12976), (94, 12871), (134, 12793), (139, 12760), (141, 12736), (146, 12721), (181, 12565), (208, 12442), (263, 12232), (287, 12103), (291, 12085),

Gene: KleverKiS\_151 Start: 76403, Stop: 75330, Start Num: 56

Candidate Starts for KleverKiS\_151:

(7, 76580), (9, 76568), (Start: 25 @76499 has 6 MA's), (37, 76478), (Start: 56 @76403 has 13 MA's), (79, 76298), (83, 76289), (93, 76253), (112, 76199), (121, 76166), (131, 76136), (144, 76052), (165, 75956), (180, 75899), (189, 75857), (193, 75839), (206, 75776), (210, 75767), (213, 75755), (214, 75752), (226, 75701), (239, 75641), (266, 75542), (269, 75533), (277, 75497), (283, 75458), (306, 75362), (308, 75353),

Gene: Kowalski\_57 Start: 37326, Stop: 38321, Start Num: 47

Candidate Starts for Kowalski\_57:

(Start: 47 @37326 has 75 MA's), (79, 37446), (84, 37455), (89, 37467), (108, 37500), (113, 37506), (117, 37524), (141, 37635), (160, 37716), (180, 37794), (182, 37806), (214, 37929), (221, 37959), (264, 38130), (272, 38151), (276, 38181), (280, 38214), (289, 38262),

Gene: Kozie\_54 Start: 37761, Stop: 38762, Start Num: 55

Candidate Starts for Kozie\_54:

(35, 37689), (Start: 55 @37761 has 37 MA's), (61, 37791), (64, 37809), (69, 37833), (94, 37917), (140, 38055), (152, 38097), (161, 38148), (177, 38214), (188, 38268), (198, 38307), (228, 38430), (231, 38442), (249, 38517), (251, 38532), (254, 38544), (267, 38586), (292, 38718),

Gene: Larnav\_252 Start: 124229, Stop: 123216, Start Num: 51

Candidate Starts for Larnav\_252:

(Start: 51 @124229 has 141 MA's), (75, 124118), (97, 124058), (103, 124049), (106, 124028), (112, 124013), (137, 123962), (158, 123851), (171, 123797), (191, 123716), (201, 123677), (205, 123659), (214, 123629), (229, 123566), (247, 123482), (250, 123470), (258, 123437), (274, 123377), (282, 123329), (285, 123311), (293, 123272),

Gene: Larnav\_2 Start: 2224, Stop: 1211, Start Num: 51

Candidate Starts for Larnav\_2:

(Start: 51 @2224 has 141 MA's), (75, 2113), (97, 2053), (103, 2044), (106, 2023), (112, 2008), (137, 1957), (158, 1846), (171, 1792), (191, 1711), (201, 1672), (205, 1654), (214, 1624), (229, 1561), (247, 1477), (250, 1465), (258, 1432), (274, 1372), (282, 1324), (285, 1306), (293, 1267),

Gene: Laure\_176 Start: 107363, Stop: 108334, Start Num: 49

Candidate Starts for Laure\_176:

(Start: 49 @107363 has 5 MA's), (60, 107402), (98, 107528), (103, 107534), (114, 107558), (137, 107612), (156, 107717), (160, 107741), (177, 107804), (220, 107978), (232, 108026), (234, 108038), (240, 108065), (255, 108110), (258, 108122), (269, 108155),

Gene: Leaf\_143 Start: 85376, Stop: 86380, Start Num: 55

Candidate Starts for Leaf\_143:

(Start: 55 @85376 has 37 MA's), (61, 85406), (80, 85493), (119, 85571), (137, 85634), (152, 85712), (154, 85715), (159, 85754), (167, 85790), (191, 85892), (192, 85898), (195, 85913), (217, 86000), (232, 86060), (245, 86114), (246, 86117), (251, 86147), (263, 86183), (292, 86333),

Gene: Leo04\_253 Start: 124342, Stop: 123329, Start Num: 51

Candidate Starts for Leo04\_253:

(Start: 10 @124489 has 4 MA's), (Start: 20 @124435 has 4 MA's), (29, 124417), (Start: 51 @124342 has 141 MA's), (75, 124231), (87, 124198), (97, 124171), (103, 124162), (106, 124141), (112, 124126), (137, 124075), (158, 123964), (171, 123910), (191, 123829), (201, 123790), (205, 123772), (214, 123742), (229, 123679), (247, 123595), (250, 123583), (258, 123550), (274, 123490), (282, 123442), (285, 123424), (293, 123385),

Gene: Leo04\_2 Start: 2224, Stop: 1211, Start Num: 51

Candidate Starts for Leo04\_2:

(Start: 10 @2371 has 4 MA's), (Start: 20 @2317 has 4 MA's), (29, 2299), (Start: 51 @2224 has 141 MA's), (75, 2113), (87, 2080), (97, 2053), (103, 2044), (106, 2023), (112, 2008), (137, 1957), (158, 1846), (171, 1792), (191, 1711), (201, 1672), (205, 1654), (214, 1624), (229, 1561), (247, 1477), (250, 1465), (258, 1432), (274, 1372), (282, 1324), (285, 1306), (293, 1267),

Gene: LeoJr\_176 Start: 116106, Stop: 117113, Start Num: 49

Candidate Starts for LeoJr\_176:

(Start: 49 @116106 has 5 MA's), (60, 116148), (95, 116280), (142, 116436), (160, 116517), (177, 116580), (195, 116664), (220, 116754), (231, 116799), (232, 116802), (255, 116886), (257, 116892), (258, 116898),

Gene: Liandry\_3 Start: 2417, Stop: 1404, Start Num: 51

Candidate Starts for Liandry\_3:

(9, 2567), (16, 2531), (Start: 20 @2510 has 4 MA's), (29, 2492), (Start: 51 @2417 has 141 MA's), (69, 2336), (75, 2306), (97, 2246), (106, 2216), (112, 2201), (113, 2198), (137, 2150), (158, 2039), (171, 1985), (182, 1940), (191, 1904), (201, 1865), (205, 1847), (214, 1817), (250, 1658), (258, 1625), (274, 1565), (282, 1517), (285, 1499), (293, 1460),

Gene: Liandry\_252 Start: 123938, Stop: 122925, Start Num: 51

Candidate Starts for Liandry\_252:

(9, 124088), (16, 124052), (Start: 20 @124031 has 4 MA's), (29, 124013), (Start: 51 @123938 has 141 MA's), (69, 123857), (75, 123827), (97, 123767), (106, 123737), (112, 123722), (113, 123719), (137, 123671), (158, 123560), (171, 123506), (182, 123461), (191, 123425), (201, 123386), (205, 123368), (214, 123338), (250, 123179), (258, 123146), (274, 123086), (282, 123038), (285, 123020), (293, 122981),

Gene: LilMartin\_254 Start: 123618, Stop: 122602, Start Num: 51

Candidate Starts for LilMartin\_254:

(Start: 51 @123618 has 141 MA's), (75, 123507), (91, 123459), (97, 123447), (99, 123441), (112, 123402), (137, 123348), (158, 123237), (171, 123183), (191, 123102), (201, 123063), (205, 123045), (214, 123015), (229, 122952), (250, 122856), (258, 122823), (274, 122763), (282, 122715), (285, 122697), (293, 122658),

Gene: LilMartin\_2 Start: 2274, Stop: 1258, Start Num: 51

Candidate Starts for LilMartin\_2:

(Start: 51 @2274 has 141 MA's), (75, 2163), (91, 2115), (97, 2103), (99, 2097), (112, 2058), (137, 2004), (158, 1893), (171, 1839), (191, 1758), (201, 1719), (205, 1701), (214, 1671), (229, 1608), (250,

1512), (258, 1479), (274, 1419), (282, 1371), (285, 1353), (293, 1314),

Gene: LilSaint\_256 Start: 124138, Stop: 123116, Start Num: 51

Candidate Starts for LilSaint\_256:

(Start: 41 @124177 has 1 MA's), (Start: 51 @124138 has 141 MA's), (69, 124057), (75, 124027), (91, 123979), (97, 123967), (99, 123961), (112, 123922), (137, 123868), (158, 123757), (159, 123754), (171, 123703), (182, 123658), (191, 123622), (201, 123583), (205, 123565), (214, 123535), (229, 123472), (233, 123454), (250, 123376), (258, 123343), (282, 123235), (285, 123217), (293, 123178),

Gene: LilSaint\_3 Start: 2327, Stop: 1266, Start Num: 41

Candidate Starts for LilSaint\_3:

(Start: 41 @2327 has 1 MA's), (Start: 51 @2288 has 141 MA's), (69, 2207), (75, 2177), (91, 2129), (97, 2117), (99, 2111), (112, 2072), (137, 2018), (158, 1907), (159, 1904), (171, 1853), (182, 1808), (191, 1772), (201, 1733), (205, 1715), (214, 1685), (229, 1622), (233, 1604), (250, 1526), (258, 1493), (282, 1385), (285, 1367), (293, 1328),

Gene: Lilbit\_96 Start: 58120, Stop: 57050, Start Num: 47

Candidate Starts for Lilbit\_96:

(Start: 36 @58174 has 1 MA's), (38, 58165), (Start: 47 @58120 has 75 MA's), (54, 58105), (61, 58072), (85, 57979), (93, 57946), (103, 57922), (111, 57889), (112, 57886), (113, 57883), (116, 57868), (119, 57856), (130, 57829), (144, 57742), (149, 57730), (155, 57697), (160, 57670), (162, 57664), (165, 57646), (177, 57604), (180, 57589), (187, 57553), (191, 57541), (207, 57463), (211, 57457), (218, 57430), (224, 57409), (240, 57334), (263, 57259), (270, 57238), (272, 57235), (306, 57067), (307, 57064),

Gene: LilhomieP\_145 Start: 75433, Stop: 74360, Start Num: 56

Candidate Starts for LilhomieP\_145:

(7, 75610), (9, 75598), (Start: 25 @75529 has 6 MA's), (37, 75508), (Start: 56 @75433 has 13 MA's), (79, 75328), (83, 75319), (93, 75283), (112, 75229), (121, 75196), (131, 75166), (144, 75082), (165, 74986), (180, 74929), (189, 74887), (193, 74869), (206, 74806), (210, 74797), (213, 74785), (214, 74782), (226, 74731), (239, 74671), (266, 74572), (269, 74563), (277, 74527), (283, 74488), (306, 74392), (308, 74383),

Gene: Limpid\_212 Start: 108722, Stop: 109738, Start Num: 52

Candidate Starts for Limpid\_212:

(Start: 52 @108722 has 4 MA's), (59, 108749), (72, 108821), (75, 108836), (90, 108875), (118, 108944), (138, 108989), (177, 109163), (186, 109211), (195, 109247), (197, 109253), (209, 109298), (229, 109373), (234, 109397), (267, 109532), (289, 109661), (290, 109667), (302, 109700), (306, 109712), (307, 109715),

Gene: LittleFortune\_60 Start: 37582, Stop: 38577, Start Num: 47

Candidate Starts for LittleFortune\_60:

(Start: 47 @37582 has 75 MA's), (79, 37702), (84, 37711), (89, 37723), (108, 37756), (113, 37762), (117, 37780), (141, 37891), (160, 37972), (180, 38050), (182, 38062), (214, 38185), (221, 38215), (264, 38386), (272, 38407), (276, 38437), (280, 38470), (289, 38518),

Gene: LittleLaf\_98 Start: 57849, Stop: 56779, Start Num: 47

Candidate Starts for LittleLaf\_98:

(Start: 36 @57903 has 1 MA's), (38, 57894), (Start: 47 @57849 has 75 MA's), (54, 57834), (61, 57801), (85, 57708), (93, 57675), (103, 57651), (111, 57618), (112, 57615), (113, 57612), (116, 57597), (119, 57585), (130, 57558), (144, 57471), (149, 57459), (155, 57426), (160, 57399), (162, 57393), (165, 57375), (177, 57333), (180, 57318), (187, 57282), (191, 57270), (207, 57192), (211, 57186), (218, 57159), (224, 57138), (240, 57063), (263, 56988), (270, 56967), (272, 56964), (306, 56796), (307,

56793),

Gene: Lucretia\_58 Start: 37240, Stop: 38235, Start Num: 47

Candidate Starts for Lucretia\_58:

(Start: 47 @37240 has 75 MA's), (79, 37360), (84, 37369), (89, 37381), (108, 37414), (113, 37420), (117, 37438), (141, 37549), (160, 37630), (180, 37708), (182, 37720), (214, 37843), (221, 37873), (264, 38044), (272, 38065), (276, 38095), (280, 38128), (289, 38176),

Gene: LukeCage\_2 Start: 2214, Stop: 1213, Start Num: 51

Candidate Starts for LukeCage\_2:

(Start: 8 @2358 has 1 MA's), (16, 2319), (18, 2304), (Start: 24 @2289 has 1 MA's), (34, 2271), (Start: 51 @2214 has 141 MA's), (75, 2103), (90, 2064), (91, 2055), (113, 2016), (165, 1824), (175, 1794), (178, 1782), (184, 1746), (191, 1722), (201, 1683), (205, 1665), (214, 1635), (229, 1572), (233, 1554), (239, 1524), (258, 1440), (274, 1380), (282, 1332), (285, 1314),

Gene: LukeCage\_265 Start: 123118, Stop: 122117, Start Num: 51

Candidate Starts for LukeCage\_265:

(Start: 8 @123262 has 1 MA's), (16, 123223), (18, 123208), (Start: 24 @123193 has 1 MA's), (34, 123175), (Start: 51 @123118 has 141 MA's), (75, 123007), (90, 122968), (91, 122959), (113, 122920), (165, 122728), (175, 122698), (178, 122686), (184, 122650), (191, 122626), (201, 122587), (205, 122569), (214, 122539), (229, 122476), (233, 122458), (239, 122428), (258, 122344), (274, 122284), (282, 122236), (285, 122218),

Gene: Lululemon\_249 Start: 123117, Stop: 122104, Start Num: 51

Candidate Starts for Lululemon\_249:

(19, 123213), (Start: 51 @123117 has 141 MA's), (75, 123006), (87, 122973), (97, 122946), (103, 122937), (106, 122916), (112, 122901), (137, 122850), (158, 122739), (171, 122685), (191, 122604), (201, 122565), (205, 122547), (214, 122517), (229, 122454), (247, 122370), (250, 122358), (258, 122325), (274, 122265), (282, 122217), (285, 122199), (293, 122160),

Gene: Lululemon\_2 Start: 2225, Stop: 1212, Start Num: 51

Candidate Starts for Lululemon\_2:

(19, 2321), (Start: 51 @2225 has 141 MA's), (75, 2114), (87, 2081), (97, 2054), (103, 2045), (106, 2024), (112, 2009), (137, 1958), (158, 1847), (171, 1793), (191, 1712), (201, 1673), (205, 1655), (214, 1625), (229, 1562), (247, 1478), (250, 1466), (258, 1433), (274, 1373), (282, 1325), (285, 1307), (293, 1268),

Gene: Madraxi\_52 Start: 37049, Stop: 35973, Start Num: 45

Candidate Starts for Madraxi\_52:

(Start: 45 @37049 has 1 MA's), (Start: 47 @37040 has 75 MA's), (61, 36992), (101, 36863), (134, 36737), (162, 36596), (194, 36458), (248, 36233), (264, 36173), (280, 36089), (298, 36005), (306, 35984),

Gene: Margaery\_54 Start: 37699, Stop: 38700, Start Num: 55

Candidate Starts for Margaery\_54:

(Start: 55 @37699 has 37 MA's), (64, 37747), (69, 37771), (79, 37813), (128, 37915), (139, 37978), (140, 37993), (150, 38029), (152, 38035), (154, 38038), (161, 38086), (198, 38245), (228, 38368), (231, 38380), (234, 38395), (249, 38455), (251, 38470), (267, 38524), (287, 38635), (304, 38692),

Gene: Marsus\_259 Start: 125936, Stop: 124920, Start Num: 51

Candidate Starts for Marsus\_259:

(46, 125948), (Start: 51 @125936 has 141 MA's), (69, 125855), (75, 125825), (91, 125777), (96, 125768), (97, 125765), (99, 125759), (112, 125720), (137, 125666), (158, 125555), (171, 125501),

(191, 125420), (201, 125381), (205, 125363), (214, 125333), (229, 125270), (250, 125174), (258, 125141), (274, 125081), (282, 125033), (285, 125015), (294, 124973),

Gene: Marsus\_2 Start: 2232, Stop: 1216, Start Num: 51

Candidate Starts for Marsus\_2:

(46, 2244), (Start: 51 @2232 has 141 MA's), (69, 2151), (75, 2121), (91, 2073), (96, 2064), (97, 2061), (99, 2055), (112, 2016), (137, 1962), (158, 1851), (171, 1797), (191, 1716), (201, 1677), (205, 1659), (214, 1629), (229, 1566), (250, 1470), (258, 1437), (274, 1377), (282, 1329), (285, 1311), (294, 1269),

Gene: Marvin\_94 Start: 57642, Stop: 56572, Start Num: 47

Candidate Starts for Marvin\_94:

(Start: 36 @57696 has 1 MA's), (38, 57687), (Start: 47 @57642 has 75 MA's), (54, 57627), (61, 57594), (85, 57501), (93, 57468), (103, 57444), (111, 57411), (112, 57408), (113, 57405), (116, 57390), (119, 57378), (130, 57351), (144, 57264), (149, 57252), (155, 57219), (160, 57192), (162, 57186), (165, 57168), (177, 57126), (180, 57111), (187, 57075), (191, 57063), (207, 56985), (211, 56979), (218, 56952), (224, 56931), (240, 56856), (263, 56781), (270, 56760), (272, 56757), (306, 56589), (307, 56586),

Gene: Matzah\_57 Start: 38560, Stop: 39561, Start Num: 55

Candidate Starts for Matzah\_57:

(Start: 55 @38560 has 37 MA's), (64, 38608), (69, 38632), (79, 38674), (128, 38776), (136, 38815), (140, 38854), (150, 38890), (152, 38896), (154, 38899), (161, 38947), (198, 39106), (228, 39229), (231, 39241), (234, 39256), (249, 39316), (251, 39331), (267, 39385), (287, 39496),

Gene: Maupel\_221 Start: 106326, Stop: 107348, Start Num: 51

Candidate Starts for Maupel\_221:

(Start: 51 @106326 has 141 MA's), (59, 106356), (75, 106437), (82, 106455), (97, 106497), (106, 106515), (113, 106533), (163, 106713), (177, 106776), (183, 106809), (185, 106821), (186, 106824), (190, 106836), (209, 106911), (229, 106986), (234, 107010), (235, 107016), (241, 107040), (255, 107103), (306, 107325), (310, 107340),

Gene: Mazun\_18 Start: 12571, Stop: 11567, Start Num: 55

Candidate Starts for Mazun\_18:

(Start: 55 @12571 has 37 MA's), (84, 12442), (131, 12346), (140, 12277), (141, 12268), (159, 12193), (191, 12055), (214, 11962), (231, 11890), (234, 11875), (237, 11860), (246, 11830), (254, 11785), (284, 11653), (291, 11614), (305, 11572),

Gene: Megan\_56 Start: 41734, Stop: 42738, Start Num: 55

Candidate Starts for Megan\_56:

(Start: 55 @41734 has 37 MA's), (61, 41764), (62, 41773), (64, 41782), (69, 41806), (78, 41845), (79, 41848), (128, 41950), (148, 42058), (154, 42076), (161, 42124), (177, 42190), (191, 42253), (195, 42274), (196, 42277), (204, 42313), (208, 42334), (231, 42418), (234, 42433), (238, 42454), (249, 42493), (251, 42508), (260, 42541), (262, 42544), (267, 42562), (277, 42601), (280, 42631), (296, 42709),

Gene: MeganTheeKilla\_223 Start: 107197, Stop: 108219, Start Num: 51

Candidate Starts for MeganTheeKilla\_223:

(Start: 51 @107197 has 141 MA's), (59, 107227), (75, 107308), (82, 107326), (97, 107368), (113, 107404), (163, 107584), (177, 107647), (183, 107680), (185, 107692), (186, 107695), (190, 107707), (209, 107782), (229, 107857), (234, 107881), (241, 107911), (255, 107974), (306, 108196),

Gene: MementoMori\_56 Start: 38139, Stop: 39140, Start Num: 55

Candidate Starts for MementoMori\_56:

(Start: 55 @38139 has 37 MA's), (64, 38187), (69, 38211), (79, 38253), (94, 38295), (128, 38355), (136, 38394), (139, 38418), (140, 38433), (150, 38469), (152, 38475), (154, 38478), (161, 38526), (198, 38685), (228, 38808), (231, 38820), (234, 38835), (249, 38895), (251, 38910), (267, 38964),

Gene: Merry\_ Start: 39138, Stop: 40133, Start Num: 47

Candidate Starts for Merry\_:

(1, 38865), (3, 38931), (4, 38970), (Start: 47 @39138 has 75 MA's), (84, 39267), (89, 39279), (100, 39303), (108, 39312), (113, 39318), (132, 39378), (134, 39393), (141, 39447), (151, 39480), (160, 39528), (170, 39570), (180, 39606), (182, 39618), (191, 39654), (205, 39711), (214, 39741), (216, 39750), (222, 39774), (264, 39942), (276, 39993), (278, 40005), (289, 40074),

Gene: Metamorphoo\_61 Start: 38510, Stop: 39505, Start Num: 47

Candidate Starts for Metamorphoo\_61:

(Start: 47 @38510 has 75 MA's), (79, 38630), (84, 38639), (89, 38651), (108, 38684), (113, 38690), (117, 38708), (134, 38765), (141, 38819), (170, 38942), (180, 38978), (182, 38990), (214, 39113), (234, 39203), (264, 39314), (272, 39335), (278, 39377), (280, 39398), (289, 39446),

Gene: Mildred21\_266 Start: 123620, Stop: 122598, Start Num: 51

Candidate Starts for Mildred21\_266:

(Start: 51 @123620 has 141 MA's), (75, 123509), (91, 123461), (97, 123449), (99, 123443), (112, 123404), (137, 123350), (158, 123239), (171, 123185), (182, 123140), (188, 123113), (205, 123047), (214, 123017), (229, 122954), (250, 122858), (258, 122825), (282, 122717),

Gene: Mildred21\_3 Start: 2462, Stop: 1440, Start Num: 51

Candidate Starts for Mildred21\_3:

(Start: 51 @2462 has 141 MA's), (75, 2351), (91, 2303), (97, 2291), (99, 2285), (112, 2246), (137, 2192), (158, 2081), (171, 2027), (182, 1982), (188, 1955), (205, 1889), (214, 1859), (229, 1796), (250, 1700), (258, 1667), (282, 1559),

Gene: MindFlayer\_2 Start: 2261, Stop: 1221, Start Num: 40

Candidate Starts for MindFlayer\_2:

(Start: 40 @2261 has 21 MA's), (Start: 51 @2216 has 141 MA's), (75, 2105), (87, 2072), (103, 2039), (110, 2027), (113, 2018), (137, 1970), (138, 1952), (139, 1949), (171, 1805), (175, 1796), (183, 1754), (191, 1724), (201, 1685), (205, 1667), (214, 1637), (229, 1574), (258, 1442), (274, 1382), (282, 1334), (293, 1277), (306, 1241),

Gene: MindFlayer\_254 Start: 120321, Stop: 119281, Start Num: 40

Candidate Starts for MindFlayer\_254:

(Start: 40 @120321 has 21 MA's), (Start: 51 @120276 has 141 MA's), (75, 120165), (87, 120132), (103, 120099), (110, 120087), (113, 120078), (137, 120030), (138, 120012), (139, 120009), (171, 119865), (175, 119856), (183, 119814), (191, 119784), (201, 119745), (205, 119727), (214, 119697), (229, 119634), (258, 119502), (274, 119442), (282, 119394), (293, 119337), (306, 119301),

Gene: Moab\_220 Start: 109307, Stop: 110329, Start Num: 50

Candidate Starts for Moab\_220:

(Start: 50 @109307 has 9 MA's), (59, 109337), (68, 109379), (75, 109418), (82, 109436), (97, 109478), (106, 109496), (113, 109514), (163, 109694), (166, 109712), (177, 109757), (183, 109790), (184, 109796), (185, 109802), (209, 109892), (229, 109967), (234, 109991), (241, 110021), (255, 110084), (306, 110303),

Gene: Moleficient\_18 Start: 12566, Stop: 11562, Start Num: 55

Candidate Starts for Moleficient\_18:

(Start: 55 @12566 has 37 MA's), (84, 12437), (131, 12341), (140, 12272), (141, 12263), (159, 12188), (191, 12050), (214, 11957), (231, 11885), (234, 11870), (237, 11855), (240, 11843), (246, 11825), (254, 11780), (284, 11648), (291, 11609), (305, 11567),

Gene: MontyDev\_62 Start: 44363, Stop: 45559, Start Num: 22

Candidate Starts for MontyDev\_62:

(Start: 22 @44363 has 12 MA's), (30, 44378), (48, 44444), (54, 44453), (71, 44534), (77, 44555), (81, 44570), (90, 44597), (105, 44657), (112, 44678), (119, 44711), (141, 44822), (143, 44828), (147, 44840), (156, 44879), (162, 44909), (170, 44948), (189, 45026), (191, 45032), (194, 45047), (227, 45185), (234, 45218), (239, 45242), (264, 45335), (269, 45353), (276, 45386), (289, 45470), (295, 45491), (299, 45506), (306, 45524), (307, 45527), (308, 45533), (310, 45542), (311, 45545),

Gene: Morrill\_17 Start: 12308, Stop: 11304, Start Num: 55

Candidate Starts for Morrill\_17:

(Start: 55 @12308 has 37 MA's), (84, 12179), (131, 12083), (140, 12014), (141, 12005), (161, 11921), (191, 11792), (214, 11699), (231, 11627), (234, 11612), (237, 11597), (246, 11567), (254, 11522), (284, 11390), (291, 11351), (305, 11309),

Gene: MosMoris\_96 Start: 57992, Stop: 56922, Start Num: 47

Candidate Starts for MosMoris\_96:

(26, 58064), (Start: 28 @58061 has 1 MA's), (32, 58055), (Start: 47 @57992 has 75 MA's), (54, 57977), (61, 57944), (85, 57851), (93, 57818), (103, 57794), (111, 57761), (112, 57758), (113, 57755), (116, 57740), (119, 57728), (130, 57701), (144, 57614), (149, 57602), (155, 57569), (160, 57542), (162, 57536), (165, 57518), (177, 57476), (180, 57461), (187, 57425), (191, 57413), (207, 57335), (211, 57329), (218, 57302), (224, 57281), (240, 57206), (263, 57131), (270, 57110), (272, 57107), (306, 56939), (307, 56936),

Gene: MrMagoo\_166 Start: 78537, Stop: 77464, Start Num: 56

Candidate Starts for MrMagoo\_166:

(35, 78609), (42, 78582), (Start: 56 @78537 has 13 MA's), (83, 78423), (92, 78393), (112, 78333), (131, 78270), (135, 78246), (144, 78186), (165, 78090), (177, 78048), (193, 77973), (206, 77910), (210, 77901), (212, 77892), (216, 77877), (226, 77835), (231, 77814), (234, 77799), (239, 77775), (240, 77772), (269, 77667), (276, 77634), (278, 77622), (283, 77592), (286, 77565), (306, 77496), (308, 77487), (310, 77478),

Gene: MrMiyagi\_53 Start: 38517, Stop: 39650, Start Num: 22

Candidate Starts for MrMiyagi\_53:

(Start: 22 @38517 has 12 MA's), (39, 38556), (44, 38583), (58, 38625), (66, 38667), (73, 38703), (77, 38718), (102, 38781), (129, 38859), (141, 38910), (149, 38931), (157, 38979), (162, 38997), (164, 39003), (170, 39036), (173, 39045), (191, 39120), (195, 39141), (197, 39147), (210, 39204), (227, 39273), (229, 39282), (234, 39306), (244, 39345), (246, 39351), (252, 39390), (261, 39420), (269, 39447), (271, 39450), (273, 39459), (275, 39474), (285, 39537), (287, 39549), (288, 39558), (301, 39600), (310, 39633), (311, 39636),

Gene: Mugiwara\_269 Start: 123586, Stop: 122585, Start Num: 51

Candidate Starts for Mugiwara\_269:

(Start: 8 @123730 has 1 MA's), (16, 123691), (18, 123676), (Start: 24 @123661 has 1 MA's), (34, 123643), (Start: 51 @123586 has 141 MA's), (75, 123475), (110, 123397), (113, 123388), (137, 123340), (138, 123322), (165, 123196), (168, 123190), (175, 123166), (178, 123154), (183, 123124), (191, 123094), (201, 123055), (205, 123037), (214, 123007), (229, 122944), (258, 122812), (274, 122752), (282, 122704), (293, 122647), (308, 122602),

Gene: Mugiwara\_2 Start: 2345, Stop: 1200, Start Num: 8

Candidate Starts for Mugiwara\_2:

(Start: 8 @2345 has 1 MA's), (16, 2306), (18, 2291), (Start: 24 @2276 has 1 MA's), (34, 2258), (Start: 51 @2201 has 141 MA's), (75, 2090), (110, 2012), (113, 2003), (137, 1955), (138, 1937), (165, 1811), (168, 1805), (175, 1781), (178, 1769), (183, 1739), (191, 1709), (201, 1670), (205, 1652), (214, 1622), (229, 1559), (258, 1427), (274, 1367), (282, 1319), (293, 1262), (308, 1217),

Gene: MulchMansion\_258 Start: 125252, Stop: 124236, Start Num: 51

Candidate Starts for MulchMansion\_258:

(Start: 51 @125252 has 141 MA's), (75, 125141), (91, 125093), (97, 125081), (99, 125075), (112, 125036), (137, 124982), (158, 124871), (171, 124817), (191, 124736), (201, 124697), (205, 124679), (214, 124649), (229, 124586), (250, 124490), (258, 124457), (274, 124397), (282, 124349), (285, 124331), (293, 124292),

Gene: MulchMansion\_2 Start: 2274, Stop: 1258, Start Num: 51

Candidate Starts for MulchMansion\_2:

(Start: 51 @2274 has 141 MA's), (75, 2163), (91, 2115), (97, 2103), (99, 2097), (112, 2058), (137, 2004), (158, 1893), (171, 1839), (191, 1758), (201, 1719), (205, 1701), (214, 1671), (229, 1608), (250, 1512), (258, 1479), (274, 1419), (282, 1371), (285, 1353), (293, 1314),

Gene: Nanosmite\_163 Start: 77987, Stop: 76914, Start Num: 56

Candidate Starts for Nanosmite\_163:

(13, 78134), (15, 78119), (Start: 56 @77987 has 13 MA's), (93, 77837), (112, 77783), (122, 77747), (131, 77720), (144, 77636), (160, 77564), (165, 77540), (193, 77423), (206, 77360), (216, 77327), (226, 77285), (230, 77267), (236, 77240), (269, 77117), (276, 77084), (277, 77081), (278, 77072), (281, 77048), (306, 76946), (308, 76937),

Gene: Navo\_244 Start: 121839, Stop: 120826, Start Num: 51

Candidate Starts for Navo\_244:

(2, 122061), (9, 121989), (16, 121953), (Start: 20 @121932 has 4 MA's), (29, 121914), (Start: 51 @121839 has 141 MA's), (69, 121758), (75, 121728), (97, 121668), (106, 121638), (112, 121623), (113, 121620), (137, 121572), (158, 121461), (171, 121407), (182, 121362), (191, 121326), (201, 121287), (205, 121269), (214, 121239), (250, 121080), (258, 121047), (274, 120987), (282, 120939), (285, 120921), (293, 120882),

Gene: Navo\_2 Start: 2214, Stop: 1201, Start Num: 51

Candidate Starts for Navo\_2:

(2, 2436), (9, 2364), (16, 2328), (Start: 20 @2307 has 4 MA's), (29, 2289), (Start: 51 @2214 has 141 MA's), (69, 2133), (75, 2103), (97, 2043), (106, 2013), (112, 1998), (113, 1995), (137, 1947), (158, 1836), (171, 1782), (182, 1737), (191, 1701), (201, 1662), (205, 1644), (214, 1614), (250, 1455), (258, 1422), (274, 1362), (282, 1314), (285, 1296), (293, 1257),

Gene: NiceHouse\_208 Start: 114434, Stop: 115474, Start Num: 53

Candidate Starts for NiceHouse\_208:

(Start: 53 @114434 has 1 MA's), (69, 114512), (72, 114527), (76, 114545), (96, 114599), (103, 114602), (112, 114638), (134, 114719), (139, 114752), (145, 114785), (171, 114896), (176, 114911), (177, 114914), (191, 114977), (194, 114992), (197, 115004), (209, 115049), (240, 115175), (258, 115259), (277, 115316), (283, 115355), (285, 115376), (302, 115439),

Gene: Nicole72\_57 Start: 42240, Stop: 43244, Start Num: 55

Candidate Starts for Nicole72\_57:

(Start: 55 @42240 has 37 MA's), (61, 42270), (64, 42288), (69, 42312), (128, 42456), (141, 42543), (152, 42579), (161, 42630), (174, 42684), (177, 42696), (191, 42759), (195, 42780), (204, 42819), (208, 42840), (231, 42924), (234, 42939), (249, 42999), (251, 43014), (264, 43056), (280, 43137),

(287, 43179), (292, 43200), (299, 43224),

Gene: Nilo\_63 Start: 44715, Stop: 45911, Start Num: 22

Candidate Starts for Nilo\_63:

(Start: 22 @44715 has 12 MA's), (30, 44730), (48, 44796), (54, 44805), (71, 44886), (77, 44907), (81, 44922), (90, 44949), (105, 45009), (112, 45030), (119, 45063), (141, 45174), (143, 45180), (147, 45192), (156, 45231), (162, 45261), (170, 45300), (189, 45378), (191, 45384), (194, 45399), (227, 45537), (234, 45570), (239, 45594), (264, 45687), (269, 45705), (276, 45738), (289, 45822), (295, 45843), (299, 45858), (306, 45876), (307, 45879), (308, 45885), (310, 45894), (311, 45897),

Gene: NoodlelyBoi\_59 Start: 38103, Stop: 39098, Start Num: 47

Candidate Starts for NoodlelyBoi\_59:

(Start: 47 @38103 has 75 MA's), (79, 38223), (84, 38232), (89, 38244), (108, 38277), (113, 38283), (117, 38301), (141, 38412), (160, 38493), (170, 38535), (180, 38571), (182, 38583), (214, 38706), (221, 38736), (264, 38907), (272, 38928), (278, 38970), (280, 38991), (289, 39039),

Gene: NootNoot\_3 Start: 2427, Stop: 1414, Start Num: 51

Candidate Starts for NootNoot\_3:

(9, 2577), (16, 2541), (Start: 20 @2520 has 4 MA's), (29, 2502), (Start: 51 @2427 has 141 MA's), (69, 2346), (75, 2316), (97, 2256), (106, 2226), (112, 2211), (113, 2208), (137, 2160), (158, 2049), (171, 1995), (182, 1950), (191, 1914), (201, 1875), (205, 1857), (214, 1827), (250, 1668), (258, 1635), (274, 1575), (282, 1527), (285, 1509), (293, 1470),

Gene: NootNoot\_248 Start: 122726, Stop: 121713, Start Num: 51

Candidate Starts for NootNoot\_248:

(9, 122876), (16, 122840), (Start: 20 @122819 has 4 MA's), (29, 122801), (Start: 51 @122726 has 141 MA's), (69, 122645), (75, 122615), (97, 122555), (106, 122525), (112, 122510), (113, 122507), (137, 122459), (158, 122348), (171, 122294), (182, 122249), (191, 122213), (201, 122174), (205, 122156), (214, 122126), (250, 121967), (258, 121934), (274, 121874), (282, 121826), (285, 121808), (293, 121769),

Gene: Nova53\_207 Start: 111289, Stop: 112311, Start Num: 51

Candidate Starts for Nova53\_207:

(Start: 51 @111289 has 141 MA's), (133, 111562), (137, 111580), (160, 111691), (175, 111754), (177, 111763), (185, 111808), (190, 111823), (195, 111847), (201, 111862), (220, 111937), (231, 111982), (306, 112288),

Gene: Onika\_57 Start: 37301, Stop: 38296, Start Num: 47

Candidate Starts for Onika\_57:

(Start: 47 @37301 has 75 MA's), (79, 37421), (84, 37430), (89, 37442), (108, 37475), (113, 37481), (117, 37499), (141, 37610), (160, 37691), (180, 37769), (182, 37781), (214, 37904), (221, 37934), (264, 38105), (272, 38126), (276, 38156), (280, 38189), (289, 38237),

Gene: Orchid\_113 Start: 77931, Stop: 76870, Start Num: 47

Candidate Starts for Orchid\_113:

(Start: 47 @77931 has 75 MA's), (Start: 57 @77907 has 1 MA's), (88, 77778), (92, 77760), (127, 77655), (139, 77595), (170, 77445), (200, 77325), (219, 77247), (220, 77241), (230, 77199), (237, 77166), (246, 77136), (264, 77073), (269, 77055), (295, 76914), (298, 76902), (302, 76893),

Gene: PacManQ\_2 Start: 2225, Stop: 1212, Start Num: 51

Candidate Starts for PacManQ\_2:

(19, 2321), (Start: 51 @2225 has 141 MA's), (75, 2114), (87, 2081), (97, 2054), (103, 2045), (106, 2024), (112, 2009), (137, 1958), (158, 1847), (171, 1793), (191, 1712), (201, 1673), (205, 1655), (214,

1625), (229, 1562), (247, 1478), (250, 1466), (258, 1433), (274, 1373), (282, 1325), (285, 1307), (293, 1268),

Gene: PacManQ\_249 Start: 123117, Stop: 122104, Start Num: 51

Candidate Starts for PacManQ\_249:

(19, 123213), (Start: 51 @123117 has 141 MA's), (75, 123006), (87, 122973), (97, 122946), (103, 122937), (106, 122916), (112, 122901), (137, 122850), (158, 122739), (171, 122685), (191, 122604), (201, 122565), (205, 122547), (214, 122517), (229, 122454), (247, 122370), (250, 122358), (258, 122325), (274, 122265), (282, 122217), (285, 122199), (293, 122160),

Gene: Panchaali\_166 Start: 113192, Stop: 114172, Start Num: 49

Candidate Starts for Panchaali\_166:

(Start: 49 @113192 has 5 MA's), (60, 113234), (135, 113438), (142, 113495), (160, 113576), (177, 113639), (195, 113723), (220, 113813), (231, 113858), (258, 113957), (278, 114032),

Gene: Papyrus\_61 Start: 44571, Stop: 45767, Start Num: 22

Candidate Starts for Papyrus\_61:

(Start: 22 @44571 has 12 MA's), (30, 44586), (48, 44652), (54, 44661), (71, 44742), (77, 44763), (81, 44778), (90, 44805), (105, 44865), (112, 44886), (119, 44919), (141, 45030), (143, 45036), (147, 45048), (156, 45087), (162, 45117), (170, 45156), (189, 45234), (191, 45240), (194, 45255), (227, 45393), (234, 45426), (239, 45450), (264, 45543), (269, 45561), (276, 45594), (289, 45678), (295, 45699), (299, 45714), (306, 45732), (307, 45735), (308, 45741), (310, 45750), (311, 45753),

Gene: Paradiddles\_3 Start: 2417, Stop: 1404, Start Num: 51

Candidate Starts for Paradiddles\_3:

(9, 2567), (16, 2531), (Start: 20 @2510 has 4 MA's), (29, 2492), (Start: 51 @2417 has 141 MA's), (69, 2336), (75, 2306), (97, 2246), (106, 2216), (112, 2201), (113, 2198), (137, 2150), (158, 2039), (171, 1985), (182, 1940), (191, 1904), (201, 1865), (205, 1847), (214, 1817), (250, 1658), (258, 1625), (274, 1565), (282, 1517), (285, 1499), (293, 1460),

Gene: Paradiddles\_244 Start: 125125, Stop: 124112, Start Num: 51

Candidate Starts for Paradiddles\_244:

(9, 125275), (16, 125239), (Start: 20 @125218 has 4 MA's), (29, 125200), (Start: 51 @125125 has 141 MA's), (69, 125044), (75, 125014), (97, 124954), (106, 124924), (112, 124909), (113, 124906), (137, 124858), (158, 124747), (171, 124693), (182, 124648), (191, 124612), (201, 124573), (205, 124555), (214, 124525), (250, 124366), (258, 124333), (274, 124273), (282, 124225), (285, 124207), (293, 124168),

Gene: Paschalis\_58 Start: 37308, Stop: 38303, Start Num: 47

Candidate Starts for Paschalis\_58:

(Start: 47 @37308 has 75 MA's), (79, 37428), (84, 37437), (89, 37449), (108, 37482), (113, 37488), (117, 37506), (141, 37617), (160, 37698), (170, 37740), (180, 37776), (182, 37788), (214, 37911), (221, 37941), (264, 38112), (272, 38133), (276, 38163), (280, 38196), (289, 38244),

Gene: Patelgo\_221 Start: 109737, Stop: 110759, Start Num: 50

Candidate Starts for Patelgo\_221:

(Start: 50 @109737 has 9 MA's), (59, 109767), (75, 109848), (82, 109866), (97, 109908), (106, 109926), (113, 109944), (163, 110124), (166, 110142), (177, 110187), (183, 110220), (184, 110226), (185, 110232), (209, 110322), (229, 110397), (234, 110421), (241, 110451), (255, 110514), (306, 110733),

Gene: PatrickStar\_114 Start: 78010, Stop: 76949, Start Num: 47

Candidate Starts for PatrickStar\_114:

(Start: 47 @78010 has 75 MA's), (Start: 57 @77986 has 1 MA's), (88, 77857), (92, 77839), (127, 77734), (139, 77674), (170, 77524), (200, 77404), (219, 77326), (220, 77320), (230, 77278), (237, 77245), (246, 77215), (264, 77152), (269, 77134), (295, 76993), (298, 76981), (302, 76972),

Gene: Peebs\_2 Start: 2371, Stop: 1211, Start Num: 10

Candidate Starts for Peebs\_2:

(Start: 10 @2371 has 4 MA's), (Start: 20 @2317 has 4 MA's), (29, 2299), (Start: 51 @2224 has 141 MA's), (75, 2113), (97, 2053), (103, 2044), (106, 2023), (112, 2008), (137, 1957), (158, 1846), (171, 1792), (191, 1711), (205, 1654), (214, 1624), (229, 1561), (247, 1477), (250, 1465), (258, 1432), (274, 1372), (282, 1324), (285, 1306), (293, 1267),

Gene: Peebs\_249 Start: 124346, Stop: 123186, Start Num: 10

Candidate Starts for Peebs\_249:

(Start: 10 @124346 has 4 MA's), (Start: 20 @124292 has 4 MA's), (29, 124274), (Start: 51 @124199 has 141 MA's), (75, 124088), (97, 124028), (103, 124019), (106, 123998), (112, 123983), (137, 123932), (158, 123821), (171, 123767), (191, 123686), (205, 123629), (214, 123599), (229, 123536), (247, 123452), (250, 123440), (258, 123407), (274, 123347), (282, 123299), (285, 123281), (293, 123242),

Gene: PegLeg\_149 Start: 75413, Stop: 74244, Start Num: 25

Candidate Starts for PegLeg\_149:

(7, 75494), (9, 75482), (Start: 25 @75413 has 6 MA's), (37, 75392), (Start: 56 @75317 has 13 MA's), (79, 75212), (83, 75203), (93, 75167), (112, 75113), (121, 75080), (131, 75050), (144, 74966), (165, 74870), (180, 74813), (189, 74771), (193, 74753), (206, 74690), (210, 74681), (213, 74669), (214, 74666), (226, 74615), (239, 74555), (266, 74456), (269, 74447), (277, 74411), (283, 74372), (306, 74276), (308, 74267),

Gene: Pepperwood\_3 Start: 2379, Stop: 1366, Start Num: 51

Candidate Starts for Pepperwood\_3:

(Start: 10 @2526 has 4 MA's), (Start: 20 @2472 has 4 MA's), (29, 2454), (Start: 51 @2379 has 141 MA's), (75, 2268), (97, 2208), (103, 2199), (106, 2178), (112, 2163), (137, 2112), (158, 2001), (171, 1947), (191, 1866), (201, 1827), (205, 1809), (214, 1779), (229, 1716), (247, 1632), (250, 1620), (258, 1587), (274, 1527), (282, 1479), (285, 1461), (293, 1422),

Gene: Pepperwood\_252 Start: 124164, Stop: 123151, Start Num: 51

Candidate Starts for Pepperwood\_252:

(Start: 10 @124311 has 4 MA's), (Start: 20 @124257 has 4 MA's), (29, 124239), (Start: 51 @124164 has 141 MA's), (75, 124053), (97, 123993), (103, 123984), (106, 123963), (112, 123948), (137, 123897), (158, 123786), (171, 123732), (191, 123651), (201, 123612), (205, 123594), (214, 123564), (229, 123501), (247, 123417), (250, 123405), (258, 123372), (274, 123312), (282, 123264), (285, 123246), (293, 123207),

Gene: Peregrin\_181 Start: 95378, Stop: 96424, Start Num: 51

Candidate Starts for Peregrin\_181:

(Start: 51 @95378 has 141 MA's), (61, 95417), (68, 95450), (76, 95495), (78, 95501), (90, 95531), (112, 95588), (140, 95726), (160, 95807), (162, 95813), (164, 95819), (169, 95852), (176, 95876), (197, 95969), (209, 96014), (214, 96026), (231, 96098), (255, 96203), (258, 96215), (279, 96293), (302, 96389), (308, 96410),

Gene: Persimmon\_2 Start: 2215, Stop: 1202, Start Num: 51

Candidate Starts for Persimmon\_2:

(9, 2365), (16, 2329), (Start: 20 @2308 has 4 MA's), (29, 2290), (Start: 51 @2215 has 141 MA's), (69, 2134), (75, 2104), (97, 2044), (106, 2014), (112, 1999), (113, 1996), (137, 1948), (158, 1837), (171,

1783), (182, 1738), (191, 1702), (201, 1663), (205, 1645), (214, 1615), (250, 1456), (258, 1423), (274, 1363), (282, 1315), (285, 1297), (293, 1258),

Gene: Persimmon\_253 Start: 123026, Stop: 122013, Start Num: 51

Candidate Starts for Persimmon\_253:

(9, 123176), (16, 123140), (Start: 20 @123119 has 4 MA's), (29, 123101), (Start: 51 @123026 has 141 MA's), (69, 122945), (75, 122915), (97, 122855), (106, 122825), (112, 122810), (113, 122807), (137, 122759), (158, 122648), (171, 122594), (182, 122549), (191, 122513), (201, 122474), (205, 122456), (214, 122426), (250, 122267), (258, 122234), (274, 122174), (282, 122126), (285, 122108), (293, 122069),

Gene: Pharky\_18 Start: 12530, Stop: 11526, Start Num: 55

Candidate Starts for Pharky\_18:

(Start: 55 @12530 has 37 MA's), (84, 12401), (131, 12305), (140, 12236), (141, 12227), (159, 12152), (191, 12014), (214, 11921), (231, 11849), (234, 11834), (237, 11819), (240, 11807), (246, 11789), (254, 11744), (284, 11612), (291, 11573), (305, 11531),

Gene: Phedro\_18 Start: 12530, Stop: 11526, Start Num: 55

Candidate Starts for Phedro\_18:

(Start: 55 @12530 has 37 MA's), (84, 12401), (131, 12305), (140, 12236), (141, 12227), (159, 12152), (191, 12014), (214, 11921), (231, 11849), (234, 11834), (237, 11819), (240, 11807), (246, 11789), (254, 11744), (284, 11612), (291, 11573), (305, 11531),

Gene: PhedwardCullen\_56 Start: 37059, Stop: 38054, Start Num: 47

Candidate Starts for PhedwardCullen\_56:

(Start: 47 @37059 has 75 MA's), (79, 37179), (84, 37188), (89, 37200), (108, 37233), (113, 37239), (117, 37257), (141, 37368), (160, 37449), (180, 37527), (182, 37539), (214, 37662), (221, 37692), (264, 37863), (272, 37884), (276, 37914), (280, 37947), (289, 37995),

Gene: Phorgeous\_58 Start: 37142, Stop: 38137, Start Num: 47

Candidate Starts for Phorgeous\_58:

(Start: 47 @37142 has 75 MA's), (79, 37262), (84, 37271), (89, 37283), (108, 37316), (113, 37322), (117, 37340), (141, 37451), (160, 37532), (180, 37610), (182, 37622), (214, 37745), (221, 37775), (264, 37946), (272, 37967), (276, 37997), (280, 38030), (289, 38078),

Gene: Phractured\_18 Start: 12530, Stop: 11526, Start Num: 55

Candidate Starts for Phractured\_18:

(Start: 55 @12530 has 37 MA's), (84, 12401), (131, 12305), (140, 12236), (141, 12227), (159, 12152), (191, 12014), (214, 11921), (231, 11849), (234, 11834), (237, 11819), (240, 11807), (246, 11789), (254, 11744), (284, 11612), (291, 11573), (305, 11531),

Gene: Phrampa\_167 Start: 117794, Stop: 118768, Start Num: 49

Candidate Starts for Phrampa\_167:

(Start: 49 @117794 has 5 MA's), (60, 117836), (160, 118175), (177, 118238), (199, 118334), (232, 118460), (255, 118544), (258, 118556), (269, 118589), (308, 118760),

Gene: Phrancesco\_58 Start: 37431, Stop: 38426, Start Num: 47

Candidate Starts for Phrancesco\_58:

(Start: 47 @37431 has 75 MA's), (79, 37551), (84, 37560), (89, 37572), (108, 37605), (113, 37611), (117, 37629), (141, 37740), (160, 37821), (180, 37899), (182, 37911), (214, 38034), (221, 38064), (225, 38076), (264, 38235), (272, 38256), (276, 38286), (280, 38319), (289, 38367),

Gene: Phredrick\_223 Start: 106600, Stop: 107622, Start Num: 51

Candidate Starts for Phredrick\_223:

(Start: 51 @106600 has 141 MA's), (59, 106630), (75, 106711), (82, 106729), (97, 106771), (113, 106807), (163, 106987), (177, 107050), (183, 107083), (185, 107095), (186, 107098), (190, 107110), (194, 107128), (209, 107185), (229, 107260), (234, 107284), (241, 107314), (255, 107377), (306, 107599), (310, 107614),

Gene: PhriedRice\_18 Start: 12541, Stop: 11537, Start Num: 55

Candidate Starts for PhriedRice\_18:

(Start: 55 @12541 has 37 MA's), (84, 12412), (131, 12316), (140, 12247), (141, 12238), (159, 12163), (191, 12025), (214, 11932), (231, 11860), (234, 11845), (237, 11830), (240, 11818), (246, 11800), (254, 11755), (284, 11623), (291, 11584), (305, 11542),

Gene: PierreOrion\_58 Start: 37551, Stop: 38546, Start Num: 47

Candidate Starts for PierreOrion\_58:

(Start: 47 @37551 has 75 MA's), (79, 37671), (84, 37680), (89, 37692), (100, 37716), (108, 37725), (113, 37731), (117, 37749), (134, 37806), (141, 37860), (160, 37941), (170, 37983), (180, 38019), (182, 38031), (214, 38154), (221, 38184), (264, 38355), (272, 38376), (276, 38406), (280, 38439), (289, 38487),

Gene: PinkiePie\_3 Start: 2417, Stop: 1404, Start Num: 51

Candidate Starts for PinkiePie\_3:

(9, 2567), (16, 2531), (Start: 20 @2510 has 4 MA's), (29, 2492), (Start: 51 @2417 has 141 MA's), (69, 2336), (75, 2306), (97, 2246), (106, 2216), (112, 2201), (113, 2198), (137, 2150), (158, 2039), (171, 1985), (182, 1940), (191, 1904), (201, 1865), (205, 1847), (214, 1817), (250, 1658), (258, 1625), (274, 1565), (282, 1517), (285, 1499), (293, 1460),

Gene: PinkiePie\_253 Start: 123938, Stop: 122925, Start Num: 51

Candidate Starts for PinkiePie\_253:

(9, 124088), (16, 124052), (Start: 20 @124031 has 4 MA's), (29, 124013), (Start: 51 @123938 has 141 MA's), (69, 123857), (75, 123827), (97, 123767), (106, 123737), (112, 123722), (113, 123719), (137, 123671), (158, 123560), (171, 123506), (182, 123461), (191, 123425), (201, 123386), (205, 123368), (214, 123338), (250, 123179), (258, 123146), (274, 123086), (282, 123038), (285, 123020), (293, 122981),

Gene: PiperSansNom\_59 Start: 37615, Stop: 38610, Start Num: 47

Candidate Starts for PiperSansNom\_59:

(Start: 47 @37615 has 75 MA's), (79, 37735), (84, 37744), (89, 37756), (108, 37789), (113, 37795), (117, 37813), (141, 37924), (160, 38005), (180, 38083), (182, 38095), (214, 38218), (221, 38248), (264, 38419), (272, 38440), (276, 38470), (280, 38503), (289, 38551),

Gene: Piperis\_59 Start: 37265, Stop: 38260, Start Num: 47

Candidate Starts for Piperis\_59:

(Start: 47 @37265 has 75 MA's), (79, 37385), (84, 37394), (89, 37406), (108, 37439), (113, 37445), (117, 37463), (141, 37574), (160, 37655), (180, 37733), (182, 37745), (214, 37868), (221, 37898), (264, 38069), (272, 38090), (276, 38120), (280, 38153), (289, 38201),

Gene: Poise\_101 Start: 57574, Stop: 56504, Start Num: 47

Candidate Starts for Poise\_101:

(26, 57646), (Start: 28 @57643 has 1 MA's), (32, 57637), (Start: 47 @57574 has 75 MA's), (54, 57559), (61, 57526), (85, 57433), (93, 57400), (103, 57376), (111, 57343), (112, 57340), (113, 57337), (116, 57322), (119, 57310), (130, 57283), (144, 57196), (149, 57184), (155, 57151), (160, 57124), (162, 57118), (165, 57100), (177, 57058), (180, 57043), (187, 57007), (191, 56995), (207, 56917), (211, 56911), (218, 56884), (224, 56863), (240, 56788), (263, 56713), (270, 56692), (272, 56689), (306,

56521), (307, 56518),

Gene: Pringar\_96 Start: 57361, Stop: 56291, Start Num: 47

Candidate Starts for Pringar\_96:

(Start: 36 @57415 has 1 MA's), (38, 57406), (Start: 47 @57361 has 75 MA's), (54, 57346), (61, 57313), (85, 57220), (93, 57187), (103, 57163), (111, 57130), (112, 57127), (113, 57124), (116, 57109), (119, 57097), (130, 57070), (144, 56983), (149, 56971), (155, 56938), (160, 56911), (162, 56905), (165, 56887), (177, 56845), (180, 56830), (187, 56794), (191, 56782), (207, 56704), (211, 56698), (218, 56671), (224, 56650), (240, 56575), (263, 56500), (270, 56479), (272, 56476), (306, 56308), (307, 56305),

Gene: Pulchra\_60 Start: 37662, Stop: 38657, Start Num: 47

Candidate Starts for Pulchra\_60:

(Start: 47 @37662 has 75 MA's), (79, 37782), (84, 37791), (89, 37803), (108, 37836), (113, 37842), (117, 37860), (141, 37971), (160, 38052), (180, 38130), (182, 38142), (214, 38265), (221, 38295), (264, 38466), (272, 38487), (276, 38517), (280, 38550), (289, 38598),

Gene: PumpkinSpice\_3 Start: 2651, Stop: 1611, Start Num: 40

Candidate Starts for PumpkinSpice\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: PumpkinSpice\_267 Start: 122543, Stop: 121503, Start Num: 40

Candidate Starts for PumpkinSpice\_267:

(Start: 40 @122543 has 21 MA's), (Start: 51 @122498 has 141 MA's), (75, 122387), (87, 122354), (103, 122321), (110, 122309), (113, 122300), (137, 122252), (138, 122234), (139, 122231), (171, 122087), (175, 122078), (183, 122036), (191, 122006), (201, 121967), (205, 121949), (214, 121919), (229, 121856), (258, 121724), (274, 121664), (282, 121616), (293, 121559), (306, 121523),

Gene: Quaran19\_264 Start: 121833, Stop: 120793, Start Num: 40

Candidate Starts for Quaran19\_264:

(Start: 40 @121833 has 21 MA's), (Start: 51 @121788 has 141 MA's), (75, 121677), (87, 121644), (103, 121611), (110, 121599), (113, 121590), (137, 121542), (138, 121524), (139, 121521), (171, 121377), (175, 121368), (183, 121326), (191, 121296), (201, 121257), (205, 121239), (214, 121209), (229, 121146), (258, 121014), (274, 120954), (282, 120906), (293, 120849), (306, 120813),

Gene: Quaran19\_3 Start: 2651, Stop: 1611, Start Num: 40

Candidate Starts for Quaran19\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: Quhwah\_62 Start: 37923, Stop: 38918, Start Num: 47

Candidate Starts for Quhwah\_62:

(Start: 47 @37923 has 75 MA's), (79, 38043), (84, 38052), (89, 38064), (108, 38097), (113, 38103), (117, 38121), (141, 38232), (160, 38313), (180, 38391), (182, 38403), (214, 38526), (221, 38556), (264, 38727), (272, 38748), (276, 38778), (280, 38811), (289, 38859),

Gene: REQ1\_18 Start: 6081, Stop: 5032, Start Num: 47

Candidate Starts for REQ1\_18:

(Start: 47 @6081 has 75 MA's), (61, 6033), (162, 5637), (194, 5499), (246, 5295), (264, 5232), (283, 5139), (306, 5043),

Gene: Raela\_102 Start: 58129, Stop: 57059, Start Num: 47

Candidate Starts for Raela\_102:

(26, 58201), (Start: 28 @58198 has 1 MA's), (32, 58192), (Start: 47 @58129 has 75 MA's), (54, 58114), (61, 58081), (85, 57988), (93, 57955), (103, 57931), (111, 57898), (112, 57895), (113, 57892), (116, 57877), (119, 57865), (130, 57838), (144, 57751), (149, 57739), (155, 57706), (160, 57679), (162, 57673), (165, 57655), (177, 57613), (180, 57598), (187, 57562), (191, 57550), (207, 57472), (211, 57466), (218, 57439), (224, 57418), (234, 57370), (240, 57343), (263, 57268), (270, 57247), (272, 57244), (306, 57076), (307, 57073),

Gene: Ramiel05\_57 Start: 37326, Stop: 38321, Start Num: 47

Candidate Starts for Ramiel05\_57:

(Start: 47 @37326 has 75 MA's), (79, 37446), (84, 37455), (89, 37467), (108, 37500), (113, 37506), (117, 37524), (141, 37635), (160, 37716), (180, 37794), (182, 37806), (214, 37929), (221, 37959), (264, 38130), (272, 38151), (276, 38181), (280, 38214), (289, 38262),

Gene: Rasputia\_140 Start: 86821, Stop: 87828, Start Num: 55

Candidate Starts for Rasputia\_140:

(11, 86671), (12, 86674), (Start: 55 @86821 has 37 MA's), (61, 86851), (78, 86932), (80, 86938), (137, 87082), (154, 87163), (166, 87235), (191, 87340), (195, 87361), (230, 87502), (232, 87508), (246, 87565), (263, 87631), (292, 87781),

Gene: RedRaider77\_100 Start: 57591, Stop: 56452, Start Num: 28

Candidate Starts for RedRaider77\_100:

(26, 57594), (Start: 28 @57591 has 1 MA's), (32, 57585), (Start: 47 @57522 has 75 MA's), (54, 57507), (61, 57474), (85, 57381), (93, 57348), (103, 57324), (111, 57291), (112, 57288), (113, 57285), (116, 57270), (119, 57258), (130, 57231), (144, 57144), (149, 57132), (155, 57099), (160, 57072), (162, 57066), (165, 57048), (177, 57006), (180, 56991), (187, 56955), (191, 56943), (207, 56865), (211, 56859), (218, 56832), (224, 56811), (234, 56763), (240, 56736), (263, 56661), (270, 56640), (272, 56637), (306, 56469), (307, 56466),

Gene: ReginaGlobina\_180 Start: 117379, Stop: 118386, Start Num: 49

Candidate Starts for ReginaGlobina\_180:

(Start: 49 @117379 has 5 MA's), (60, 117421), (69, 117466), (95, 117553), (142, 117709), (160, 117790), (177, 117853), (195, 117937), (220, 118027), (231, 118072), (232, 118075), (255, 118159), (257, 118165), (258, 118171), (278, 118246),

Gene: RegnumDei\_38 Start: 31135, Stop: 30074, Start Num: 45

Candidate Starts for RegnumDei\_38:

(14, 31243), (Start: 45 @31135 has 1 MA's), (Start: 47 @31126 has 75 MA's), (61, 31078), (101, 30949), (103, 30943), (111, 30910), (122, 30865), (126, 30856), (134, 30823), (162, 30682), (164, 30676), (194, 30544), (264, 30280), (277, 30226), (283, 30187), (298, 30112),

Gene: Reindeer\_147 Start: 76556, Stop: 75483, Start Num: 57

Candidate Starts for Reindeer\_147:

(Start: 57 @76556 has 1 MA's), (61, 76532), (83, 76442), (93, 76406), (112, 76352), (121, 76319), (131, 76289), (135, 76265), (144, 76205), (165, 76109), (189, 76010), (190, 76007), (193, 75992), (210, 75920), (213, 75908), (214, 75905), (226, 75854), (234, 75818), (239, 75794), (266, 75695), (269, 75686), (277, 75650), (283, 75611), (306, 75515), (308, 75506),

Gene: Rey\_164 Start: 77837, Stop: 76674, Start Num: 24

Candidate Starts for Rey\_164:

(Start: 24 @77837 has 1 MA's), (35, 77819), (42, 77792), (Start: 56 @77747 has 13 MA's), (83, 77633), (92, 77603), (112, 77543), (144, 77396), (165, 77300), (177, 77258), (193, 77183), (206, 77120), (210, 77111), (212, 77102), (214, 77096), (216, 77087), (226, 77045), (230, 77027), (234, 77009), (239, 76985), (240, 76982), (269, 76877), (278, 76832), (283, 76802), (286, 76775), (306, 76706), (308, 76697), (310, 76688),

Gene: RicoCaldo\_18 Start: 12562, Stop: 11558, Start Num: 55

Candidate Starts for RicoCaldo\_18:

(Start: 55 @12562 has 37 MA's), (84, 12433), (131, 12337), (140, 12268), (141, 12259), (159, 12184), (191, 12046), (214, 11953), (231, 11881), (234, 11866), (237, 11851), (240, 11839), (246, 11821), (254, 11776), (284, 11644), (291, 11605), (305, 11563),

Gene: Rikishi\_264 Start: 122334, Stop: 121294, Start Num: 40

Candidate Starts for Rikishi\_264:

(Start: 40 @122334 has 21 MA's), (Start: 51 @122289 has 141 MA's), (75, 122178), (87, 122145), (103, 122112), (110, 122100), (113, 122091), (137, 122043), (138, 122025), (139, 122022), (171, 121878), (175, 121869), (183, 121827), (191, 121797), (201, 121758), (205, 121740), (214, 121710), (229, 121647), (258, 121515), (274, 121455), (282, 121407), (293, 121350), (306, 121314),

Gene: Rikishi\_2 Start: 2261, Stop: 1221, Start Num: 40

Candidate Starts for Rikishi\_2:

(Start: 40 @2261 has 21 MA's), (Start: 51 @2216 has 141 MA's), (75, 2105), (87, 2072), (103, 2039), (110, 2027), (113, 2018), (137, 1970), (138, 1952), (139, 1949), (171, 1805), (175, 1796), (183, 1754), (191, 1724), (201, 1685), (205, 1667), (214, 1637), (229, 1574), (258, 1442), (274, 1382), (282, 1334), (293, 1277), (306, 1241),

Gene: Riparian\_63 Start: 44163, Stop: 45359, Start Num: 22

Candidate Starts for Riparian\_63:

(Start: 22 @44163 has 12 MA's), (30, 44178), (48, 44244), (54, 44253), (71, 44334), (77, 44355), (81, 44370), (90, 44397), (105, 44457), (112, 44478), (119, 44511), (141, 44622), (143, 44628), (147, 44640), (156, 44679), (162, 44709), (170, 44748), (189, 44826), (191, 44832), (194, 44847), (227, 44985), (234, 45018), (239, 45042), (264, 45135), (269, 45153), (276, 45186), (289, 45270), (295, 45291), (299, 45306), (306, 45324), (307, 45327), (308, 45333), (310, 45342), (311, 45345),

Gene: Riptide\_257 Start: 123758, Stop: 122736, Start Num: 51

Candidate Starts for Riptide\_257:

(Start: 51 @123758 has 141 MA's), (69, 123677), (75, 123647), (87, 123614), (91, 123599), (97, 123587), (99, 123581), (112, 123542), (137, 123488), (158, 123377), (159, 123374), (171, 123323), (182, 123278), (191, 123242), (201, 123203), (205, 123185), (214, 123155), (229, 123092), (233, 123074), (250, 122996), (258, 122963), (282, 122855), (285, 122837), (293, 122798),

Gene: Riptide\_2 Start: 2306, Stop: 1284, Start Num: 51

Candidate Starts for Riptide\_2:

(Start: 51 @2306 has 141 MA's), (69, 2225), (75, 2195), (87, 2162), (91, 2147), (97, 2135), (99, 2129), (112, 2090), (137, 2036), (158, 1925), (159, 1922), (171, 1871), (182, 1826), (191, 1790), (201, 1751), (205, 1733), (214, 1703), (229, 1640), (233, 1622), (250, 1544), (258, 1511), (282, 1403), (285, 1385), (293, 1346),

Gene: RobinSparkles\_123 Start: 79116, Stop: 78055, Start Num: 47

Candidate Starts for RobinSparkles\_123:

(Start: 47 @79116 has 75 MA's), (Start: 57 @79092 has 1 MA's), (88, 78963), (92, 78945), (127, 78840), (139, 78780), (170, 78630), (200, 78510), (219, 78432), (220, 78426), (230, 78384), (237,

78351), (246, 78321), (264, 78258), (269, 78240), (295, 78099), (298, 78087), (302, 78078),

Gene: RobsFeet\_62 Start: 38777, Stop: 39772, Start Num: 47

Candidate Starts for RobsFeet\_62:

(Start: 47 @38777 has 75 MA's), (79, 38897), (84, 38906), (89, 38918), (108, 38951), (113, 38957), (117, 38975), (134, 39032), (141, 39086), (170, 39209), (180, 39245), (182, 39257), (214, 39380), (234, 39470), (264, 39581), (272, 39602), (276, 39632), (278, 39644), (280, 39665), (289, 39713),

Gene: Rockwell\_57 Start: 37326, Stop: 38321, Start Num: 47

Candidate Starts for Rockwell\_57:

(Start: 47 @37326 has 75 MA's), (79, 37446), (84, 37455), (89, 37467), (108, 37500), (113, 37506), (117, 37524), (141, 37635), (160, 37716), (180, 37794), (182, 37806), (214, 37929), (221, 37959), (264, 38130), (272, 38151), (276, 38181), (280, 38214), (289, 38262),

Gene: Ronaldo\_83 Start: 43764, Stop: 42694, Start Num: 47

Candidate Starts for Ronaldo\_83:

(38, 43809), (43, 43779), (Start: 47 @43764 has 75 MA's), (Start: 57 @43740 has 1 MA's), (61, 43716), (75, 43644), (79, 43632), (92, 43593), (141, 43395), (144, 43386), (164, 43302), (173, 43260), (177, 43248), (180, 43233), (191, 43185), (220, 43068), (234, 43011), (240, 42984), (256, 42924), (287, 42774), (292, 42750), (296, 42735), (299, 42726), (302, 42720),

Gene: Rope\_61 Start: 44561, Stop: 45757, Start Num: 22

Candidate Starts for Rope\_61:

(Start: 22 @44561 has 12 MA's), (30, 44576), (48, 44642), (54, 44651), (71, 44732), (77, 44753), (81, 44768), (90, 44795), (105, 44855), (112, 44876), (119, 44909), (141, 45020), (143, 45026), (147, 45038), (156, 45077), (162, 45107), (170, 45146), (188, 45221), (189, 45224), (191, 45230), (194, 45245), (227, 45383), (239, 45440), (264, 45533), (269, 45551), (276, 45584), (289, 45668), (295, 45689), (299, 45704), (306, 45722), (307, 45725), (308, 45731), (310, 45740), (311, 45743),

Gene: RoseMarie\_153 Start: 78042, Stop: 76969, Start Num: 56

Candidate Starts for RoseMarie\_153:

(7, 78219), (9, 78207), (Start: 25 @78138 has 6 MA's), (37, 78117), (Start: 56 @78042 has 13 MA's), (79, 77937), (83, 77928), (93, 77892), (112, 77838), (121, 77805), (131, 77775), (144, 77691), (165, 77595), (180, 77538), (189, 77496), (193, 77478), (206, 77415), (210, 77406), (213, 77394), (214, 77391), (226, 77340), (239, 77280), (266, 77181), (269, 77172), (277, 77136), (283, 77097), (306, 77001), (308, 76992),

Gene: SFuller\_47 Start: 34228, Stop: 33161, Start Num: 47

Candidate Starts for SFuller\_47:

(Start: 45 @34237 has 1 MA's), (Start: 47 @34228 has 75 MA's), (61, 34180), (134, 33925), (156, 33814), (162, 33784), (194, 33646), (248, 33421), (264, 33361), (280, 33277), (298, 33193), (306, 33172),

Gene: SaltySpittoon\_3 Start: 2606, Stop: 1611, Start Num: 51

Candidate Starts for SaltySpittoon\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: SaltySpittoon\_263 Start: 120870, Stop: 119875, Start Num: 51

Candidate Starts for SaltySpittoon\_263:

(Start: 40 @120915 has 21 MA's), (Start: 51 @120870 has 141 MA's), (75, 120759), (87, 120726), (103, 120693), (110, 120681), (113, 120672), (137, 120624), (138, 120606), (139, 120603), (171, 120459), (175, 120450), (183, 120408), (191, 120378), (201, 120339), (205, 120321), (214, 120291), (229, 120228), (258, 120096), (274, 120036), (282, 119988), (293, 119931), (306, 119895),

Gene: Samisti12\_2 Start: 2223, Stop: 1210, Start Num: 51

Candidate Starts for Samisti12\_2:

(Start: 51 @2223 has 141 MA's), (75, 2112), (97, 2052), (103, 2043), (106, 2022), (112, 2007), (137, 1956), (158, 1845), (171, 1791), (191, 1710), (201, 1671), (205, 1653), (214, 1623), (229, 1560), (247, 1476), (250, 1464), (258, 1431), (274, 1371), (282, 1323), (285, 1305), (293, 1266),

Gene: Samisti12\_253 Start: 125267, Stop: 124254, Start Num: 51

Candidate Starts for Samisti12\_253:

(Start: 51 @125267 has 141 MA's), (75, 125156), (97, 125096), (103, 125087), (106, 125066), (112, 125051), (137, 125000), (158, 124889), (171, 124835), (191, 124754), (201, 124715), (205, 124697), (214, 124667), (229, 124604), (247, 124520), (250, 124508), (258, 124475), (274, 124415), (282, 124367), (285, 124349), (293, 124310),

Gene: Savannah\_57 Start: 37353, Stop: 38348, Start Num: 47

Candidate Starts for Savannah\_57:

(Start: 47 @37353 has 75 MA's), (79, 37473), (84, 37482), (89, 37494), (108, 37527), (113, 37533), (117, 37551), (141, 37662), (160, 37743), (180, 37821), (182, 37833), (214, 37956), (221, 37986), (264, 38157), (272, 38178), (276, 38208), (280, 38241), (289, 38289),

Gene: Scheme\_256 Start: 125574, Stop: 124561, Start Num: 51

Candidate Starts for Scheme\_256:

(Start: 10 @125721 has 4 MA's), (Start: 20 @125667 has 4 MA's), (29, 125649), (Start: 51 @125574 has 141 MA's), (75, 125463), (97, 125403), (103, 125394), (106, 125373), (112, 125358), (137, 125307), (158, 125196), (171, 125142), (191, 125061), (201, 125022), (205, 125004), (214, 124974), (229, 124911), (247, 124827), (250, 124815), (258, 124782), (274, 124722), (282, 124674), (285, 124656), (293, 124617),

Gene: Scheme\_3 Start: 2379, Stop: 1366, Start Num: 51

Candidate Starts for Scheme\_3:

(Start: 10 @2526 has 4 MA's), (Start: 20 @2472 has 4 MA's), (29, 2454), (Start: 51 @2379 has 141 MA's), (75, 2268), (97, 2208), (103, 2199), (106, 2178), (112, 2163), (137, 2112), (158, 2001), (171, 1947), (191, 1866), (201, 1827), (205, 1809), (214, 1779), (229, 1716), (247, 1632), (250, 1620), (258, 1587), (274, 1527), (282, 1479), (285, 1461), (293, 1422),

Gene: Scumberland\_59 Start: 37548, Stop: 38543, Start Num: 47

Candidate Starts for Scumberland\_59:

(Start: 47 @37548 has 75 MA's), (79, 37668), (84, 37677), (89, 37689), (108, 37722), (113, 37728), (117, 37746), (141, 37857), (160, 37938), (180, 38016), (182, 38028), (191, 38064), (214, 38151), (221, 38181), (264, 38352), (272, 38373), (276, 38403), (280, 38436), (289, 38484),

Gene: Selwyn23\_59 Start: 37496, Stop: 38491, Start Num: 47

Candidate Starts for Selwyn23\_59:

(Start: 47 @37496 has 75 MA's), (79, 37616), (84, 37625), (89, 37637), (108, 37670), (113, 37676), (117, 37694), (141, 37805), (160, 37886), (180, 37964), (182, 37976), (214, 38099), (221, 38129), (264, 38300), (272, 38321), (276, 38351), (280, 38384), (289, 38432),

Gene: Send513\_61 Start: 44696, Stop: 45892, Start Num: 22

Candidate Starts for Send513\_61:

(Start: 22 @44696 has 12 MA's), (30, 44711), (48, 44777), (54, 44786), (71, 44867), (77, 44888), (81, 44903), (90, 44930), (105, 44990), (112, 45011), (119, 45044), (141, 45155), (143, 45161), (147, 45173), (156, 45212), (162, 45242), (170, 45281), (189, 45359), (191, 45365), (194, 45380), (227, 45518), (234, 45551), (239, 45575), (264, 45668), (269, 45686), (276, 45719), (289, 45803), (295, 45824), (299, 45839), (306, 45857), (307, 45860), (308, 45866), (310, 45875), (311, 45878),

Gene: SeresaTree\_219 Start: 108748, Stop: 109758, Start Num: 51

Candidate Starts for SeresaTree\_219:

(Start: 51 @108748 has 141 MA's), (59, 108778), (69, 108829), (75, 108859), (90, 108898), (118, 108967), (194, 109264), (217, 109348), (229, 109396), (234, 109420), (235, 109426), (253, 109504), (259, 109531), (290, 109690), (302, 109723), (303, 109726), (307, 109738),

Gene: Shagrat\_38 Start: 31485, Stop: 30412, Start Num: 47

Candidate Starts for Shagrat\_38:

(Start: 47 @31485 has 75 MA's), (61, 31437), (101, 31308), (103, 31302), (111, 31269), (127, 31212), (134, 31182), (153, 31092), (162, 31041), (164, 31035), (194, 30903), (264, 30618), (268, 30603), (277, 30564), (283, 30525),

Gene: Sham\_210 Start: 109632, Stop: 110651, Start Num: 51

Candidate Starts for Sham\_210:

(Start: 51 @109632 has 141 MA's), (59, 109662), (75, 109749), (90, 109788), (109, 109827), (118, 109860), (177, 110079), (186, 110127), (195, 110163), (197, 110169), (229, 110289), (234, 110313), (235, 110319), (236, 110322), (258, 110418), (267, 110448), (289, 110577), (302, 110616), (303, 110619), (307, 110631),

Gene: Shotgun\_58 Start: 37229, Stop: 38224, Start Num: 47

Candidate Starts for Shotgun\_58:

(Start: 47 @37229 has 75 MA's), (79, 37349), (84, 37358), (89, 37370), (108, 37403), (113, 37409), (117, 37427), (141, 37538), (160, 37619), (170, 37661), (180, 37697), (182, 37709), (214, 37832), (221, 37862), (264, 38033), (272, 38054), (276, 38084), (280, 38117), (289, 38165),

Gene: Shrubaron\_61 Start: 38390, Stop: 39385, Start Num: 47

Candidate Starts for Shrubaron\_61:

(Start: 47 @38390 has 75 MA's), (79, 38510), (84, 38519), (89, 38531), (108, 38564), (113, 38570), (117, 38588), (134, 38645), (141, 38699), (170, 38822), (180, 38858), (182, 38870), (214, 38993), (234, 39083), (264, 39194), (272, 39215), (278, 39257), (280, 39278), (289, 39326),

Gene: Shuckle\_250 Start: 124880, Stop: 123867, Start Num: 51

Candidate Starts for Shuckle\_250:

(Start: 10 @125027 has 4 MA's), (Start: 20 @124973 has 4 MA's), (29, 124955), (Start: 51 @124880 has 141 MA's), (69, 124799), (75, 124769), (99, 124703), (106, 124679), (112, 124664), (137, 124613), (158, 124502), (171, 124448), (191, 124367), (201, 124328), (205, 124310), (214, 124280), (229, 124217), (233, 124199), (250, 124121), (258, 124088), (282, 123980), (285, 123962), (293, 123923),

Gene: Shuckle\_2 Start: 2247, Stop: 1234, Start Num: 51

Candidate Starts for Shuckle\_2:

(Start: 10 @2394 has 4 MA's), (Start: 20 @2340 has 4 MA's), (29, 2322), (Start: 51 @2247 has 141 MA's), (69, 2166), (75, 2136), (99, 2070), (106, 2046), (112, 2031), (137, 1980), (158, 1869), (171, 1815), (191, 1734), (201, 1695), (205, 1677), (214, 1647), (229, 1584), (233, 1566), (250, 1488), (258, 1455), (282, 1347), (285, 1329), (293, 1290),

Gene: ShyRosie\_17 Start: 12296, Stop: 11307, Start Num: 55

Candidate Starts for ShyRosie\_17:

(Start: 55 @12296 has 37 MA's), (79, 12182), (84, 12167), (136, 12053), (140, 12014), (141, 12005), (161, 11921), (191, 11792), (214, 11699), (234, 11612), (265, 11492), (280, 11414), (287, 11372), (291, 11354), (299, 11327),

Gene: SirFrank\_58 Start: 37508, Stop: 38503, Start Num: 47

Candidate Starts for SirFrank\_58:

(Start: 47 @37508 has 75 MA's), (79, 37628), (84, 37637), (89, 37649), (108, 37682), (113, 37688), (117, 37706), (141, 37817), (160, 37898), (170, 37940), (180, 37976), (182, 37988), (214, 38111), (221, 38141), (264, 38312), (272, 38333), (278, 38375), (280, 38396), (289, 38444),

Gene: Skinny\_152 Start: 76530, Stop: 75361, Start Num: 25

Candidate Starts for Skinny\_152:

(7, 76611), (9, 76599), (Start: 25 @76530 has 6 MA's), (37, 76509), (Start: 56 @76434 has 13 MA's), (79, 76329), (83, 76320), (93, 76284), (112, 76230), (121, 76197), (131, 76167), (144, 76083), (165, 75987), (180, 75930), (189, 75888), (193, 75870), (206, 75807), (210, 75798), (213, 75786), (214, 75783), (226, 75732), (239, 75672), (266, 75573), (269, 75564), (277, 75528), (283, 75489), (286, 75462), (306, 75393), (308, 75384),

Gene: Skugga\_57 Start: 37335, Stop: 38330, Start Num: 47

Candidate Starts for Skugga\_57:

(Start: 47 @37335 has 75 MA's), (54, 37350), (79, 37455), (84, 37464), (89, 37476), (108, 37509), (113, 37515), (117, 37533), (134, 37590), (141, 37644), (170, 37767), (180, 37803), (182, 37815), (191, 37851), (214, 37938), (221, 37968), (234, 38028), (264, 38139), (272, 38160), (278, 38202), (280, 38223),

Gene: SlimJimmy\_146 Start: 75904, Stop: 74831, Start Num: 56

Candidate Starts for SlimJimmy\_146:

(7, 76081), (9, 76069), (Start: 25 @76000 has 6 MA's), (37, 75979), (Start: 56 @75904 has 13 MA's), (79, 75799), (83, 75790), (93, 75754), (112, 75700), (121, 75667), (131, 75637), (144, 75553), (165, 75457), (180, 75400), (189, 75358), (193, 75340), (206, 75277), (210, 75268), (213, 75256), (214, 75253), (226, 75202), (239, 75142), (266, 75043), (269, 75034), (277, 74998), (283, 74959), (306, 74863), (308, 74854),

Gene: Smarties\_67 Start: 39139, Stop: 40134, Start Num: 47

Candidate Starts for Smarties\_67:

(Start: 47 @39139 has 75 MA's), (54, 39154), (79, 39259), (84, 39268), (89, 39280), (108, 39313), (113, 39319), (117, 39337), (134, 39394), (141, 39448), (160, 39529), (170, 39571), (180, 39607), (182, 39619), (214, 39742), (221, 39772), (234, 39832), (264, 39943), (272, 39964), (278, 40006), (302, 40117),

Gene: SoilSleuth\_17 Start: 12338, Stop: 11307, Start Num: 55

Candidate Starts for SoilSleuth\_17:

(Start: 55 @12338 has 37 MA's), (79, 12224), (84, 12209), (136, 12053), (140, 12014), (141, 12005), (156, 11948), (161, 11921), (191, 11792), (214, 11699), (234, 11612), (265, 11492), (280, 11414), (287, 11372), (291, 11354), (299, 11327),

Gene: Sollertia\_260 Start: 121518, Stop: 120517, Start Num: 51

Candidate Starts for Sollertia\_260:

(31, 121584), (34, 121575), (Start: 51 @121518 has 141 MA's), (75, 121407), (113, 121320), (165, 121128), (171, 121107), (175, 121098), (183, 121056), (191, 121026), (201, 120987), (205, 120969), (214, 120939), (229, 120876), (258, 120744), (274, 120684), (282, 120636), (285, 120618), (293, 120579),

Gene: Sollertia\_4 Start: 2628, Stop: 1627, Start Num: 51

Candidate Starts for Sollertia\_4:

(31, 2694), (34, 2685), (Start: 51 @2628 has 141 MA's), (75, 2517), (113, 2430), (165, 2238), (171, 2217), (175, 2208), (183, 2166), (191, 2136), (201, 2097), (205, 2079), (214, 2049), (229, 1986), (258, 1854), (274, 1794), (282, 1746), (285, 1728), (293, 1689),

Gene: SparkleGoddess\_218 Start: 108469, Stop: 109491, Start Num: 50

Candidate Starts for SparkleGoddess\_218:

(Start: 50 @108469 has 9 MA's), (59, 108499), (75, 108580), (82, 108598), (97, 108640), (106, 108658), (113, 108676), (163, 108856), (177, 108919), (183, 108952), (185, 108964), (186, 108967), (190, 108979), (209, 109054), (229, 109129), (234, 109153), (241, 109183), (255, 109246), (306, 109465),

Gene: Spelly\_3 Start: 2651, Stop: 1611, Start Num: 40

Candidate Starts for Spelly\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: Spelly\_269 Start: 121455, Stop: 120415, Start Num: 40

Candidate Starts for Spelly\_269:

(Start: 40 @121455 has 21 MA's), (Start: 51 @121410 has 141 MA's), (75, 121299), (87, 121266), (103, 121233), (110, 121221), (113, 121212), (137, 121164), (138, 121146), (139, 121143), (171, 120999), (175, 120990), (183, 120948), (191, 120918), (201, 120879), (205, 120861), (214, 120831), (229, 120768), (258, 120636), (274, 120576), (282, 120528), (293, 120471), (306, 120435),

Gene: Spilled\_2 Start: 2261, Stop: 1221, Start Num: 40

Candidate Starts for Spilled\_2:

(Start: 40 @2261 has 21 MA's), (Start: 51 @2216 has 141 MA's), (75, 2105), (87, 2072), (103, 2039), (110, 2027), (113, 2018), (137, 1970), (138, 1952), (139, 1949), (171, 1805), (175, 1796), (183, 1754), (191, 1724), (201, 1685), (205, 1667), (214, 1637), (229, 1574), (258, 1442), (274, 1382), (282, 1334), (293, 1277), (306, 1241),

Gene: Spilled\_270 Start: 122730, Stop: 121690, Start Num: 40

Candidate Starts for Spilled\_270:

(Start: 40 @122730 has 21 MA's), (Start: 51 @122685 has 141 MA's), (75, 122574), (87, 122541), (103, 122508), (110, 122496), (113, 122487), (137, 122439), (138, 122421), (139, 122418), (171, 122274), (175, 122265), (183, 122223), (191, 122193), (201, 122154), (205, 122136), (214, 122106), (229, 122043), (258, 121911), (274, 121851), (282, 121803), (293, 121746), (306, 121710),

Gene: Squillium\_255 Start: 123941, Stop: 122928, Start Num: 51

Candidate Starts for Squillium\_255:

(9, 124091), (16, 124055), (Start: 20 @124034 has 4 MA's), (29, 124016), (Start: 51 @123941 has 141 MA's), (69, 123860), (75, 123830), (97, 123770), (106, 123740), (112, 123725), (113, 123722), (137, 123674), (158, 123563), (171, 123509), (182, 123464), (191, 123428), (201, 123389), (205, 123371), (214, 123341), (250, 123182), (258, 123149), (274, 123089), (282, 123041), (285, 123023), (293, 122984),

Gene: Squillium\_3 Start: 2417, Stop: 1404, Start Num: 51

Candidate Starts for Squillium\_3:

(9, 2567), (16, 2531), (Start: 20 @2510 has 4 MA's), (29, 2492), (Start: 51 @2417 has 141 MA's), (69, 2336), (75, 2306), (97, 2246), (106, 2216), (112, 2201), (113, 2198), (137, 2150), (158, 2039), (171,

1985), (182, 1940), (191, 1904), (201, 1865), (205, 1847), (214, 1817), (250, 1658), (258, 1625), (274, 1565), (282, 1517), (285, 1499), (293, 1460),

Gene: StagePhright\_18 Start: 12530, Stop: 11526, Start Num: 55

Candidate Starts for StagePhright\_18:

(Start: 55 @12530 has 37 MA's), (84, 12401), (131, 12305), (140, 12236), (141, 12227), (159, 12152), (191, 12014), (214, 11921), (231, 11849), (234, 11834), (237, 11819), (240, 11807), (246, 11789), (254, 11744), (284, 11612), (291, 11573), (305, 11531),

Gene: Stanimal\_4 Start: 2628, Stop: 1627, Start Num: 51

Candidate Starts for Stanimal\_4:

(31, 2694), (34, 2685), (Start: 51 @2628 has 141 MA's), (75, 2517), (113, 2430), (165, 2238), (171, 2217), (175, 2208), (183, 2166), (191, 2136), (201, 2097), (205, 2079), (214, 2049), (229, 1986), (258, 1854), (274, 1794), (282, 1746), (285, 1728), (293, 1689),

Gene: Stanimal\_259 Start: 121902, Stop: 120901, Start Num: 51

Candidate Starts for Stanimal\_259:

(31, 121968), (34, 121959), (Start: 51 @121902 has 141 MA's), (75, 121791), (113, 121704), (165, 121512), (171, 121491), (175, 121482), (183, 121440), (191, 121410), (201, 121371), (205, 121353), (214, 121323), (229, 121260), (258, 121128), (274, 121068), (282, 121020), (285, 121002), (293, 120963),

Gene: StarPlatinum\_2 Start: 2355, Stop: 1354, Start Num: 51

Candidate Starts for StarPlatinum\_2:

(Start: 8 @2499 has 1 MA's), (16, 2460), (18, 2445), (Start: 24 @2430 has 1 MA's), (34, 2412), (Start: 51 @2355 has 141 MA's), (75, 2244), (113, 2157), (165, 1965), (168, 1959), (175, 1935), (178, 1923), (183, 1893), (191, 1863), (201, 1824), (205, 1806), (214, 1776), (229, 1713), (233, 1695), (239, 1665), (258, 1581), (274, 1521), (282, 1473), (285, 1455),

Gene: StarPlatinum\_272 Start: 124042, Stop: 123041, Start Num: 51

Candidate Starts for StarPlatinum\_272:

(Start: 8 @124186 has 1 MA's), (16, 124147), (18, 124132), (Start: 24 @124117 has 1 MA's), (34, 124099), (Start: 51 @124042 has 141 MA's), (75, 123931), (113, 123844), (165, 123652), (168, 123646), (175, 123622), (178, 123610), (183, 123580), (191, 123550), (201, 123511), (205, 123493), (214, 123463), (229, 123400), (233, 123382), (239, 123352), (258, 123268), (274, 123208), (282, 123160), (285, 123142),

Gene: Starbow\_260 Start: 121454, Stop: 120459, Start Num: 51

Candidate Starts for Starbow\_260:

(Start: 40 @121499 has 21 MA's), (Start: 51 @121454 has 141 MA's), (75, 121343), (87, 121310), (103, 121277), (110, 121265), (113, 121256), (137, 121208), (138, 121190), (139, 121187), (171, 121043), (175, 121034), (183, 120992), (191, 120962), (201, 120923), (205, 120905), (214, 120875), (229, 120812), (258, 120680), (274, 120620), (282, 120572), (293, 120515), (306, 120479),

Gene: Starbow\_3 Start: 2606, Stop: 1611, Start Num: 51

Candidate Starts for Starbow\_3:

(Start: 40 @2651 has 21 MA's), (Start: 51 @2606 has 141 MA's), (75, 2495), (87, 2462), (103, 2429), (110, 2417), (113, 2408), (137, 2360), (138, 2342), (139, 2339), (171, 2195), (175, 2186), (183, 2144), (191, 2114), (201, 2075), (205, 2057), (214, 2027), (229, 1964), (258, 1832), (274, 1772), (282, 1724), (293, 1667), (306, 1631),

Gene: Stewart25555\_165 Start: 114464, Stop: 115444, Start Num: 49

Candidate Starts for Stewart25555\_165:

(Start: 49 @114464 has 5 MA's), (60, 114506), (98, 114632), (142, 114767), (160, 114848), (177, 114911), (195, 114995), (205, 115028), (220, 115085), (231, 115130), (258, 115229), (278, 115304),

Gene: Stigma\_217 Start: 108675, Stop: 109697, Start Num: 50

Candidate Starts for Stigma\_217:

(Start: 50 @108675 has 9 MA's), (59, 108705), (75, 108786), (82, 108804), (97, 108846), (106, 108864), (113, 108882), (163, 109062), (177, 109125), (183, 109158), (185, 109170), (186, 109173), (190, 109185), (209, 109260), (229, 109335), (234, 109359), (241, 109389), (255, 109452), (306, 109671),

Gene: Sunny\_ Start: 39140, Stop: 40135, Start Num: 47

Candidate Starts for Sunny\_:

(1, 38867), (3, 38933), (4, 38972), (Start: 47 @39140 has 75 MA's), (84, 39269), (89, 39281), (100, 39305), (108, 39314), (113, 39320), (132, 39380), (134, 39395), (141, 39449), (151, 39482), (160, 39530), (170, 39572), (180, 39608), (182, 39620), (191, 39656), (205, 39713), (214, 39743), (216, 39752), (222, 39776), (264, 39944), (276, 39995), (278, 40007), (289, 40076),

Gene: Sushi23\_253 Start: 125067, Stop: 124054, Start Num: 51

Candidate Starts for Sushi23\_253:

(Start: 51 @125067 has 141 MA's), (75, 124956), (97, 124896), (103, 124887), (106, 124866), (112, 124851), (137, 124800), (158, 124689), (171, 124635), (191, 124554), (201, 124515), (205, 124497), (214, 124467), (229, 124404), (247, 124320), (250, 124308), (258, 124275), (274, 124215), (282, 124167), (285, 124149), (293, 124110),

Gene: Sushi23\_2 Start: 2224, Stop: 1211, Start Num: 51

Candidate Starts for Sushi23\_2:

(Start: 51 @2224 has 141 MA's), (75, 2113), (97, 2053), (103, 2044), (106, 2023), (112, 2008), (137, 1957), (158, 1846), (171, 1792), (191, 1711), (201, 1672), (205, 1654), (214, 1624), (229, 1561), (247, 1477), (250, 1465), (258, 1432), (274, 1372), (282, 1324), (285, 1306), (293, 1267),

Gene: Targaryen\_2 Start: 2329, Stop: 1316, Start Num: 51

Candidate Starts for Targaryen\_2:

(Start: 10 @2467 has 4 MA's), (Start: 20 @2422 has 4 MA's), (29, 2404), (46, 2341), (Start: 51 @2329 has 141 MA's), (69, 2248), (75, 2218), (87, 2185), (99, 2152), (106, 2128), (112, 2113), (137, 2062), (171, 1897), (191, 1816), (201, 1777), (205, 1759), (214, 1729), (229, 1666), (233, 1648), (250, 1570), (258, 1537), (282, 1429), (285, 1411), (293, 1372),

Gene: Targaryen\_253 Start: 126005, Stop: 124992, Start Num: 51

Candidate Starts for Targaryen\_253:

(Start: 10 @126143 has 4 MA's), (Start: 20 @126098 has 4 MA's), (29, 126080), (46, 126017), (Start: 51 @126005 has 141 MA's), (69, 125924), (75, 125894), (87, 125861), (99, 125828), (106, 125804), (112, 125789), (137, 125738), (171, 125573), (191, 125492), (201, 125453), (205, 125435), (214, 125405), (229, 125342), (233, 125324), (250, 125246), (258, 125213), (282, 125105), (285, 125087), (293, 125048),

Gene: Teamocil\_61 Start: 37414, Stop: 38409, Start Num: 47

Candidate Starts for Teamocil\_61:

(Start: 47 @37414 has 75 MA's), (54, 37429), (79, 37534), (84, 37543), (89, 37555), (117, 37612), (134, 37669), (141, 37723), (170, 37846), (180, 37882), (182, 37894), (214, 38017), (221, 38047), (234, 38107), (264, 38218), (272, 38239), (278, 38281), (280, 38302),

Gene: Terij\_55 Start: 37200, Stop: 38201, Start Num: 55

Candidate Starts for Terij\_55:

(Start: 55 @37200 has 37 MA's), (64, 37248), (79, 37314), (128, 37416), (139, 37479), (140, 37494), (150, 37530), (152, 37536), (154, 37539), (161, 37587), (188, 37707), (198, 37746), (228, 37869), (231, 37881), (234, 37896), (249, 37956), (251, 37971), (267, 38025), (287, 38136),

Gene: Tesla\_96 Start: 57368, Stop: 56298, Start Num: 47

Candidate Starts for Tesla\_96:

(Start: 36 @57422 has 1 MA's), (38, 57413), (Start: 47 @57368 has 75 MA's), (54, 57353), (61, 57320), (85, 57227), (93, 57194), (103, 57170), (111, 57137), (112, 57134), (113, 57131), (116, 57116), (119, 57104), (130, 57077), (144, 56990), (149, 56978), (155, 56945), (160, 56918), (162, 56912), (165, 56894), (177, 56852), (180, 56837), (187, 56801), (191, 56789), (207, 56711), (211, 56705), (224, 56657), (240, 56582), (263, 56507), (270, 56486), (272, 56483), (306, 56315), (307, 56312),

Gene: Teutsch\_2 Start: 2225, Stop: 1212, Start Num: 51

Candidate Starts for Teutsch\_2:

(Start: 51 @2225 has 141 MA's), (75, 2114), (97, 2054), (103, 2045), (106, 2024), (112, 2009), (137, 1958), (158, 1847), (171, 1793), (191, 1712), (201, 1673), (205, 1655), (214, 1625), (229, 1562), (247, 1478), (250, 1466), (258, 1433), (274, 1373), (282, 1325), (285, 1307), (293, 1268),

Gene: Teutsch\_249 Start: 124434, Stop: 123421, Start Num: 51

Candidate Starts for Teutsch\_249:

(Start: 51 @124434 has 141 MA's), (75, 124323), (97, 124263), (103, 124254), (106, 124233), (112, 124218), (137, 124167), (158, 124056), (171, 124002), (191, 123921), (201, 123882), (205, 123864), (214, 123834), (229, 123771), (247, 123687), (250, 123675), (258, 123642), (274, 123582), (282, 123534), (285, 123516), (293, 123477),

Gene: ThirteenKH\_17 Start: 12307, Stop: 11303, Start Num: 55

Candidate Starts for ThirteenKH\_17:

(Start: 55 @12307 has 37 MA's), (84, 12178), (131, 12082), (140, 12013), (141, 12004), (161, 11920), (191, 11791), (214, 11698), (231, 11626), (237, 11596), (240, 11584), (246, 11566), (254, 11521), (284, 11389), (291, 11350), (305, 11308),

Gene: TomSawyer\_2 Start: 2200, Stop: 1199, Start Num: 51

Candidate Starts for TomSawyer\_2:

(Start: 40 @2245 has 21 MA's), (Start: 51 @2200 has 141 MA's), (75, 2089), (87, 2056), (103, 2023), (110, 2011), (113, 2002), (137, 1954), (138, 1936), (139, 1933), (171, 1789), (175, 1780), (183, 1738), (191, 1708), (201, 1669), (205, 1651), (214, 1621), (229, 1558), (258, 1426), (274, 1366), (282, 1318), (293, 1261), (308, 1216),

Gene: TomSawyer\_267 Start: 123979, Stop: 122978, Start Num: 51

Candidate Starts for TomSawyer\_267:

(Start: 40 @124024 has 21 MA's), (Start: 51 @123979 has 141 MA's), (75, 123868), (87, 123835), (103, 123802), (110, 123790), (113, 123781), (137, 123733), (138, 123715), (139, 123712), (171, 123568), (175, 123559), (183, 123517), (191, 123487), (201, 123448), (205, 123430), (214, 123400), (229, 123337), (258, 123205), (274, 123145), (282, 123097), (293, 123040), (308, 122995),

Gene: Tomas\_3 Start: 2619, Stop: 1627, Start Num: 51

Candidate Starts for Tomas\_3:

(34, 2676), (Start: 51 @2619 has 141 MA's), (67, 2550), (69, 2538), (75, 2508), (78, 2499), (110, 2430), (114, 2418), (137, 2373), (191, 2127), (201, 2088), (205, 2070), (214, 2040), (229, 1977), (250, 1881), (258, 1848), (274, 1788), (282, 1740), (294, 1680), (306, 1647),

Gene: Tomas\_258 Start: 124326, Stop: 123334, Start Num: 51

Candidate Starts for Tomas\_258:

(34, 124383), (Start: 51 @124326 has 141 MA's), (67, 124257), (69, 124245), (75, 124215), (78, 124206), (110, 124137), (114, 124125), (137, 124080), (191, 123834), (201, 123795), (205, 123777), (214, 123747), (229, 123684), (250, 123588), (258, 123555), (274, 123495), (282, 123447), (294, 123387), (306, 123354),

Gene: TpudiCK\_149 Start: 75164, Stop: 74091, Start Num: 56

Candidate Starts for TpudiCK\_149:

(7, 75341), (9, 75329), (Start: 25 @75260 has 6 MA's), (37, 75239), (Start: 56 @75164 has 13 MA's), (79, 75059), (83, 75050), (93, 75014), (112, 74960), (121, 74927), (131, 74897), (144, 74813), (165, 74717), (180, 74660), (189, 74618), (193, 74600), (206, 74537), (210, 74528), (213, 74516), (214, 74513), (226, 74462), (239, 74402), (266, 74303), (269, 74294), (277, 74258), (283, 74219), (306, 74123), (308, 74114),

Gene: Tribute\_2 Start: 2225, Stop: 1212, Start Num: 51

Candidate Starts for Tribute\_2:

(Start: 51 @2225 has 141 MA's), (75, 2114), (97, 2054), (103, 2045), (106, 2024), (112, 2009), (137, 1958), (158, 1847), (171, 1793), (191, 1712), (201, 1673), (205, 1655), (214, 1625), (229, 1562), (247, 1478), (250, 1466), (258, 1433), (274, 1373), (282, 1325), (285, 1307), (293, 1268),

Gene: Tribute\_248 Start: 124769, Stop: 123756, Start Num: 51

Candidate Starts for Tribute\_248:

(Start: 51 @124769 has 141 MA's), (75, 124658), (97, 124598), (103, 124589), (106, 124568), (112, 124553), (137, 124502), (158, 124391), (171, 124337), (191, 124256), (201, 124217), (205, 124199), (214, 124169), (229, 124106), (247, 124022), (250, 124010), (258, 123977), (274, 123917), (282, 123869), (285, 123851), (293, 123812),

Gene: Trina\_210 Start: 112849, Stop: 113895, Start Num: 51

Candidate Starts for Trina\_210:

(Start: 51 @112849 has 141 MA's), (74, 112954), (75, 112960), (82, 112978), (91, 113008), (96, 113017), (103, 113020), (107, 113044), (120, 113092), (145, 113215), (160, 113275), (172, 113332), (177, 113347), (194, 113425), (197, 113437), (201, 113446), (209, 113482), (214, 113494), (215, 113500), (219, 113515), (220, 113521), (258, 113683), (287, 113806), (305, 113866),

Gene: TrippleS\_17 Start: 12314, Stop: 11310, Start Num: 55

Candidate Starts for TrippleS\_17:

(Start: 55 @12314 has 37 MA's), (84, 12185), (131, 12089), (140, 12020), (141, 12011), (159, 11936), (191, 11798), (214, 11705), (231, 11633), (234, 11618), (237, 11603), (240, 11591), (246, 11573), (254, 11528), (284, 11396), (291, 11357), (305, 11315),

Gene: Trogglehumper\_109 Start: 75166, Stop: 74096, Start Num: 47

Candidate Starts for Trogglehumper\_109:

(Start: 47 @75166 has 75 MA's), (61, 75118), (103, 74983), (111, 74950), (114, 74941), (127, 74893), (131, 74884), (134, 74863), (144, 74800), (149, 74788), (153, 74773), (182, 74635), (191, 74599), (194, 74584), (200, 74563), (203, 74548), (219, 74491), (229, 74449), (263, 74308), (264, 74302), (268, 74287), (278, 74239), (283, 74209), (309, 74101),

Gene: Truong\_17 Start: 12296, Stop: 11307, Start Num: 55

Candidate Starts for Truong\_17:

(Start: 55 @12296 has 37 MA's), (79, 12182), (84, 12167), (136, 12053), (140, 12014), (141, 12005), (161, 11921), (191, 11792), (214, 11699), (234, 11612), (265, 11492), (280, 11414), (287, 11372), (291, 11354), (299, 11327),

Gene: TunaTartare\_218 Start: 111927, Stop: 112946, Start Num: 51

Candidate Starts for TunaTartare\_218:

(Start: 51 @111927 has 141 MA's), (59, 111957), (75, 112044), (90, 112083), (109, 112122), (118, 112155), (177, 112374), (186, 112422), (195, 112458), (197, 112464), (229, 112584), (234, 112608), (235, 112614), (236, 112617), (258, 112713), (267, 112743), (289, 112872), (302, 112911), (303, 112914), (307, 112926),

Gene: TyDawg\_142 Start: 75349, Stop: 74276, Start Num: 56

Candidate Starts for TyDawg\_142:

(7, 75526), (9, 75514), (Start: 25 @75445 has 6 MA's), (37, 75424), (Start: 56 @75349 has 13 MA's), (79, 75244), (83, 75235), (93, 75199), (112, 75145), (121, 75112), (131, 75082), (144, 74998), (165, 74902), (189, 74803), (193, 74785), (206, 74722), (210, 74713), (213, 74701), (214, 74698), (226, 74647), (239, 74587), (266, 74488), (269, 74479), (277, 74443), (283, 74404), (306, 74308), (308, 74299),

Gene: Tyrumbra\_58 Start: 38636, Stop: 39631, Start Num: 47

Candidate Starts for Tyrumbra\_58:

(Start: 47 @38636 has 75 MA's), (79, 38756), (84, 38765), (89, 38777), (108, 38810), (113, 38816), (117, 38834), (134, 38891), (141, 38945), (170, 39068), (180, 39104), (182, 39116), (214, 39239), (234, 39329), (264, 39440), (272, 39461), (278, 39503), (280, 39524), (289, 39572),

Gene: VasuNzinga\_98 Start: 57452, Stop: 56382, Start Num: 47

Candidate Starts for VasuNzinga\_98:

(Start: 36 @57506 has 1 MA's), (38, 57497), (Start: 47 @57452 has 75 MA's), (54, 57437), (61, 57404), (85, 57311), (93, 57278), (103, 57254), (111, 57221), (112, 57218), (113, 57215), (116, 57200), (119, 57188), (130, 57161), (144, 57074), (149, 57062), (155, 57029), (160, 57002), (162, 56996), (165, 56978), (177, 56936), (180, 56921), (187, 56885), (191, 56873), (207, 56795), (211, 56789), (218, 56762), (224, 56741), (240, 56666), (263, 56591), (270, 56570), (272, 56567), (306, 56399), (307, 56396),

Gene: Volt\_83 Start: 43928, Stop: 42858, Start Num: 47

Candidate Starts for Volt\_83:

(38, 43973), (43, 43943), (Start: 47 @43928 has 75 MA's), (Start: 57 @43904 has 1 MA's), (61, 43880), (75, 43808), (79, 43796), (92, 43757), (141, 43559), (144, 43550), (164, 43466), (173, 43424), (177, 43412), (180, 43397), (191, 43349), (220, 43232), (234, 43175), (240, 43148), (256, 43088), (287, 42938), (292, 42914), (296, 42899), (299, 42890), (302, 42884),

Gene: WaddleDee\_160 Start: 111543, Stop: 112520, Start Num: 49

Candidate Starts for WaddleDee\_160:

(Start: 49 @111543 has 5 MA's), (60, 111585), (98, 111711), (142, 111846), (160, 111927), (177, 111990), (195, 112074), (220, 112164), (231, 112209), (258, 112308), (278, 112383),

Gene: Warpy\_257 Start: 124267, Stop: 123161, Start Num: 20

Candidate Starts for Warpy\_257:

(Start: 20 @124267 has 4 MA's), (29, 124249), (46, 124186), (Start: 51 @124174 has 141 MA's), (69, 124093), (75, 124063), (87, 124030), (99, 123997), (106, 123973), (112, 123958), (137, 123907), (171, 123742), (191, 123661), (201, 123622), (205, 123604), (214, 123574), (229, 123511), (233, 123493), (250, 123415), (258, 123382), (282, 123274), (285, 123256), (293, 123217),

Gene: Warpy\_5 Start: 2729, Stop: 1623, Start Num: 20

Candidate Starts for Warpy\_5:

(Start: 20 @2729 has 4 MA's), (29, 2711), (46, 2648), (Start: 51 @2636 has 141 MA's), (69, 2555), (75, 2525), (87, 2492), (99, 2459), (106, 2435), (112, 2420), (137, 2369), (171, 2204), (191, 2123), (201, 2084), (205, 2066), (214, 2036), (229, 1973), (233, 1955), (250, 1877), (258, 1844), (282, 1736), (285,

1718), (293, 1679),

Gene: Waterlily\_17 Start: 12338, Stop: 11307, Start Num: 55

Candidate Starts for Waterlily\_17:

(Start: 55 @12338 has 37 MA's), (79, 12224), (84, 12209), (136, 12053), (140, 12014), (141, 12005), (161, 11921), (191, 11792), (214, 11699), (234, 11612), (265, 11492), (280, 11414), (287, 11372), (291, 11354), (299, 11327),

Gene: Watermoore\_2 Start: 2226, Stop: 1213, Start Num: 51

Candidate Starts for Watermoore\_2:

(Start: 10 @2373 has 4 MA's), (Start: 20 @2319 has 4 MA's), (29, 2301), (Start: 51 @2226 has 141 MA's), (75, 2115), (87, 2082), (97, 2055), (103, 2046), (106, 2025), (112, 2010), (137, 1959), (158, 1848), (171, 1794), (191, 1713), (201, 1674), (205, 1656), (214, 1626), (229, 1563), (247, 1479), (250, 1467), (258, 1434), (274, 1374), (282, 1326), (285, 1308), (293, 1269),

Gene: Watermoore\_249 Start: 124822, Stop: 123809, Start Num: 51

Candidate Starts for Watermoore\_249:

(Start: 10 @124969 has 4 MA's), (Start: 20 @124915 has 4 MA's), (29, 124897), (Start: 51 @124822 has 141 MA's), (75, 124711), (87, 124678), (97, 124651), (103, 124642), (106, 124621), (112, 124606), (137, 124555), (158, 124444), (171, 124390), (191, 124309), (201, 124270), (205, 124252), (214, 124222), (229, 124159), (247, 124075), (250, 124063), (258, 124030), (274, 123970), (282, 123922), (285, 123904), (293, 123865),

Gene: Weasels2\_189 Start: 100516, Stop: 101544, Start Num: 51

Candidate Starts for Weasels2\_189:

(27, 100435), (Start: 51 @100516 has 141 MA's), (61, 100555), (63, 100570), (69, 100600), (76, 100633), (103, 100690), (123, 100762), (160, 100918), (162, 100924), (177, 100990), (185, 101035), (203, 101101), (209, 101125), (214, 101137), (215, 101143), (255, 101320), (306, 101521), (308, 101530),

Gene: Weiss13\_60 Start: 44400, Stop: 45596, Start Num: 22

Candidate Starts for Weiss13\_60:

(Start: 22 @44400 has 12 MA's), (30, 44415), (48, 44481), (54, 44490), (71, 44571), (77, 44592), (81, 44607), (90, 44634), (105, 44694), (112, 44715), (119, 44748), (141, 44859), (143, 44865), (147, 44877), (156, 44916), (162, 44946), (170, 44985), (189, 45063), (191, 45069), (194, 45084), (227, 45222), (234, 45255), (239, 45279), (264, 45372), (269, 45390), (276, 45423), (289, 45507), (295, 45528), (299, 45543), (306, 45561), (307, 45564), (308, 45570), (310, 45579), (311, 45582),

Gene: Westy\_222 Start: 109461, Stop: 110483, Start Num: 50

Candidate Starts for Westy\_222:

(Start: 50 @109461 has 9 MA's), (59, 109491), (75, 109572), (82, 109590), (97, 109632), (106, 109650), (113, 109668), (163, 109848), (177, 109911), (183, 109944), (185, 109956), (186, 109959), (190, 109971), (209, 110046), (229, 110121), (234, 110145), (241, 110175), (255, 110238), (306, 110457),

Gene: WhereRU\_251 Start: 123360, Stop: 122347, Start Num: 51

Candidate Starts for WhereRU\_251:

(9, 123510), (16, 123474), (Start: 20 @123453 has 4 MA's), (29, 123435), (Start: 51 @123360 has 141 MA's), (69, 123279), (75, 123249), (97, 123189), (106, 123159), (112, 123144), (113, 123141), (137, 123093), (158, 122982), (171, 122928), (182, 122883), (191, 122847), (201, 122808), (205, 122790), (214, 122760), (250, 122601), (258, 122568), (274, 122508), (282, 122460), (285, 122442), (293, 122403),

Gene: WhereRU\_2 Start: 2215, Stop: 1202, Start Num: 51

Candidate Starts for WhereRU\_2:

(9, 2365), (16, 2329), (Start: 20 @2308 has 4 MA's), (29, 2290), (Start: 51 @2215 has 141 MA's), (69, 2134), (75, 2104), (97, 2044), (106, 2014), (112, 1999), (113, 1996), (137, 1948), (158, 1837), (171, 1783), (182, 1738), (191, 1702), (201, 1663), (205, 1645), (214, 1615), (250, 1456), (258, 1423), (274, 1363), (282, 1315), (285, 1297), (293, 1258),

Gene: Wipeout\_2 Start: 2266, Stop: 1220, Start Num: 40

Candidate Starts for Wipeout\_2:

(Start: 40 @2266 has 21 MA's), (Start: 51 @2221 has 141 MA's), (75, 2110), (87, 2077), (103, 2044), (110, 2032), (113, 2023), (137, 1975), (138, 1957), (139, 1954), (171, 1810), (175, 1801), (183, 1759), (191, 1729), (201, 1690), (205, 1672), (214, 1642), (229, 1579), (258, 1447), (274, 1387), (282, 1339), (293, 1282), (308, 1237),

Gene: Wipeout\_255 Start: 122997, Stop: 121951, Start Num: 40

Candidate Starts for Wipeout\_255:

(Start: 40 @122997 has 21 MA's), (Start: 51 @122952 has 141 MA's), (75, 122841), (87, 122808), (103, 122775), (110, 122763), (113, 122754), (137, 122706), (138, 122688), (139, 122685), (171, 122541), (175, 122532), (183, 122490), (191, 122460), (201, 122421), (205, 122403), (214, 122373), (229, 122310), (258, 122178), (274, 122118), (282, 122070), (293, 122013), (308, 121968),

Gene: Wofford\_3 Start: 2491, Stop: 1490, Start Num: 51

Candidate Starts for Wofford\_3:

(Start: 8 @2638 has 1 MA's), (16, 2599), (17, 2587), (Start: 25 @2566 has 6 MA's), (34, 2548), (Start: 51 @2491 has 141 MA's), (75, 2380), (110, 2302), (113, 2293), (137, 2245), (138, 2227), (139, 2224), (171, 2080), (175, 2071), (191, 1999), (201, 1960), (205, 1942), (214, 1912), (229, 1849), (242, 1792), (243, 1789), (258, 1717), (274, 1657), (278, 1636), (282, 1609), (285, 1591), (306, 1516),

Gene: Wofford\_261 Start: 124284, Stop: 123283, Start Num: 51

Candidate Starts for Wofford\_261:

(Start: 8 @124431 has 1 MA's), (16, 124392), (17, 124380), (Start: 25 @124359 has 6 MA's), (34, 124341), (Start: 51 @124284 has 141 MA's), (75, 124173), (110, 124095), (113, 124086), (137, 124038), (138, 124020), (139, 124017), (171, 123873), (175, 123864), (191, 123792), (201, 123753), (205, 123735), (214, 123705), (229, 123642), (242, 123585), (243, 123582), (258, 123510), (274, 123450), (278, 123429), (282, 123402), (285, 123384), (306, 123309),

Gene: Yaboi\_4 Start: 2628, Stop: 1627, Start Num: 51

Candidate Starts for Yaboi\_4:

(31, 2694), (34, 2685), (Start: 51 @2628 has 141 MA's), (75, 2517), (113, 2430), (165, 2238), (171, 2217), (175, 2208), (183, 2166), (191, 2136), (201, 2097), (205, 2079), (214, 2049), (229, 1986), (258, 1854), (274, 1794), (282, 1746), (285, 1728), (293, 1689),

Gene: Yaboi\_265 Start: 121446, Stop: 120445, Start Num: 51

Candidate Starts for Yaboi\_265:

(31, 121512), (34, 121503), (Start: 51 @121446 has 141 MA's), (75, 121335), (113, 121248), (165, 121056), (171, 121035), (175, 121026), (183, 120984), (191, 120954), (201, 120915), (205, 120897), (214, 120867), (229, 120804), (258, 120672), (274, 120612), (282, 120564), (285, 120546), (293, 120507),

Gene: Yafa\_17 Start: 12330, Stop: 11326, Start Num: 55

Candidate Starts for Yafa\_17:

(Start: 55 @12330 has 37 MA's), (84, 12201), (131, 12105), (140, 12036), (141, 12027), (161, 11943), (191, 11814), (214, 11721), (231, 11649), (237, 11619), (240, 11607), (246, 11589), (254, 11544),

(284, 11412), (291, 11373), (305, 11331),

Gene: Yelo\_60 Start: 44779, Stop: 45975, Start Num: 22

Candidate Starts for Yelo\_60:

(Start: 22 @44779 has 12 MA's), (30, 44794), (48, 44860), (54, 44869), (71, 44950), (77, 44971), (81, 44986), (90, 45013), (105, 45073), (112, 45094), (119, 45127), (141, 45238), (143, 45244), (147, 45256), (156, 45295), (162, 45325), (170, 45364), (189, 45442), (191, 45448), (194, 45463), (227, 45601), (234, 45634), (239, 45658), (264, 45751), (269, 45769), (276, 45802), (289, 45886), (295, 45907), (299, 45922), (306, 45940), (307, 45943), (308, 45949), (310, 45958), (311, 45961),

Gene: Yeti\_59 Start: 37298, Stop: 38293, Start Num: 47

Candidate Starts for Yeti\_59:

(Start: 47 @37298 has 75 MA's), (79, 37418), (84, 37427), (89, 37439), (108, 37472), (113, 37478), (117, 37496), (141, 37607), (160, 37688), (180, 37766), (182, 37778), (214, 37901), (221, 37931), (264, 38102), (272, 38123), (276, 38153), (280, 38186), (289, 38234),

Gene: Zapato\_57 Start: 37541, Stop: 38536, Start Num: 47

Candidate Starts for Zapato\_57:

(Start: 47 @37541 has 75 MA's), (79, 37661), (84, 37670), (89, 37682), (108, 37715), (117, 37739), (134, 37796), (170, 37973), (180, 38009), (182, 38021), (191, 38057), (202, 38102), (214, 38144), (221, 38174), (231, 38219), (261, 38336), (264, 38345), (272, 38366), (278, 38408), (280, 38429),

Gene: Zenon\_62 Start: 44725, Stop: 45921, Start Num: 22

Candidate Starts for Zenon\_62:

(Start: 22 @44725 has 12 MA's), (30, 44740), (48, 44806), (54, 44815), (71, 44896), (77, 44917), (81, 44932), (90, 44959), (105, 45019), (112, 45040), (119, 45073), (141, 45184), (143, 45190), (147, 45202), (156, 45241), (162, 45271), (170, 45310), (189, 45388), (191, 45394), (194, 45409), (227, 45547), (234, 45580), (239, 45604), (264, 45697), (269, 45715), (276, 45748), (289, 45832), (295, 45853), (299, 45868), (306, 45886), (307, 45889), (308, 45895), (310, 45904), (311, 45907),

Gene: Zhengyi\_18 Start: 13141, Stop: 12152, Start Num: 55

Candidate Starts for Zhengyi\_18:

(Start: 55 @13141 has 37 MA's), (61, 13111), (65, 13090), (94, 12985), (131, 12928), (139, 12874), (141, 12850), (146, 12835), (181, 12679), (188, 12646), (263, 12346), (280, 12259), (287, 12217), (291, 12199),

Gene: Ziko\_83 Start: 43750, Stop: 42680, Start Num: 47

Candidate Starts for Ziko\_83:

(38, 43795), (43, 43765), (Start: 47 @43750 has 75 MA's), (Start: 57 @43726 has 1 MA's), (61, 43702), (75, 43630), (79, 43618), (92, 43579), (103, 43555), (115, 43504), (141, 43381), (164, 43288), (173, 43246), (177, 43234), (191, 43171), (220, 43054), (234, 42997), (240, 42970), (256, 42910), (287, 42760), (292, 42736), (296, 42721), (299, 42712), (302, 42706),