

Pham 166412

1: Twister_9 + 3	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
2: Eaglepride_10	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
3: Goose_9	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
4: OKCentral2016_9 + 1	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
5: Edison31_9	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
6: Rebeuca_10 + 1	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
7: Pm1_6	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
8: Kimona_6	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
9: BreSam8_11 + 6	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
10: QuinnKiro_9 + 11	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
11: Grub_11 + 32	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
12: Todacoro_10	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
13: JeppNRM_12 + 13	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
14: Proxy_11 + 4	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
15: HeiDan_9 + 1	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
16: GingkoMaracino_11	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
17: Vix_11	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
18: Phantastic_9	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
19: SoTo_11	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
20: Giroux_9 + 6	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
21: Colostar_11 + 6	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
22: BabyKay_9	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
23: Louie6_11 + 1	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
24: Rummer_11 + 1	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
25: JF2_9 + 3	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
26: Gm1_11	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
27: Rockstar_9	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
28: Scout_9 + 1	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
29: LarryKay_11	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
30: HaveUMet1ed_12	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
31: Anubis_13	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
32: SoilDragon_11 + 1	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
33: Margo_10	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
34: MA5_9	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
35: ACFishhook_11	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
36: Zetzy_10	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
37: TNguyen7_9	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
38: Isca_9	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
39: Settecandela_1 + 1	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
40: Induliamithi_31	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
41: Aikoy_44 + 2	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
42: Squinty_26	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
43: Sunley_30 + 2	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
44: Apocalypse_30	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
45: Anaya_31	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
46: Platt_30 + 10	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
47: Bagnakamaia_30 + 22	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
48: CrimD_30 + 1	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
49: TaiwanKao_31	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186
50: Bella96_30	70	78	279	31	78	78	78	78	84	81	106	115	129	134	142	158	162	186



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 166412 Report

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

Pham number 166412 has 285 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Twister\_9, Topanga\_9, RhynO\_10, WalterMcMickey\_9
- Track 2 : Eaglepride\_10
- Track 3 : Goose\_9
- Track 4 : OKCentral2016\_9, Chupacabra\_9
- Track 5 : Edison31\_9
- Track 6 : Rebeuca\_10, Kristoff\_10
- Track 7 : Phlei\_6
- Track 8 : Kimona\_6
- Track 9 : BreSam8\_11, Sabia\_11, Aglet\_11, StepMih\_11, Stagni\_11, Mainiac\_11, Malinsilva\_13
- Track 10 : QuinnKiro\_9, Popcicle\_10, Pocahontas\_10, Panamaxus\_10, Caviar\_10, ResDef\_10, Texage\_9, Norbert\_9, Hookmount\_10, Veracruz\_9, Noella\_10, Lambert1\_10
- Track 11 : Grub\_11, Fernando\_11, Lilith\_11, Snickers\_11, LugYA\_13, Watson\_11, Microwolf\_11, Dieselweasel\_11, Phoebe\_11, JHC117\_11, Tiffany\_11, Taurus\_11, DaHudson\_11, JenCasNa\_11, Wooldri\_13, Sabinator\_11, GtownJaz\_11, PGHhamlin\_13, MarQuardt\_11, Soshari\_13, Methuselah\_11, MadMarie\_11, AugsMagnumOpus\_13, Pembroke\_11, Ollie\_11, AgronaGT15\_11, MuchMore\_13, Hercules11\_11, Farber\_11, Cullens\_11, P28Green\_11, Marie\_11, MoneyMay\_11
- Track 12 : Todacoro\_10
- Track 13 : JeppNRM\_12, Reba\_12, Marius\_12, Pawn\_12, Groupthink\_12, Manu\_12, Gemma\_11, Phranny\_12, Kalb97\_12, PurpleHaze\_11, OlanP\_11, Heliosoles\_11, PhishRPhriends\_10, Kalnoky\_12
- Track 14 : Phoxy\_11, KADY\_12, Misomonster\_13, BuzzBuzz\_10, Spike509\_11
- Track 15 : HelDan\_9, Heathen\_9
- Track 16 : GingkoMaracino\_11
- Track 17 : Vix\_11
- Track 18 : Phantastic\_9
- Track 19 : SoYo\_11
- Track 20 : Giroux\_9, Pistachio\_10, Idleandcovert\_9, Puppy\_10, SaturnRing\_9, BlueBird\_10, Bugatti\_9
- Track 21 : Colbster\_11, LBerry\_11, Beauxregard13\_11, Grum1\_11, Penny1\_11, EpicPhail\_11, PotatoSplit\_12
- Track 22 : BabyRay\_9
- Track 23 : Louie6\_11, Bxz2\_11
- Track 24 : Rummer\_11, HashRod\_12
- Track 25 : JF2\_9, JF4\_9, MK4\_9, B1\_07

- Track 26 : Grif\_11
- Track 27 : Rockstar\_9
- Track 28 : Scout\_9, Fred313\_9
- Track 29 : LarryKay\_11
- Track 30 : HaveUMetTed\_12
- Track 31 : Anubis\_13
- Track 32 : SoilDragon\_11, Jobu08\_11
- Track 33 : Margo\_10
- Track 34 : MA5\_9
- Track 35 : ACFishhook\_11
- Track 36 : Zetzy\_10
- Track 37 : TNguyen7\_9
- Track 38 : Isca\_9
- Track 39 : Settecandela\_1, Phrappuccino\_1
- Track 40 : Indlulamithi\_31
- Track 41 : Aikoy\_44, Onyinye\_45, Leopard\_44
- Track 42 : Squirty\_26
- Track 43 : Sulley\_30, Angelica\_30, Deby\_30
- Track 44 : Apocalypse\_30
- Track 45 : Anaya\_31
- Track 46 : Piatt\_30, Durfee\_30, Boiii\_30, AlishaPH\_30, Padfoot\_30, Asayake\_30, Blizzard\_30, CaseJules\_30, Hyperbowlee\_30, BEEST\_30, ShiaSurprise\_30
- Track 47 : BaghaKamala\_30, Jayhawk\_31, Zavala\_30, HedwigODU\_30, Mynx\_30, JAWS\_30, Geraldini\_30, BarrelRoll\_30, ActinUp\_30, Ganymede\_31, MeaningOfLife\_30, Veliki\_30, Slimphazie\_30, Tachez\_30, Zabiza\_31, Atiba\_30, Ramen\_30, Emerson\_30, Padpat\_30, TruffulaTree\_30, Homura\_30, Rapunzel97\_30, QuincyRose\_29
- Track 48 : CrimD\_30, Megsy\_30
- Track 49 : TaiwanKao\_31
- Track 50 : Bella96\_30
- Track 51 : Murucutumbu\_30
- Track 52 : YoureAdopted\_29
- Track 53 : Belladonna\_30, CheetoDust\_30, Peel\_30, Dalmuri\_30, Inky\_30, BGIlluviae\_30, Capricorn\_30, Jeckyll\_30, CREW\_30, Joy99\_30, Twitch\_30, Topper\_30, Llorens\_30, Jarvi\_30, Spock\_30, Rosmarinus\_30, Lunahalos\_30
- Track 54 : LindNT\_30, Prithvi\_30, TreyKay\_30
- Track 55 : Dole\_30, Illumine\_30, Devera\_30
- Track 56 : DrHayes\_30, TiniBug\_30, Urkel\_30, SamuelLPlaqson\_30
- Track 57 : Adonis\_30
- Track 58 : Peanam\_30, Shaobing\_30, Niklas\_30
- Track 59 : Guanica15\_30, Efra2\_30, Yunkel11\_30
- Track 60 : Validus\_30
- Track 61 : LaterM\_30
- Track 62 : Curiosium\_31
- Track 63 : Ageofdapage\_30, Stinson\_31
- Track 64 : Tiri\_30
- Track 65 : Adephegia\_30
- Track 66 : Pokerus\_29
- Track 67 : LastHope\_30
- Track 68 : Beezoo\_30
- Track 69 : DismalFunk\_28, Findley\_28, Marcoliusprime\_28, Strobilo\_28, DismalStressor\_28
- Track 70 : Milly\_28

- Track 71 : ZoeJ\_28
- Track 72 : Rando14\_30
- Track 73 : Ekdilam\_27
- Track 74 : DarthP\_29, Amohnition\_29, Hammy\_29
- Track 75 : Yuna\_31
- Track 76 : Marshawn\_31
- Track 77 : Ellie\_27, Amgine\_28
- Track 78 : Fefferhead\_29
- Track 79 : Boilgate\_27
- Track 80 : Xerxes\_28, Parmesanjohn\_28, Tapioca\_28, Melville\_28, Chewbacca\_28, Gex\_28, Schnauzer\_28, Smurph\_28, Bosection6\_28, Carcharodon\_28, Magsby\_28, Duplicity\_28, Silvafighter\_28, Pipsqueaks\_28
- Track 81 : Nenae\_25, PhancyPhin\_25, Snekmaggedon\_25, Andies\_25, Shweta\_25, Rebel\_25, BabeRuth\_25, SpongeBob\_25, Jamie19\_25, ShrimpFriedEgg\_25, Redi\_25, Purgamenstris\_25
- Track 82 : Panchino\_25, SkinnyPete\_25
- Track 83 : Phloss\_25
- Track 84 : Charlie\_28, Journey\_29, Silvy\_28, Aggie\_28
- Track 85 : Raymond7\_25
- Track 86 : Philonius\_28
- Track 87 : MichelleMyBell\_26
- Track 88 : Scitech\_25
- Track 89 : Xeno\_27
- Track 90 : Fulbright\_27
- Track 91 : Willsammy\_26
- Track 92 : Tortellini\_26
- Track 93 : Purky\_26

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

The start number called the most often in the published annotations is 12, it was called in 141 of the 270 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_30, Adephegia\_30, Adonis\_30, Ageofdapage\_30, Aggie\_28, Aikoy\_44, AlishaPH\_30, Amgine\_28, Amohnition\_29, Anaya\_31, Andies\_25, Angelica\_30, Apocalypse\_30, Asayake\_30, Atiba\_30, BEEST\_30, BGIlluviae\_30, BabeRuth\_25, BaghaKamala\_30, BarrelRoll\_30, Beezoo\_30, Bella96\_30, Belladonna\_30, Blizzard\_30, Boiiii\_30, Boilgate\_27, Bosection6\_28, CREW\_30, Capricorn\_30, Carcharodon\_28, CaseJules\_30, Charlie\_28, CheetoDust\_30, Chewbacca\_28, CrimD\_30, Curiosium\_31, Dalmuri\_30, DarthP\_29, Deby\_30, Devera\_30, Dole\_30, DrHayes\_30, Duplicity\_28, Durfee\_30, Efra2\_30, Ekdilam\_27, Ellie\_27, Emerson\_30, Fefferhead\_29, Fulbright\_27, Ganymede\_31, Geraldini\_30, Gex\_28, Guanica15\_30, Hammy\_29, HedwigODU\_30, Homura\_30, Hyperbowlee\_30, Illumine\_30, Indlulamithi\_31, Inky\_30, JAWS\_30, Jamie19\_25, Jarvi\_30, Jayhawk\_31, Jeckyll\_30, Journey\_29, Joy99\_30, LastHope\_30, LaterM\_30, Leopard\_44, LindNT\_30, Llorens\_30, Lunahalos\_30, Magsby\_28, MeaningOfLife\_30, Megsy\_30, Melville\_28, MichelleMyBell\_26, Murucutumbu\_30, Mynx\_30, Nenae\_25, Niklas\_30, Onyinye\_45, Padfoot\_30, Padpat\_30, Panchino\_25, Parmesanjohn\_28, Peanam\_30, Peel\_30, PhancyPhin\_25, Philonius\_28, Phlei\_6, Phloss\_25, Phrappuccino\_1, Piatt\_30,

Pipsqueaks\_28, Pokerus\_29, Prithvi\_30, Purgamenstris\_25, Purky\_26, QuincyRose\_29, Ramen\_30, Rando14\_30, Rapunzel97\_30, Raymond7\_25, Rebel\_25, Redi\_25, Rosmarinus\_30, SamuelLPlaqson\_30, Schnauzer\_28, Scitech\_25, Settecandela\_1, Shaobing\_30, ShiaSurprise\_30, ShrimpFriedEgg\_25, Shweta\_25, Silvafighter\_28, Silvy\_28, SkinnyPete\_25, Slimphazie\_30, Smurph\_28, Snekmaggedon\_25, Spock\_30, SpongeBob\_25, Squirty\_26, Stinson\_31, Sulley\_30, Tachez\_30, TaiwanKao\_31, Tapioca\_28, TiniBug\_30, Tiri\_30, Topper\_30, Tortellini\_26, TreyKay\_30, TruffulaTree\_30, Twitch\_30, Urkel\_30, Validus\_30, Veliki\_30, Willsammy\_26, Xeno\_27, Xerxes\_28, YoureAdopted\_29, Yuna\_31, Yunkel11\_30, Zabiza\_31, Zavala\_30, ZoeJ\_28,

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

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

- ACFishhook\_11, Aglet\_11, AgronaGT15\_11, Anubis\_13, AugsMagnumOpus\_13, B1\_07, BabyRay\_9, Beauxregard13\_11, BlueBird\_10, BreSam8\_11, Bugatti\_9, BuzzBuzz\_10, Bxz2\_11, Caviar\_10, Chupacabra\_9, Colbster\_11, Cullens\_11, DaHudson\_11, Dieselweasel\_11, DismalFunk\_28, DismalStressor\_28, Eaglepride\_10, Edison31\_9, EpicPhail\_11, Farber\_11, Fernando\_11, Findley\_28, Fred313\_9, Gemma\_11, GingkoMaracino\_11, Giroux\_9, Goose\_9, Grif\_11, Groupthink\_12, Grub\_11, Grum1\_11, GtownJaz\_11, HashRod\_12, HaveUMetTed\_12, Heathen\_9, HelDan\_9, Heliosoles\_11, Hercules11\_11, Hookmount\_10, Idleandcovert\_9, Isca\_9, JF2\_9, JF4\_9, JHC117\_11, JenCasNa\_11, JeppNRM\_12, Jobu08\_11, KADY\_12, Kalb97\_12, Kalnoky\_12, Kimona\_6, Kristoff\_10, LBerry\_11, Lambert1\_10, LarryKay\_11, Lilith\_11, Louie6\_11, LugYA\_13, MA5\_9, MK4\_9, MadMarie\_11, Mainiac\_11, Malinsilva\_13, Manu\_12, MarQuardt\_11, Marcoliusprime\_28, Margo\_10, Marie\_11, Marius\_12, Marshawn\_31, Methuselah\_11, Microwolf\_11, Milly\_28, Misomonster\_13, MoneyMay\_11, MuchMore\_13, Noella\_10, Norbert\_9, OKCentral2016\_9, OlanP\_11, Ollie\_11, P28Green\_11, PGHhamlin\_13, Panamaxus\_10, Pawn\_12, Pembroke\_11, Penny1\_11, Phantastic\_9, PhishRPhriends\_10, Phoebe\_11, Phoxy\_11, Phranny\_12, Pistachio\_10, Pocahontas\_10, Popcicle\_10, PotatoSplit\_12, Puppy\_10, PurpleHaze\_11, QuinnKiro\_9, Reba\_12, Rebeuca\_10, ResDef\_10, RhynO\_10, Rockstar\_9, Rummer\_11, Sabia\_11, Sabinator\_11, SaturnRing\_9, Scout\_9, Snickers\_11, SoYo\_11, SoilDragon\_11, Soshari\_13, Spike509\_11, Stagni\_11, StepMih\_11, Strobilo\_28, TNguyen7\_9, Taurus\_11, Texage\_9, Tiffany\_11, Todacoro\_10, Topanga\_9, Twister\_9, Veracruz\_9, Vix\_11, WalterMcMickey\_9, Watson\_11, Wooldri\_13, Zetzy\_10,

### Summary by start number:

Start 9:

- Found in 6 of 285 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 6 of 270
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DismalFunk\_28 (K2), DismalStressor\_28 (K2), Findley\_28 (K2), Marcoliusprime\_28 (K2), Milly\_28 (K2), Strobilo\_28 (K2),

Start 10:

- Found in 128 of 285 ( 44.9% ) of genes in pham
- Manual Annotations of this start: 122 of 270

- Called 100.0% of time when present
- Phage (with cluster) where this start called: ACFishhook\_11 (A3), Aglet\_11 (A3), AgronaGT15\_11 (A3), Anubis\_13 (A3), AugsMagnumOpus\_13 (A3), B1\_07 (A3), BabyRay\_9 (A3), Beauxregard13\_11 (A3), BlueBird\_10 (A3), BreSam8\_11 (A3), Bugatti\_9 (A3), BuzzBuzz\_10 (A3), Bxz2\_11 (A3), Caviar\_10 (A3), Chupacabra\_9 (A10), Colbster\_11 (A3), Cullens\_11 (A3), DaHudson\_11 (A3), Dieselweasel\_11 (A3), Eaglepride\_10 (A10), Edison31\_9 (A10), EpicPhail\_11 (A3), Farber\_11 (A3), Fernando\_11 (A3), Fred313\_9 (A3), Gemma\_11 (A3), GingkoMaracino\_11 (A3), Giroux\_9 (A3), Goose\_9 (A10), Grif\_11 (A3), Groupthink\_12 (A3), Grub\_11 (A3), Grum1\_11 (A3), GtownJaz\_11 (A3), HashRod\_12 (A3), HaveUMetTed\_12 (A3), Heathen\_9 (A3), HelDan\_9 (A3), Heliosoles\_11 (A3), Hercules11\_11 (A3), Hookmount\_10 (A3), Idleandcovert\_9 (A3), Isca\_9 (A3), JF2\_9 (A3), JF4\_9 (A3), JHC117\_11 (A3), JenCasNa\_11 (A3), JeppNRM\_12 (A3), Jobu08\_11 (A3), KADY\_12 (A3), Kalb97\_12 (A3), Kalnoky\_12 (A3), Kimona\_6 (A19), Kristoff\_10 (A10), LBerry\_11 (A3), Lambert1\_10 (A3), LarryKay\_11 (A3), Lilith\_11 (A3), Louie6\_11 (A3), LugYA\_13 (A3), MA5\_9 (A3), MK4\_9 (A3), MadMarie\_11 (A3), Mainiac\_11 (A3), Malinsilva\_13 (A3), Manu\_12 (A3), MarQuardt\_11 (A3), Margo\_10 (A3), Marie\_11 (A3), Marius\_12 (A3), Methuselah\_11 (A3), Microwolf\_11 (A3), Misomonster\_13 (A3), MoneyMay\_11 (A3), MuchMore\_13 (A3), Noella\_10 (A3), Norbert\_9 (A3), OKCentral2016\_9 (A10), OlanP\_11 (A3), Ollie\_11 (A3), P28Green\_11 (A3), PGHhamlin\_13 (A3), Panamaxus\_10 (A3), Pawn\_12 (A3), Pembroke\_11 (A3), Penny1\_11 (A3), Phantastic\_9 (A3), PhishRPhriends\_10 (A3), Phoebe\_11 (A3), Phoxy\_11 (A3), Phranny\_12 (A3), Pistachio\_10 (A3), Pocahontas\_10 (A3), Popcicle\_10 (A3), PotatoSplit\_12 (A3), Puppy\_10 (A3), PurpleHaze\_11 (A3), QuinnKiro\_9 (A3), Reba\_12 (A3), Rebeuca\_10 (A10), ResDef\_10 (A3), RhynO\_10 (A10), Rockstar\_9 (A3), Rummer\_11 (A3), Sabia\_11 (A3), Sabinator\_11 (A3), SaturnRing\_9 (A3), Scout\_9 (A3), Snickers\_11 (A3), SoYo\_11 (A3), SoilDragon\_11 (A3), Soshari\_13 (A3), Spike509\_11 (A3), Stagni\_11 (A3), StepMih\_11 (A3), TNguyen7\_9 (A3), Taurus\_11 (A3), Texage\_9 (A3), Tiffany\_11 (A3), Todacoro\_10 (A3), Topanga\_9 (A10), Twister\_9 (A10), Veracruz\_9 (A3), Vix\_11 (A3), WalterMcMickey\_9 (A10), Watson\_11 (A3), Wooldri\_13 (A3), Zetsy\_10 (A3),

#### Start 11:

- Found in 1 of 285 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 270
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Marshawn\_31 (K6),

#### Start 12:

- Found in 150 of 285 ( 52.6% ) of genes in pham
- Manual Annotations of this start: 141 of 270
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ActinUp\_30 (K1), Adephegia\_30 (K1), Adonis\_30 (K1), Ageofdapage\_30 (K1), Aggie\_28 (N), Aikoy\_44 (AE), AlishaPH\_30 (K1), Amgine\_28 (K6), Amohnition\_29 (K6), Anaya\_31 (K1), Andies\_25 (N), Angelica\_30 (K1), Apocalypse\_30 (K1), Asayake\_30 (K1), Atiba\_30 (K1), BEEST\_30 (K1), BGIluviae\_30 (K1), BabeRuth\_25 (N), BaghaKamala\_30 (K1), BarrelRoll\_30 (K1), Beezoo\_30 (K1), Bella96\_30 (K1), Belladonna\_30 (K1), Blizzard\_30 (K1), Boiiii\_30 (K1), Boilgate\_27 (K8), Bosection6\_28 (N), CREW\_30 (K1), Capricorn\_30 (K1), Carcharodon\_28 (N), CaseJules\_30 (K1), Charlie\_28 (N), CheetoDust\_30 (K1), Chewbacca\_28 (N), CrimD\_30 (K1), Curiosium\_31 (K1), Dalmuri\_30 (K1), DarthP\_29 (K6), Deby\_30 (K1), Devera\_30 (K1), Dole\_30 (K1), DrHayes\_30 (K1), Duplicity\_28 (N), Durfee\_30 (K1), Efra2\_30 (K1), Ekdilam\_27 (K6), Ellie\_27 (K6), Emerson\_30

(K1), Fefferhead\_29 (K6), Fulbright\_27 (N), Ganymede\_31 (K1), Geraldini\_30 (K1), Gex\_28 (N), Guanica15\_30 (K1), Hammy\_29 (K6), HedwigODU\_30 (K1), Homura\_30 (K1), Hyperbowlee\_30 (K1), Illumine\_30 (K1), Indulamithi\_31 (AC), Inky\_30 (K1), JAWS\_30 (K1), Jamie19\_25 (N), Jarvi\_30 (K1), Jayhawk\_31 (K1), Jeckyll\_30 (K1), Journey\_29 (N), Joy99\_30 (K1), LastHope\_30 (K1), LaterM\_30 (K1), Leopard\_44 (AE), LindNT\_30 (K1), Llorens\_30 (K1), Lunahalos\_30 (K1), Magsby\_28 (N), MeaningOfLife\_30 (K1), Megsy\_30 (K1), Melville\_28 (N), MichelleMyBell\_26 (N), Murucutumbu\_30 (K1), Mynx\_30 (K1), Nenae\_25 (N), Niklas\_30 (K1), Onyinye\_45 (AE), Padfoot\_30 (K1), Padpat\_30 (K1), Panchino\_25 (N), Parmesanjohn\_28 (N), Peanam\_30 (K1), Peel\_30 (K1), PhancyPhin\_25 (N), Philonius\_28 (N), Phlei\_6 (A13), Phloss\_25 (N), Phrappuccino\_1 (AA), Piatt\_30 (K1), Pipsqueaks\_28 (N), Pokerus\_29 (K1), Prithvi\_30 (K1), Purgamenstris\_25 (N), Purky\_26 (P6), QuincyRose\_29 (K1), Ramen\_30 (K1), Rando14\_30 (K5), Rapunzel97\_30 (K1), Raymond7\_25 (N), Rebel\_25 (N), Redi\_25 (N), Rosmarinus\_30 (K1), SamuelLPlaqson\_30 (K1), Schnauzer\_28 (N), Scitech\_25 (N), Settecandela\_1 (AA), Shaobing\_30 (K1), ShiaSurprise\_30 (K1), ShrimpFriedEgg\_25 (N), Shweta\_25 (N), Silvafighter\_28 (N), Silvy\_28 (N), SkinnyPete\_25 (N), Slimphazie\_30 (K1), Smurph\_28 (N), Snekmaggon\_25 (N), Spock\_30 (K1), SpongeBob\_25 (N), Squirty\_26 (F3), Stinson\_31 (K1), Sulley\_30 (K1), Tachez\_30 (K1), TaiwanKao\_31 (K1), Tapioca\_28 (N), TiniBug\_30 (K1), Tiri\_30 (K1), Topper\_30 (K1), Tortellini\_26 (P2), TreyKay\_30 (K1), TruffulaTree\_30 (K1), Twitch\_30 (K1), Urkel\_30 (K1), Validus\_30 (K1), Veliki\_30 (K1), Willsammy\_26 (P1), Xeno\_27 (N), Xerxes\_28 (N), YoureAdopted\_29 (K1), Yuna\_31 (K6), Yunkel11\_30 (K1), Zabiza\_31 (K1), Zavala\_30 (K1), ZoeJ\_28 (K2),

### **Summary by clusters:**

There are 17 clusters represented in this pham: P2, AA, AC, P1, AE, A10, A13, A19, A3, N, K2, K1, F3, K6, K5, P6, K8,

Info for manual annotations of cluster A10:

- Start number 10 was manually annotated 11 times for cluster A10.

Info for manual annotations of cluster A19:

- Start number 10 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A3:

- Start number 10 was manually annotated 110 times for cluster A3.

Info for manual annotations of cluster AA:

- Start number 12 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AC:

- Start number 12 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster AE:

- Start number 12 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster F3:

- Start number 12 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster K1:



- Start number 12 was manually annotated 85 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 9 was manually annotated 6 times for cluster K2.
- Start number 12 was manually annotated 1 time for cluster K2.

Info for manual annotations of cluster K5:

- Start number 12 was manually annotated 1 time for cluster K5.

Info for manual annotations of cluster K6:

- Start number 11 was manually annotated 1 time for cluster K6.
- Start number 12 was manually annotated 8 times for cluster K6.

Info for manual annotations of cluster K8:

- Start number 12 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster N:

- Start number 12 was manually annotated 35 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 12 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster P2:

- Start number 12 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P6:

- Start number 12 was manually annotated 1 time for cluster P6.

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

Gene: ACFishhook\_11 Start: 4534, Stop: 6117, Start Num: 10

Candidate Starts for ACFishhook\_11:

(Start: 10 @4534 has 122 MA's), (20, 4618), (29, 4741), (43, 4873), (45, 4912), (46, 4924), (49, 4972), (63, 5134), (67, 5152), (75, 5209), (81, 5260), (100, 5464), (102, 5485), (109, 5551), (116, 5620), (118, 5632), (129, 5749), (142, 5797), (147, 5824), (162, 5902), (170, 5926),

Gene: ActinUp\_30 Start: 24811, Stop: 26466, Start Num: 12

Candidate Starts for ActinUp\_30:

(Start: 12 @24811 has 141 MA's), (20, 24892), (24, 24916), (26, 24955), (27, 24973), (32, 25006), (34, 25030), (38, 25075), (41, 25117), (42, 25120), (43, 25123), (46, 25174), (47, 25201), (49, 25222), (53, 25255), (69, 25426), (75, 25474), (81, 25525), (83, 25555), (85, 25570), (98, 25708), (100, 25741), (104, 25780), (110, 25840), (114, 25870), (120, 25948), (129, 25993), (136, 26026), (141, 26047), (147, 26101), (154, 26143), (164, 26188), (196, 26356), (203, 26440),

Gene: Adephagia\_30 Start: 24808, Stop: 26463, Start Num: 12

Candidate Starts for Adephagia\_30:

(Start: 12 @24808 has 141 MA's), (15, 24835), (20, 24889), (24, 24913), (26, 24952), (27, 24970), (32, 25003), (34, 25027), (38, 25072), (41, 25114), (42, 25117), (43, 25120), (46, 25171), (47, 25198), (49, 25219), (53, 25252), (69, 25423), (75, 25471), (81, 25522), (83, 25552), (85, 25567), (98, 25705), (100, 25738), (104, 25777), (110, 25837), (114, 25867), (120, 25945), (129, 25990), (136, 26023), (141, 26044), (147, 26098), (154, 26140), (164, 26185), (196, 26353), (203, 26437),

Gene: Adonis\_30 Start: 24814, Stop: 26469, Start Num: 12

Candidate Starts for Adonis\_30:

(Start: 12 @24814 has 141 MA's), (20, 24895), (24, 24919), (26, 24958), (27, 24976), (32, 25009), (34, 25033), (38, 25078), (41, 25120), (43, 25126), (46, 25177), (47, 25204), (49, 25225), (53, 25258), (69, 25429), (75, 25477), (81, 25528), (83, 25558), (85, 25573), (98, 25711), (100, 25744), (110, 25843), (114, 25873), (120, 25951), (129, 25996), (136, 26029), (141, 26050), (147, 26104), (154, 26146), (164, 26191), (196, 26359), (203, 26443),

Gene: Ageofdapage\_30 Start: 24757, Stop: 26406, Start Num: 12

Candidate Starts for Ageofdapage\_30:

(Start: 12 @24757 has 141 MA's), (20, 24838), (23, 24859), (24, 24862), (26, 24901), (32, 24952), (34, 24976), (38, 25021), (41, 25063), (43, 25069), (46, 25120), (47, 25147), (49, 25168), (53, 25201), (66, 25363), (69, 25372), (75, 25420), (81, 25471), (85, 25516), (98, 25654), (100, 25687), (104, 25726), (110, 25786), (114, 25816), (120, 25894), (129, 25939), (136, 25972), (138, 25981), (154, 26089), (196, 26296), (203, 26380),

Gene: Aggie\_28 Start: 22835, Stop: 24343, Start Num: 12

Candidate Starts for Aggie\_28:

(Start: 12 @22835 has 141 MA's), (20, 22919), (29, 23018), (32, 23033), (42, 23147), (43, 23150), (46, 23201), (48, 23240), (49, 23249), (53, 23282), (55, 23324), (69, 23459), (71, 23474), (77, 23522), (80, 23546), (85, 23606), (120, 23972), (132, 24038), (140, 24062), (148, 24095), (152, 24110), (175, 24200),

Gene: Aglet\_11 Start: 4419, Stop: 5963, Start Num: 10

Candidate Starts for Aglet\_11:

(Start: 10 @4419 has 122 MA's), (20, 4503), (29, 4626), (43, 4758), (45, 4797), (49, 4857), (53, 4890), (63, 5025), (75, 5100), (81, 5151), (100, 5322), (101, 5337), (129, 5598), (142, 5646), (147, 5673), (162, 5751), (170, 5775), (172, 5781),

Gene: AgronaGT15\_11 Start: 4326, Stop: 5870, Start Num: 10

Candidate Starts for AgronaGT15\_11:

(Start: 10 @4326 has 122 MA's), (20, 4410), (29, 4533), (43, 4665), (45, 4704), (49, 4764), (53, 4797), (63, 4932), (75, 5007), (81, 5058), (100, 5229), (101, 5244), (129, 5505), (142, 5553), (147, 5580), (162, 5658), (170, 5682),

Gene: Aikoy\_44 Start: 34493, Stop: 36076, Start Num: 12

Candidate Starts for Aikoy\_44:

(Start: 12 @34493 has 141 MA's), (20, 34577), (21, 34580), (25, 34616), (27, 34658), (29, 34676), (34, 34715), (36, 34736), (40, 34775), (43, 34808), (45, 34847), (49, 34907), (52, 34931), (65, 35090), (69, 35102), (82, 35207), (83, 35231), (90, 35297), (102, 35432), (104, 35450), (120, 35648), (122, 35657), (124, 35666), (127, 35696), (133, 35720), (135, 35732), (146, 35780), (159, 35861), (160, 35864), (171, 35894), (193, 36041),

Gene: AlishaPH\_30 Start: 24801, Stop: 26456, Start Num: 12

Candidate Starts for AlishaPH\_30:

(Start: 12 @24801 has 141 MA's), (20, 24882), (24, 24906), (26, 24945), (27, 24963), (32, 24996), (34, 25020), (38, 25065), (41, 25107), (42, 25110), (43, 25113), (46, 25164), (47, 25191), (49, 25212), (53, 25245), (69, 25416), (75, 25464), (81, 25515), (83, 25545), (85, 25560), (98, 25698), (100, 25731), (110, 25830), (114, 25860), (120, 25938), (129, 25983), (136, 26016), (141, 26037), (147, 26091), (154, 26133), (164, 26178), (196, 26346), (203, 26430),

Gene: Amgine\_28 Start: 24839, Stop: 26542, Start Num: 12

Candidate Starts for Amgine\_28:

(Start: 12 @24839 has 141 MA's), (14, 24854), (17, 24875), (20, 24923), (26, 24986), (29, 25022), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (49, 25253), (53, 25286), (56, 25343), (59, 25394), (66, 25448), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (144, 26111), (147, 26129), (167, 26222), (175, 26252), (190, 26369), (196, 26423), (203, 26513),

Gene: Amohnition\_29 Start: 25269, Stop: 26972, Start Num: 12

Candidate Starts for Amohnition\_29:

(Start: 12 @25269 has 141 MA's), (17, 25305), (20, 25353), (26, 25416), (32, 25467), (34, 25491), (35, 25497), (38, 25536), (41, 25578), (42, 25581), (43, 25584), (46, 25635), (49, 25683), (53, 25716), (69, 25887), (75, 25935), (81, 25986), (85, 26031), (92, 26100), (104, 26241), (110, 26301), (120, 26409), (129, 26454), (136, 26487), (138, 26496), (147, 26559), (167, 26652), (184, 26772), (196, 26865), (203, 26949), (206, 26967),

Gene: Anaya\_31 Start: 24827, Stop: 26482, Start Num: 12

Candidate Starts for Anaya\_31:

(Start: 12 @24827 has 141 MA's), (20, 24908), (24, 24932), (26, 24971), (27, 24989), (32, 25022), (34, 25046), (38, 25091), (41, 25133), (42, 25136), (43, 25139), (46, 25190), (47, 25217), (49, 25238), (53, 25271), (69, 25442), (73, 25478), (75, 25490), (81, 25541), (83, 25571), (85, 25586), (98, 25724), (100, 25757), (104, 25796), (110, 25856), (114, 25886), (120, 25964), (129, 26009), (136, 26042), (141, 26063), (147, 26117), (149, 26126), (154, 26159), (164, 26204), (177, 26252), (196, 26372), (203, 26456),

Gene: Andies\_25 Start: 22011, Stop: 23510, Start Num: 12

Candidate Starts for Andies\_25:

(Start: 12 @22011 has 141 MA's), (20, 22095), (32, 22209), (43, 22326), (46, 22377), (48, 22416), (49, 22425), (53, 22458), (55, 22500), (69, 22629), (71, 22644), (72, 22659), (77, 22692), (80, 22716), (84, 22767), (85, 22776), (115, 23055), (120, 23142), (130, 23199), (132, 23205), (140, 23229), (148, 23262), (152, 23277), (175, 23367),

Gene: Angelica\_30 Start: 24776, Stop: 26431, Start Num: 12

Candidate Starts for Angelica\_30:

(Start: 12 @24776 has 141 MA's), (20, 24857), (24, 24881), (26, 24920), (27, 24938), (34, 24995), (38, 25040), (41, 25082), (42, 25085), (43, 25088), (46, 25139), (47, 25166), (49, 25187), (53, 25220), (69, 25391), (73, 25427), (75, 25439), (81, 25490), (83, 25520), (85, 25535), (98, 25673), (100, 25706), (104, 25745), (110, 25805), (114, 25835), (120, 25913), (129, 25958), (136, 25991), (141, 26012), (147, 26066), (154, 26108), (164, 26153), (196, 26321), (203, 26405),

Gene: Anubis\_13 Start: 4286, Stop: 5848, Start Num: 10

Candidate Starts for Anubis\_13:

(Start: 10 @4286 has 122 MA's), (20, 4370), (29, 4493), (32, 4508), (41, 4619), (43, 4625), (45, 4664), (46, 4676), (49, 4724), (79, 4988), (81, 5021), (82, 5027), (102, 5231), (106, 5258), (119, 5396), (120, 5435), (129, 5483), (142, 5531), (162, 5636), (174, 5672),

Gene: Apocalypse\_30 Start: 24779, Stop: 26434, Start Num: 12

Candidate Starts for Apocalypse\_30:

(Start: 12 @24779 has 141 MA's), (20, 24860), (24, 24884), (26, 24923), (27, 24941), (32, 24974), (34, 24998), (38, 25043), (42, 25088), (43, 25091), (46, 25142), (47, 25169), (49, 25190), (53, 25223), (69, 25394), (73, 25430), (75, 25442), (81, 25493), (83, 25523), (85, 25538), (98, 25676), (100, 25709), (110, 25808), (114, 25838), (120, 25916), (129, 25961), (136, 25994), (141, 26015), (147, 26069), (154, 26111), (164, 26156), (196, 26324), (203, 26408),

Gene: Asayake\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Asayake\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Atiba\_30 Start: 24771, Stop: 26426, Start Num: 12

Candidate Starts for Atiba\_30:

(Start: 12 @24771 has 141 MA's), (20, 24852), (24, 24876), (26, 24915), (27, 24933), (32, 24966), (34, 24990), (38, 25035), (41, 25077), (42, 25080), (43, 25083), (46, 25134), (47, 25161), (49, 25182), (53, 25215), (69, 25386), (75, 25434), (81, 25485), (83, 25515), (85, 25530), (98, 25668), (100, 25701), (104, 25740), (110, 25800), (114, 25830), (120, 25908), (129, 25953), (136, 25986), (141, 26007), (147, 26061), (154, 26103), (164, 26148), (196, 26316), (203, 26400),

Gene: AugsMagnumOpus\_13 Start: 4410, Stop: 5954, Start Num: 10

Candidate Starts for AugsMagnumOpus\_13:

(Start: 10 @4410 has 122 MA's), (20, 4494), (29, 4617), (43, 4749), (45, 4788), (49, 4848), (53, 4881), (63, 5016), (75, 5091), (81, 5142), (100, 5313), (101, 5328), (129, 5589), (142, 5637), (147, 5664), (162, 5742), (170, 5766),

Gene: B1\_07 Start: 3814, Stop: 5379, Start Num: 10

Candidate Starts for B1\_07:

(Start: 10 @3814 has 122 MA's), (20, 3898), (34, 4060), (35, 4066), (38, 4105), (41, 4147), (43, 4153), (45, 4192), (49, 4252), (81, 4543), (102, 4753), (106, 4780), (119, 4918), (129, 5005), (142, 5053), (150, 5101), (175, 5203), (177, 5212), (181, 5227), (185, 5263),

Gene: BEEST\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for BEEST\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: BGlluviae\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for BGlluviae\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: BabeRuth\_25 Start: 21893, Stop: 23392, Start Num: 12

Candidate Starts for BabeRuth\_25:

(Start: 12 @21893 has 141 MA's), (20, 21977), (32, 22091), (43, 22208), (46, 22259), (48, 22298), (49, 22307), (53, 22340), (55, 22382), (69, 22511), (71, 22526), (72, 22541), (77, 22574), (80, 22598), (84, 22649), (85, 22658), (115, 22937), (120, 23024), (130, 23081), (132, 23087), (140, 23111), (148, 23144), (152, 23159), (175, 23249),

Gene: BabyRay\_9 Start: 4410, Stop: 5975, Start Num: 10

Candidate Starts for BabyRay\_9:

(2, 4119), (Start: 10 @4410 has 122 MA's), (20, 4494), (35, 4662), (41, 4743), (43, 4749), (45, 4788), (49, 4848), (81, 5139), (102, 5349), (119, 5514), (129, 5601), (142, 5649), (175, 5799), (177, 5808), (181, 5823), (185, 5859), (199, 5946),

Gene: BaghaKamala\_30 Start: 24771, Stop: 26426, Start Num: 12

Candidate Starts for BaghaKamala\_30:

(Start: 12 @24771 has 141 MA's), (20, 24852), (24, 24876), (26, 24915), (27, 24933), (32, 24966), (34, 24990), (38, 25035), (41, 25077), (42, 25080), (43, 25083), (46, 25134), (47, 25161), (49, 25182), (53, 25215), (69, 25386), (75, 25434), (81, 25485), (83, 25515), (85, 25530), (98, 25668), (100, 25701), (104, 25740), (110, 25800), (114, 25830), (120, 25908), (129, 25953), (136, 25986), (141, 26007), (147, 26061), (154, 26103), (164, 26148), (196, 26316), (203, 26400),

Gene: BarrelRoll\_30 Start: 24794, Stop: 26449, Start Num: 12

Candidate Starts for BarrelRoll\_30:

(Start: 12 @24794 has 141 MA's), (20, 24875), (24, 24899), (26, 24938), (27, 24956), (32, 24989), (34, 25013), (38, 25058), (41, 25100), (42, 25103), (43, 25106), (46, 25157), (47, 25184), (49, 25205), (53, 25238), (69, 25409), (75, 25457), (81, 25508), (83, 25538), (85, 25553), (98, 25691), (100, 25724), (104, 25763), (110, 25823), (114, 25853), (120, 25931), (129, 25976), (136, 26009), (141, 26030), (147, 26084), (154, 26126), (164, 26171), (196, 26339), (203, 26423),

Gene: Beauxregard13\_11 Start: 4418, Stop: 5962, Start Num: 10

Candidate Starts for Beauxregard13\_11:

(Start: 10 @4418 has 122 MA's), (20, 4502), (29, 4625), (43, 4757), (45, 4796), (49, 4856), (53, 4889), (63, 5024), (75, 5099), (81, 5150), (100, 5321), (101, 5336), (112, 5429), (129, 5597), (142, 5645), (147, 5672), (162, 5750), (170, 5774),

Gene: Beezoo\_30 Start: 24819, Stop: 26474, Start Num: 12

Candidate Starts for Beezoo\_30:

(Start: 12 @24819 has 141 MA's), (20, 24900), (24, 24924), (26, 24963), (27, 24981), (32, 25014), (34, 25038), (38, 25083), (42, 25128), (43, 25131), (46, 25182), (47, 25209), (49, 25230), (53, 25263), (68, 25431), (69, 25434), (73, 25470), (75, 25482), (81, 25533), (83, 25563), (85, 25578), (98, 25716), (100, 25749), (104, 25788), (110, 25848), (114, 25878), (120, 25956), (129, 26001), (136, 26034), (141, 26055), (147, 26109), (154, 26151), (164, 26196), (196, 26364), (203, 26448),

Gene: Bella96\_30 Start: 24751, Stop: 26367, Start Num: 12

Candidate Starts for Bella96\_30:

(Start: 12 @24751 has 141 MA's), (17, 24784), (20, 24832), (24, 24856), (26, 24895), (27, 24913), (32, 24946), (34, 24970), (38, 25015), (41, 25057), (43, 25063), (49, 25162), (53, 25195), (66, 25357), (69, 25366), (75, 25414), (81, 25465), (85, 25510), (98, 25648), (100, 25681), (104, 25720), (110, 25780), (114, 25810), (120, 25888), (129, 25933), (143, 25987), (154, 26071), (168, 26128), (196, 26257), (203, 26341),

Gene: Belladonna\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Belladonna\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Blizzard\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Blizzard\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: BlueBird\_10 Start: 4177, Stop: 5742, Start Num: 10

Candidate Starts for BlueBird\_10:

(Start: 10 @4177 has 122 MA's), (20, 4261), (35, 4429), (38, 4468), (41, 4510), (43, 4516), (45, 4555), (49, 4615), (81, 4906), (102, 5116), (106, 5143), (119, 5281), (129, 5368), (142, 5416), (147, 5443), (174, 5557), (177, 5575), (199, 5713),

Gene: Boiiii\_30 Start: 24844, Stop: 26499, Start Num: 12

Candidate Starts for Boiiii\_30:

(Start: 12 @24844 has 141 MA's), (20, 24925), (24, 24949), (26, 24988), (27, 25006), (32, 25039), (34, 25063), (38, 25108), (41, 25150), (42, 25153), (43, 25156), (46, 25207), (47, 25234), (49, 25255), (53, 25288), (69, 25459), (75, 25507), (81, 25558), (83, 25588), (85, 25603), (98, 25741), (100, 25774), (110, 25873), (114, 25903), (120, 25981), (129, 26026), (136, 26059), (141, 26080), (147, 26134), (154, 26176), (164, 26221), (196, 26389), (203, 26473),

Gene: Boilgate\_27 Start: 26728, Stop: 28389, Start Num: 12

Candidate Starts for Boilgate\_27:

(6, 26656), (8, 26692), (Start: 12 @26728 has 141 MA's), (19, 26806), (20, 26809), (24, 26833), (25, 26848), (28, 26896), (32, 26926), (34, 26950), (41, 27037), (43, 27043), (45, 27082), (49, 27142), (53, 27169), (65, 27325), (76, 27397), (81, 27439), (84, 27475), (104, 27682), (109, 27730), (120, 27853), (129, 27898), (136, 27931), (141, 27952), (155, 28033), (160, 28063), (183, 28174), (194, 28252),

Gene: Bosection6\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Bosection6\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: BreSam8\_11 Start: 4411, Stop: 5955, Start Num: 10

Candidate Starts for BreSam8\_11:

(Start: 10 @4411 has 122 MA's), (20, 4495), (29, 4618), (43, 4750), (45, 4789), (49, 4849), (53, 4882), (63, 5017), (75, 5092), (81, 5143), (100, 5314), (101, 5329), (129, 5590), (142, 5638), (147, 5665), (162, 5743), (170, 5767), (172, 5773),

Gene: Bugatti\_9 Start: 4177, Stop: 5742, Start Num: 10

Candidate Starts for Bugatti\_9:

(Start: 10 @4177 has 122 MA's), (20, 4261), (35, 4429), (38, 4468), (41, 4510), (43, 4516), (45, 4555), (49, 4615), (81, 4906), (102, 5116), (106, 5143), (119, 5281), (129, 5368), (142, 5416), (147, 5443), (174, 5557), (177, 5575), (199, 5713),

Gene: BuzzBuzz\_10 Start: 4502, Stop: 6046, Start Num: 10

Candidate Starts for BuzzBuzz\_10:

(Start: 10 @4502 has 122 MA's), (20, 4586), (29, 4709), (32, 4724), (41, 4835), (43, 4841), (45, 4880), (46, 4892), (49, 4940), (63, 5108), (75, 5183), (81, 5234), (100, 5405), (101, 5420), (112, 5513), (129, 5681), (142, 5729), (147, 5756), (162, 5834), (170, 5858),

Gene: Bxz2\_11 Start: 4512, Stop: 6056, Start Num: 10

Candidate Starts for Bxz2\_11:

(Start: 10 @4512 has 122 MA's), (20, 4596), (29, 4719), (32, 4734), (41, 4845), (43, 4851), (45, 4890), (46, 4902), (49, 4950), (63, 5118), (75, 5193), (81, 5244), (100, 5415), (101, 5430), (129, 5691), (142, 5739), (147, 5766), (162, 5844), (170, 5868),

Gene: CREW\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for CREW\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Capricorn\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Capricorn\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Carcharodon\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Carcharodon\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: CaseJules\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for CaseJules\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Caviar\_10 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for Caviar\_10:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: Charlie\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Charlie\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (46, 23200), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: CheetoDust\_30 Start: 24819, Stop: 26474, Start Num: 12

Candidate Starts for CheetoDust\_30:

(Start: 12 @24819 has 141 MA's), (20, 24900), (24, 24924), (26, 24963), (27, 24981), (32, 25014), (34, 25038), (41, 25125), (42, 25128), (43, 25131), (46, 25182), (47, 25209), (49, 25230), (53, 25263), (69, 25434), (75, 25482), (81, 25533), (83, 25563), (85, 25578), (98, 25716), (100, 25749), (104, 25788), (110, 25848), (114, 25878), (120, 25956), (129, 26001), (136, 26034), (141, 26055), (147, 26109),

(154, 26151), (164, 26196), (196, 26364), (203, 26448),

Gene: Chewbacca\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Chewbacca\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Chupacabra\_9 Start: 4142, Stop: 5710, Start Num: 10

Candidate Starts for Chupacabra\_9:

(Start: 10 @4142 has 122 MA's), (18, 4217), (19, 4223), (27, 4331), (29, 4349), (37, 4424), (43, 4481), (45, 4520), (48, 4571), (50, 4595), (64, 4754), (81, 4871), (100, 5081), (102, 5102), (106, 5129), (115, 5219), (120, 5291), (123, 5306), (126, 5336), (131, 5360), (134, 5372), (158, 5495), (161, 5504), (177, 5561), (189, 5642),

Gene: Colbster\_11 Start: 4418, Stop: 5962, Start Num: 10

Candidate Starts for Colbster\_11:

(Start: 10 @4418 has 122 MA's), (20, 4502), (29, 4625), (43, 4757), (45, 4796), (49, 4856), (53, 4889), (63, 5024), (75, 5099), (81, 5150), (100, 5321), (101, 5336), (112, 5429), (129, 5597), (142, 5645), (147, 5672), (162, 5750), (170, 5774),

Gene: CrimD\_30 Start: 24779, Stop: 26434, Start Num: 12

Candidate Starts for CrimD\_30:

(Start: 12 @24779 has 141 MA's), (20, 24860), (24, 24884), (26, 24923), (32, 24974), (34, 24998), (38, 25043), (41, 25085), (46, 25142), (47, 25169), (49, 25190), (53, 25223), (66, 25385), (69, 25394), (75, 25442), (81, 25493), (85, 25538), (95, 25652), (98, 25676), (100, 25709), (104, 25748), (110, 25808), (114, 25838), (120, 25916), (129, 25961), (136, 25994), (138, 26003), (147, 26069), (149, 26078), (154, 26111), (164, 26156), (196, 26324), (203, 26408),

Gene: Cullens\_11 Start: 4416, Stop: 5960, Start Num: 10

Candidate Starts for Cullens\_11:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: Curiosium\_31 Start: 24611, Stop: 26284, Start Num: 12

Candidate Starts for Curiosium\_31:

(Start: 12 @24611 has 141 MA's), (20, 24695), (24, 24719), (26, 24758), (32, 24809), (34, 24833), (38, 24878), (41, 24920), (42, 24923), (43, 24926), (47, 25004), (49, 25025), (69, 25223), (75, 25271), (81, 25322), (85, 25367), (95, 25481), (98, 25505), (100, 25538), (104, 25577), (107, 25601), (110, 25637), (114, 25667), (120, 25745), (129, 25790), (130, 25799), (136, 25823), (138, 25832), (157, 25970), (158, 25973), (165, 25988), (190, 26132), (196, 26174), (203, 26258),

Gene: DaHudson\_11 Start: 4410, Stop: 5954, Start Num: 10

Candidate Starts for DaHudson\_11:

(Start: 10 @4410 has 122 MA's), (20, 4494), (29, 4617), (43, 4749), (45, 4788), (49, 4848), (53, 4881), (63, 5016), (75, 5091), (81, 5142), (100, 5313), (101, 5328), (129, 5589), (142, 5637), (147, 5664), (162, 5742), (170, 5766),

Gene: Dalmuri\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Dalmuri\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69,



25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: DarthP\_29 Start: 25191, Stop: 26894, Start Num: 12

Candidate Starts for DarthP\_29:

(Start: 12 @25191 has 141 MA's), (17, 25227), (20, 25275), (26, 25338), (32, 25389), (34, 25413), (35, 25419), (38, 25458), (41, 25500), (42, 25503), (43, 25506), (46, 25557), (49, 25605), (53, 25638), (69, 25809), (75, 25857), (81, 25908), (85, 25953), (92, 26022), (104, 26163), (110, 26223), (120, 26331), (129, 26376), (136, 26409), (138, 26418), (147, 26481), (167, 26574), (184, 26694), (196, 26787), (203, 26871), (206, 26889),

Gene: Deby\_30 Start: 24776, Stop: 26431, Start Num: 12

Candidate Starts for Deby\_30:

(Start: 12 @24776 has 141 MA's), (20, 24857), (24, 24881), (26, 24920), (27, 24938), (34, 24995), (38, 25040), (41, 25082), (42, 25085), (43, 25088), (46, 25139), (47, 25166), (49, 25187), (53, 25220), (69, 25391), (73, 25427), (75, 25439), (81, 25490), (83, 25520), (85, 25535), (98, 25673), (100, 25706), (104, 25745), (110, 25805), (114, 25835), (120, 25913), (129, 25958), (136, 25991), (141, 26012), (147, 26066), (154, 26108), (164, 26153), (196, 26321), (203, 26405),

Gene: Devera\_30 Start: 24822, Stop: 26471, Start Num: 12

Candidate Starts for Devera\_30:

(Start: 12 @24822 has 141 MA's), (23, 24924), (24, 24927), (26, 24966), (32, 25017), (34, 25041), (38, 25086), (41, 25128), (43, 25134), (46, 25185), (47, 25212), (49, 25233), (53, 25266), (66, 25428), (69, 25437), (75, 25485), (81, 25536), (85, 25581), (98, 25719), (100, 25752), (104, 25791), (110, 25851), (114, 25881), (120, 25959), (129, 26004), (136, 26037), (138, 26046), (154, 26154), (196, 26361), (203, 26445), (207, 26466),

Gene: Dieselweasel\_11 Start: 4419, Stop: 5963, Start Num: 10

Candidate Starts for Dieselweasel\_11:

(Start: 10 @4419 has 122 MA's), (20, 4503), (29, 4626), (43, 4758), (45, 4797), (49, 4857), (53, 4890), (63, 5025), (75, 5100), (81, 5151), (100, 5322), (101, 5337), (129, 5598), (142, 5646), (147, 5673), (162, 5751), (170, 5775),

Gene: DismalFunk\_28 Start: 23083, Stop: 24801, Start Num: 9

Candidate Starts for DismalFunk\_28:

(Start: 9 @23083 has 6 MA's), (17, 23119), (20, 23167), (34, 23308), (39, 23365), (41, 23395), (42, 23398), (46, 23452), (47, 23479), (49, 23500), (53, 23533), (61, 23641), (64, 23683), (69, 23698), (75, 23746), (81, 23797), (85, 23842), (100, 24001), (104, 24040), (113, 24112), (120, 24211), (129, 24259), (145, 24331), (158, 24418), (161, 24427), (177, 24481), (201, 24709),

Gene: DismalStressor\_28 Start: 23083, Stop: 24801, Start Num: 9

Candidate Starts for DismalStressor\_28:

(Start: 9 @23083 has 6 MA's), (17, 23119), (20, 23167), (34, 23308), (39, 23365), (41, 23395), (42, 23398), (46, 23452), (47, 23479), (49, 23500), (53, 23533), (61, 23641), (64, 23683), (69, 23698), (75, 23746), (81, 23797), (85, 23842), (100, 24001), (104, 24040), (113, 24112), (120, 24211), (129, 24259), (145, 24331), (158, 24418), (161, 24427), (177, 24481), (201, 24709),

Gene: Dole\_30 Start: 24824, Stop: 26473, Start Num: 12

Candidate Starts for Dole\_30:

(Start: 12 @24824 has 141 MA's), (23, 24926), (24, 24929), (26, 24968), (32, 25019), (34, 25043), (38, 25088), (41, 25130), (43, 25136), (46, 25187), (47, 25214), (49, 25235), (53, 25268), (66, 25430), (69, 25439), (75, 25487), (81, 25538), (85, 25583), (98, 25721), (100, 25754), (104, 25793), (110, 25853),

(114, 25883), (120, 25961), (129, 26006), (136, 26039), (138, 26048), (154, 26156), (196, 26363),  
(203, 26447), (207, 26468),

Gene: DrHayes\_30 Start: 24769, Stop: 26385, Start Num: 12

Candidate Starts for DrHayes\_30:

(Start: 12 @24769 has 141 MA's), (17, 24802), (20, 24850), (24, 24874), (26, 24913), (27, 24931), (32, 24964), (34, 24988), (38, 25033), (41, 25075), (42, 25078), (43, 25081), (49, 25180), (53, 25213), (66, 25375), (69, 25384), (75, 25432), (81, 25483), (85, 25528), (98, 25666), (100, 25699), (104, 25738), (110, 25798), (114, 25828), (120, 25906), (129, 25951), (143, 26005), (154, 26089), (168, 26146), (196, 26275), (200, 26305), (203, 26359),

Gene: Duplicity\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Duplicity\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Durfee\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Durfee\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Eaglepride\_10 Start: 4140, Stop: 5708, Start Num: 10

Candidate Starts for Eaglepride\_10:

(Start: 10 @4140 has 122 MA's), (18, 4215), (27, 4329), (29, 4347), (43, 4479), (45, 4518), (48, 4569), (49, 4578), (50, 4593), (64, 4752), (81, 4869), (102, 5100), (106, 5127), (115, 5217), (123, 5304), (126, 5334), (131, 5358), (134, 5370), (142, 5397), (158, 5493), (161, 5502), (166, 5517), (176, 5553), (177, 5559), (186, 5625), (189, 5640),

Gene: Edison31\_9 Start: 4156, Stop: 5718, Start Num: 10

Candidate Starts for Edison31\_9:

(Start: 10 @4156 has 122 MA's), (18, 4231), (27, 4345), (29, 4363), (37, 4438), (43, 4495), (45, 4534), (48, 4585), (50, 4609), (64, 4768), (81, 4885), (102, 5116), (106, 5143), (115, 5233), (120, 5305), (126, 5350), (131, 5374), (134, 5386), (142, 5413), (158, 5509), (166, 5533), (172, 5551), (186, 5641),

Gene: Efra2\_30 Start: 24059, Stop: 25705, Start Num: 12

Candidate Starts for Efra2\_30:

(Start: 12 @24059 has 141 MA's), (17, 24092), (20, 24140), (24, 24164), (26, 24203), (27, 24221), (32, 24254), (34, 24278), (41, 24365), (42, 24368), (43, 24371), (46, 24422), (49, 24470), (53, 24500), (69, 24665), (81, 24764), (85, 24809), (98, 24947), (100, 24980), (104, 25019), (110, 25079), (114, 25109), (120, 25187), (129, 25232), (136, 25265), (138, 25274), (154, 25382), (196, 25595), (197, 25598), (203, 25679), (205, 25694),

Gene: Ekdilam\_27 Start: 24950, Stop: 26653, Start Num: 12

Candidate Starts for Ekdilam\_27:

(Start: 12 @24950 has 141 MA's), (17, 24986), (20, 25034), (26, 25097), (29, 25133), (32, 25148), (34, 25172), (35, 25178), (38, 25217), (41, 25259), (42, 25262), (43, 25265), (46, 25316), (49, 25364), (53, 25397), (59, 25505), (69, 25568), (75, 25616), (81, 25667), (85, 25712), (95, 25826), (98, 25850), (100, 25883), (104, 25922), (110, 25982), (114, 26012), (120, 26090), (129, 26135), (136, 26168), (147, 26240), (167, 26333), (184, 26453), (190, 26480), (196, 26546),

Gene: Ellie\_27 Start: 24952, Stop: 26655, Start Num: 12

Candidate Starts for Ellie\_27:

(Start: 12 @24952 has 141 MA's), (14, 24967), (17, 24988), (20, 25036), (26, 25099), (29, 25135), (32, 25150), (34, 25174), (38, 25219), (41, 25261), (42, 25264), (43, 25267), (46, 25318), (49, 25366), (53, 25399), (56, 25456), (59, 25507), (66, 25561), (69, 25570), (75, 25618), (81, 25669), (83, 25699), (85, 25714), (98, 25852), (104, 25924), (110, 25984), (114, 26014), (120, 26092), (129, 26137), (136, 26170), (144, 26224), (147, 26242), (167, 26335), (175, 26365), (190, 26482), (196, 26536), (203, 26626),

Gene: Emerson\_30 Start: 24802, Stop: 26457, Start Num: 12

Candidate Starts for Emerson\_30:

(Start: 12 @24802 has 141 MA's), (20, 24883), (24, 24907), (26, 24946), (27, 24964), (32, 24997), (34, 25021), (38, 25066), (41, 25108), (42, 25111), (43, 25114), (46, 25165), (47, 25192), (49, 25213), (53, 25246), (69, 25417), (75, 25465), (81, 25516), (83, 25546), (85, 25561), (98, 25699), (100, 25732), (104, 25771), (110, 25831), (114, 25861), (120, 25939), (129, 25984), (136, 26017), (141, 26038), (147, 26092), (154, 26134), (164, 26179), (196, 26347), (203, 26431),

Gene: EpicPhail\_11 Start: 4418, Stop: 5962, Start Num: 10

Candidate Starts for EpicPhail\_11:

(Start: 10 @4418 has 122 MA's), (20, 4502), (29, 4625), (43, 4757), (45, 4796), (49, 4856), (53, 4889), (63, 5024), (75, 5099), (81, 5150), (100, 5321), (101, 5336), (112, 5429), (129, 5597), (142, 5645), (147, 5672), (162, 5750), (170, 5774),

Gene: Farber\_11 Start: 4411, Stop: 5955, Start Num: 10

Candidate Starts for Farber\_11:

(Start: 10 @4411 has 122 MA's), (20, 4495), (29, 4618), (43, 4750), (45, 4789), (49, 4849), (53, 4882), (63, 5017), (75, 5092), (81, 5143), (100, 5314), (101, 5329), (129, 5590), (142, 5638), (147, 5665), (162, 5743), (170, 5767),

Gene: Fefferhead\_29 Start: 25152, Stop: 26855, Start Num: 12

Candidate Starts for Fefferhead\_29:

(Start: 12 @25152 has 141 MA's), (14, 25167), (17, 25188), (20, 25236), (26, 25299), (29, 25335), (32, 25350), (34, 25374), (38, 25419), (41, 25461), (42, 25464), (43, 25467), (46, 25518), (49, 25566), (53, 25599), (56, 25656), (59, 25707), (66, 25761), (69, 25770), (75, 25818), (81, 25869), (83, 25899), (85, 25914), (98, 26052), (104, 26124), (110, 26184), (114, 26214), (120, 26292), (129, 26337), (136, 26370), (147, 26442), (167, 26535), (175, 26565), (190, 26682), (196, 26736), (203, 26826),

Gene: Fernando\_11 Start: 4416, Stop: 5960, Start Num: 10

Candidate Starts for Fernando\_11:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: Findley\_28 Start: 23102, Stop: 24793, Start Num: 9

Candidate Starts for Findley\_28:

(Start: 9 @23102 has 6 MA's), (17, 23138), (20, 23186), (34, 23327), (39, 23384), (41, 23414), (42, 23417), (46, 23471), (47, 23498), (49, 23519), (53, 23552), (61, 23660), (64, 23702), (69, 23717), (75, 23765), (81, 23816), (85, 23861), (100, 24020), (104, 24059), (113, 24131), (120, 24230), (129, 24278), (145, 24350), (158, 24437), (161, 24446), (177, 24500), (201, 24701),

Gene: Fred313\_9 Start: 3878, Stop: 5443, Start Num: 10

Candidate Starts for Fred313\_9:

(Start: 10 @3878 has 122 MA's), (20, 3962), (35, 4130), (41, 4211), (43, 4217), (45, 4256), (49, 4316), (81, 4607), (102, 4817), (119, 4982), (129, 5069), (142, 5117), (150, 5165), (175, 5267), (177, 5276), (181, 5291), (185, 5327), (199, 5414),

Gene: Fulbright\_27 Start: 22795, Stop: 24165, Start Num: 12

Candidate Starts for Fulbright\_27:

(Start: 12 @22795 has 141 MA's), (20, 22879), (32, 22993), (34, 23017), (43, 23110), (46, 23161), (48, 23200), (49, 23209), (53, 23242), (55, 23284), (63, 23392), (70, 23425), (72, 23443), (88, 23539), (89, 23542), (96, 23602), (97, 23605), (102, 23650), (117, 23746), (132, 23860), (148, 23917), (152, 23932), (175, 24022),

Gene: Ganymede\_31 Start: 24822, Stop: 26477, Start Num: 12

Candidate Starts for Ganymede\_31:

(Start: 12 @24822 has 141 MA's), (20, 24903), (24, 24927), (26, 24966), (27, 24984), (32, 25017), (34, 25041), (38, 25086), (41, 25128), (42, 25131), (43, 25134), (46, 25185), (47, 25212), (49, 25233), (53, 25266), (69, 25437), (75, 25485), (81, 25536), (83, 25566), (85, 25581), (98, 25719), (100, 25752), (104, 25791), (110, 25851), (114, 25881), (120, 25959), (129, 26004), (136, 26037), (141, 26058), (147, 26112), (154, 26154), (164, 26199), (196, 26367), (203, 26451),

Gene: Gemma\_11 Start: 4453, Stop: 6036, Start Num: 10

Candidate Starts for Gemma\_11:

(Start: 10 @4453 has 122 MA's), (20, 4537), (21, 4540), (29, 4660), (43, 4792), (45, 4831), (46, 4843), (49, 4891), (63, 5053), (67, 5071), (75, 5128), (81, 5179), (100, 5383), (102, 5404), (109, 5470), (116, 5539), (118, 5551), (129, 5668), (142, 5716), (147, 5743), (162, 5821), (170, 5845),

Gene: Geraldini\_30 Start: 24819, Stop: 26474, Start Num: 12

Candidate Starts for Geraldini\_30:

(Start: 12 @24819 has 141 MA's), (20, 24900), (24, 24924), (26, 24963), (27, 24981), (32, 25014), (34, 25038), (38, 25083), (41, 25125), (42, 25128), (43, 25131), (46, 25182), (47, 25209), (49, 25230), (53, 25263), (69, 25434), (75, 25482), (81, 25533), (83, 25563), (85, 25578), (98, 25716), (100, 25749), (104, 25788), (110, 25848), (114, 25878), (120, 25956), (129, 26001), (136, 26034), (141, 26055), (147, 26109), (154, 26151), (164, 26196), (196, 26364), (203, 26448),

Gene: Gex\_28 Start: 22830, Stop: 24338, Start Num: 12

Candidate Starts for Gex\_28:

(Start: 12 @22830 has 141 MA's), (20, 22914), (29, 23013), (32, 23028), (42, 23142), (43, 23145), (48, 23235), (49, 23244), (53, 23277), (55, 23319), (69, 23454), (71, 23469), (77, 23517), (80, 23541), (85, 23601), (120, 23967), (132, 24033), (140, 24057), (148, 24090), (152, 24105), (175, 24195),

Gene: GingkoMaracino\_11 Start: 4283, Stop: 5848, Start Num: 10

Candidate Starts for GingkoMaracino\_11:

(Start: 10 @4283 has 122 MA's), (20, 4367), (29, 4490), (43, 4622), (45, 4661), (49, 4721), (53, 4754), (63, 4895), (79, 4988), (81, 5021), (82, 5027), (102, 5231), (106, 5258), (119, 5396), (120, 5435), (129, 5483), (142, 5531), (162, 5636), (174, 5672),

Gene: Giroux\_9 Start: 4177, Stop: 5742, Start Num: 10

Candidate Starts for Giroux\_9:

(Start: 10 @4177 has 122 MA's), (20, 4261), (35, 4429), (38, 4468), (41, 4510), (43, 4516), (45, 4555), (49, 4615), (81, 4906), (102, 5116), (106, 5143), (119, 5281), (129, 5368), (142, 5416), (147, 5443), (174, 5557), (177, 5575), (199, 5713),

Gene: Goose\_9 Start: 4143, Stop: 5711, Start Num: 10

Candidate Starts for Goose\_9:

(Start: 10 @4143 has 122 MA's), (18, 4218), (27, 4332), (29, 4350), (37, 4425), (43, 4482), (45, 4521), (48, 4572), (50, 4596), (64, 4755), (81, 4872), (100, 5082), (102, 5103), (106, 5130), (115, 5220), (120, 5292), (123, 5307), (126, 5337), (131, 5361), (134, 5373), (158, 5496), (161, 5505), (177, 5562), (189, 5643),

Gene: Grif\_11 Start: 4501, Stop: 6045, Start Num: 10

Candidate Starts for Grif\_11:

(Start: 10 @4501 has 122 MA's), (20, 4585), (29, 4708), (32, 4723), (43, 4840), (45, 4879), (49, 4939), (53, 4972), (63, 5107), (75, 5182), (81, 5233), (100, 5404), (101, 5419), (129, 5680), (142, 5728), (147, 5755), (162, 5833), (170, 5857),

Gene: Groupthink\_12 Start: 4453, Stop: 6036, Start Num: 10

Candidate Starts for Groupthink\_12:

(Start: 10 @4453 has 122 MA's), (20, 4537), (21, 4540), (29, 4660), (43, 4792), (45, 4831), (46, 4843), (49, 4891), (63, 5053), (67, 5071), (75, 5128), (81, 5179), (100, 5383), (102, 5404), (109, 5470), (116, 5539), (118, 5551), (129, 5668), (142, 5716), (147, 5743), (162, 5821), (170, 5845),

Gene: Grub\_11 Start: 4410, Stop: 5954, Start Num: 10

Candidate Starts for Grub\_11:

(Start: 10 @4410 has 122 MA's), (20, 4494), (29, 4617), (43, 4749), (45, 4788), (49, 4848), (53, 4881), (63, 5016), (75, 5091), (81, 5142), (100, 5313), (101, 5328), (129, 5589), (142, 5637), (147, 5664), (162, 5742), (170, 5766),

Gene: Grum1\_11 Start: 4411, Stop: 5955, Start Num: 10

Candidate Starts for Grum1\_11:

(Start: 10 @4411 has 122 MA's), (20, 4495), (29, 4618), (43, 4750), (45, 4789), (49, 4849), (53, 4882), (63, 5017), (75, 5092), (81, 5143), (100, 5314), (101, 5329), (112, 5422), (129, 5590), (142, 5638), (147, 5665), (162, 5743), (170, 5767),

Gene: GtownJaz\_11 Start: 4419, Stop: 5963, Start Num: 10

Candidate Starts for GtownJaz\_11:

(Start: 10 @4419 has 122 MA's), (20, 4503), (29, 4626), (43, 4758), (45, 4797), (49, 4857), (53, 4890), (63, 5025), (75, 5100), (81, 5151), (100, 5322), (101, 5337), (129, 5598), (142, 5646), (147, 5673), (162, 5751), (170, 5775),

Gene: Guanica15\_30 Start: 24076, Stop: 25722, Start Num: 12

Candidate Starts for Guanica15\_30:

(Start: 12 @24076 has 141 MA's), (17, 24109), (20, 24157), (24, 24181), (26, 24220), (27, 24238), (32, 24271), (34, 24295), (41, 24382), (42, 24385), (43, 24388), (46, 24439), (49, 24487), (53, 24517), (69, 24682), (81, 24781), (85, 24826), (98, 24964), (100, 24997), (104, 25036), (110, 25096), (114, 25126), (120, 25204), (129, 25249), (136, 25282), (138, 25291), (154, 25399), (196, 25612), (197, 25615), (203, 25696), (205, 25711),

Gene: Hammy\_29 Start: 25182, Stop: 26885, Start Num: 12

Candidate Starts for Hammy\_29:

(Start: 12 @25182 has 141 MA's), (17, 25218), (20, 25266), (26, 25329), (32, 25380), (34, 25404), (35, 25410), (38, 25449), (41, 25491), (42, 25494), (43, 25497), (46, 25548), (49, 25596), (53, 25629), (69, 25800), (75, 25848), (81, 25899), (85, 25944), (92, 26013), (104, 26154), (110, 26214), (120, 26322), (129, 26367), (136, 26400), (138, 26409), (147, 26472), (167, 26565), (184, 26685), (196, 26778), (203, 26862), (206, 26880),

Gene: HashRod\_12 Start: 4502, Stop: 6046, Start Num: 10

Candidate Starts for HashRod\_12:

(Start: 10 @4502 has 122 MA's), (20, 4586), (29, 4709), (32, 4724), (41, 4835), (43, 4841), (45, 4880), (46, 4892), (49, 4940), (53, 4973), (63, 5108), (75, 5183), (81, 5234), (100, 5405), (101, 5420), (129, 5681), (142, 5729), (147, 5756), (162, 5834), (170, 5858),

Gene: HaveUMetTed\_12 Start: 4453, Stop: 6036, Start Num: 10

Candidate Starts for HaveUMetTed\_12:

(Start: 10 @4453 has 122 MA's), (20, 4537), (21, 4540), (29, 4660), (33, 4693), (43, 4792), (45, 4831), (46, 4843), (49, 4891), (63, 5053), (67, 5071), (75, 5128), (81, 5179), (100, 5383), (102, 5404), (109, 5470), (116, 5539), (118, 5551), (129, 5668), (142, 5716), (147, 5743), (162, 5821), (170, 5845),

Gene: Heathen\_9 Start: 3976, Stop: 5541, Start Num: 10

Candidate Starts for Heathen\_9:

(3, 3706), (Start: 10 @3976 has 122 MA's), (20, 4060), (35, 4228), (41, 4309), (43, 4315), (45, 4354), (49, 4414), (81, 4705), (102, 4915), (119, 5080), (129, 5167), (142, 5215), (150, 5263), (175, 5365), (177, 5374), (181, 5389), (185, 5425), (199, 5512),

Gene: HedwigODU\_30 Start: 24811, Stop: 26466, Start Num: 12

Candidate Starts for HedwigODU\_30:

(Start: 12 @24811 has 141 MA's), (20, 24892), (24, 24916), (26, 24955), (27, 24973), (32, 25006), (34, 25030), (38, 25075), (41, 25117), (42, 25120), (43, 25123), (46, 25174), (47, 25201), (49, 25222), (53, 25255), (69, 25426), (75, 25474), (81, 25525), (83, 25555), (85, 25570), (98, 25708), (100, 25741), (104, 25780), (110, 25840), (114, 25870), (120, 25948), (129, 25993), (136, 26026), (141, 26047), (147, 26101), (154, 26143), (164, 26188), (196, 26356), (203, 26440),

Gene: HelDan\_9 Start: 4228, Stop: 5793, Start Num: 10

Candidate Starts for HelDan\_9:

(3, 3958), (Start: 10 @4228 has 122 MA's), (20, 4312), (35, 4480), (41, 4561), (43, 4567), (45, 4606), (49, 4666), (81, 4957), (102, 5167), (119, 5332), (129, 5419), (142, 5467), (150, 5515), (175, 5617), (177, 5626), (181, 5641), (185, 5677), (199, 5764),

Gene: Heliosoles\_11 Start: 4453, Stop: 6036, Start Num: 10

Candidate Starts for Heliosoles\_11:

(Start: 10 @4453 has 122 MA's), (20, 4537), (21, 4540), (29, 4660), (43, 4792), (45, 4831), (46, 4843), (49, 4891), (63, 5053), (67, 5071), (75, 5128), (81, 5179), (100, 5383), (102, 5404), (109, 5470), (116, 5539), (118, 5551), (129, 5668), (142, 5716), (147, 5743), (162, 5821), (170, 5845),

Gene: Hercules11\_11 Start: 4425, Stop: 5969, Start Num: 10

Candidate Starts for Hercules11\_11:

(Start: 10 @4425 has 122 MA's), (20, 4509), (29, 4632), (43, 4764), (45, 4803), (49, 4863), (53, 4896), (63, 5031), (75, 5106), (81, 5157), (100, 5328), (101, 5343), (129, 5604), (142, 5652), (147, 5679), (162, 5757), (170, 5781),

Gene: Homura\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Homura\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Hookmount\_10 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for Hookmount\_10:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: Hyperbowlee\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Hyperbowlee\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Idleandcovert\_9 Start: 4177, Stop: 5742, Start Num: 10

Candidate Starts for Idleandcovert\_9:

(Start: 10 @4177 has 122 MA's), (20, 4261), (35, 4429), (38, 4468), (41, 4510), (43, 4516), (45, 4555), (49, 4615), (81, 4906), (102, 5116), (106, 5143), (119, 5281), (129, 5368), (142, 5416), (147, 5443), (174, 5557), (177, 5575), (199, 5713),

Gene: Illumine\_30 Start: 24824, Stop: 26473, Start Num: 12

Candidate Starts for Illumine\_30:

(Start: 12 @24824 has 141 MA's), (23, 24926), (24, 24929), (26, 24968), (32, 25019), (34, 25043), (38, 25088), (41, 25130), (43, 25136), (46, 25187), (47, 25214), (49, 25235), (53, 25268), (66, 25430), (69, 25439), (75, 25487), (81, 25538), (85, 25583), (98, 25721), (100, 25754), (104, 25793), (110, 25853), (114, 25883), (120, 25961), (129, 26006), (136, 26039), (138, 26048), (154, 26156), (196, 26363), (203, 26447), (207, 26468),

Gene: Indlulamithi\_31 Start: 28337, Stop: 29908, Start Num: 12

Candidate Starts for Indlulamithi\_31:

(Start: 12 @28337 has 141 MA's), (19, 28418), (25, 28460), (28, 28508), (30, 28523), (36, 28580), (45, 28691), (49, 28751), (54, 28793), (56, 28844), (57, 28853), (60, 28895), (69, 28949), (74, 28988), (81, 29048), (85, 29093), (87, 29102), (90, 29141), (91, 29144), (103, 29291), (104, 29294), (111, 29360), (120, 29489), (121, 29495), (122, 29498), (127, 29528), (151, 29633), (173, 29729), (174, 29732), (178, 29762), (180, 29768), (182, 29774),

Gene: Inky\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Inky\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Isca\_9 Start: 4047, Stop: 5618, Start Num: 10

Candidate Starts for Isca\_9:

(Start: 10 @4047 has 122 MA's), (20, 4131), (35, 4299), (38, 4338), (41, 4380), (43, 4386), (45, 4425), (49, 4485), (81, 4776), (93, 4881), (102, 4986), (106, 5013), (119, 5151), (129, 5238), (142, 5286), (177, 5445), (181, 5460), (185, 5496), (195, 5562),

Gene: JAWS\_30 Start: 24796, Stop: 26451, Start Num: 12

Candidate Starts for JAWS\_30:

(Start: 12 @24796 has 141 MA's), (20, 24877), (24, 24901), (26, 24940), (27, 24958), (32, 24991), (34, 25015), (38, 25060), (41, 25102), (42, 25105), (43, 25108), (46, 25159), (47, 25186), (49, 25207), (53, 25240), (69, 25411), (75, 25459), (81, 25510), (83, 25540), (85, 25555), (98, 25693), (100, 25726),

(104, 25765), (110, 25825), (114, 25855), (120, 25933), (129, 25978), (136, 26011), (141, 26032), (147, 26086), (154, 26128), (164, 26173), (196, 26341), (203, 26425),

Gene: JF2\_9 Start: 3814, Stop: 5379, Start Num: 10

Candidate Starts for JF2\_9:

(Start: 10 @3814 has 122 MA's), (20, 3898), (34, 4060), (35, 4066), (38, 4105), (41, 4147), (43, 4153), (45, 4192), (49, 4252), (81, 4543), (102, 4753), (106, 4780), (119, 4918), (129, 5005), (142, 5053), (150, 5101), (175, 5203), (177, 5212), (181, 5227), (185, 5263),

Gene: JF4\_9 Start: 3814, Stop: 5379, Start Num: 10

Candidate Starts for JF4\_9:

(Start: 10 @3814 has 122 MA's), (20, 3898), (34, 4060), (35, 4066), (38, 4105), (41, 4147), (43, 4153), (45, 4192), (49, 4252), (81, 4543), (102, 4753), (106, 4780), (119, 4918), (129, 5005), (142, 5053), (150, 5101), (175, 5203), (177, 5212), (181, 5227), (185, 5263),

Gene: JHC117\_11 Start: 4416, Stop: 5960, Start Num: 10

Candidate Starts for JHC117\_11:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: Jamie19\_25 Start: 21893, Stop: 23392, Start Num: 12

Candidate Starts for Jamie19\_25:

(Start: 12 @21893 has 141 MA's), (20, 21977), (32, 22091), (43, 22208), (46, 22259), (48, 22298), (49, 22307), (53, 22340), (55, 22382), (69, 22511), (71, 22526), (72, 22541), (77, 22574), (80, 22598), (84, 22649), (85, 22658), (115, 22937), (120, 23024), (130, 23081), (132, 23087), (140, 23111), (148, 23144), (152, 23159), (175, 23249),

Gene: Jarvi\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Jarvi\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Jayhawk\_31 Start: 24809, Stop: 26464, Start Num: 12

Candidate Starts for Jayhawk\_31:

(Start: 12 @24809 has 141 MA's), (20, 24890), (24, 24914), (26, 24953), (27, 24971), (32, 25004), (34, 25028), (38, 25073), (41, 25115), (42, 25118), (43, 25121), (46, 25172), (47, 25199), (49, 25220), (53, 25253), (69, 25424), (75, 25472), (81, 25523), (83, 25553), (85, 25568), (98, 25706), (100, 25739), (104, 25778), (110, 25838), (114, 25868), (120, 25946), (129, 25991), (136, 26024), (141, 26045), (147, 26099), (154, 26141), (164, 26186), (196, 26354), (203, 26438),

Gene: Jeckyll\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Jeckyll\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: JenCasNa\_11 Start: 4416, Stop: 5960, Start Num: 10



Candidate Starts for JenCasNa\_11:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: JeppNRM\_12 Start: 4451, Stop: 6034, Start Num: 10

Candidate Starts for JeppNRM\_12:

(Start: 10 @4451 has 122 MA's), (20, 4535), (21, 4538), (29, 4658), (43, 4790), (45, 4829), (46, 4841), (49, 4889), (63, 5051), (67, 5069), (75, 5126), (81, 5177), (100, 5381), (102, 5402), (109, 5468), (116, 5537), (118, 5549), (129, 5666), (142, 5714), (147, 5741), (162, 5819), (170, 5843),

Gene: Jobu08\_11 Start: 4481, Stop: 6031, Start Num: 10

Candidate Starts for Jobu08\_11:

(Start: 10 @4481 has 122 MA's), (20, 4565), (29, 4688), (43, 4820), (45, 4859), (46, 4871), (49, 4919), (75, 5168), (81, 5219), (100, 5390), (101, 5405), (112, 5498), (129, 5666), (142, 5714), (147, 5741), (162, 5819), (170, 5843),

Gene: Journey\_29 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Journey\_29:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (46, 23200), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Joy99\_30 Start: 24771, Stop: 26426, Start Num: 12

Candidate Starts for Joy99\_30:

(Start: 12 @24771 has 141 MA's), (20, 24852), (24, 24876), (26, 24915), (27, 24933), (32, 24966), (34, 24990), (41, 25077), (42, 25080), (43, 25083), (46, 25134), (47, 25161), (49, 25182), (53, 25215), (69, 25386), (75, 25434), (81, 25485), (83, 25515), (85, 25530), (98, 25668), (100, 25701), (104, 25740), (110, 25800), (114, 25830), (120, 25908), (129, 25953), (136, 25986), (141, 26007), (147, 26061), (154, 26103), (164, 26148), (196, 26316), (203, 26400),

Gene: KADY\_12 Start: 4502, Stop: 6046, Start Num: 10

Candidate Starts for KADY\_12:

(Start: 10 @4502 has 122 MA's), (20, 4586), (29, 4709), (32, 4724), (41, 4835), (43, 4841), (45, 4880), (46, 4892), (49, 4940), (63, 5108), (75, 5183), (81, 5234), (100, 5405), (101, 5420), (112, 5513), (129, 5681), (142, 5729), (147, 5756), (162, 5834), (170, 5858),

Gene: Kalb97\_12 Start: 4451, Stop: 6034, Start Num: 10

Candidate Starts for Kalb97\_12:

(Start: 10 @4451 has 122 MA's), (20, 4535), (21, 4538), (29, 4658), (43, 4790), (45, 4829), (46, 4841), (49, 4889), (63, 5051), (67, 5069), (75, 5126), (81, 5177), (100, 5381), (102, 5402), (109, 5468), (116, 5537), (118, 5549), (129, 5666), (142, 5714), (147, 5741), (162, 5819), (170, 5843),

Gene: Kalnoky\_12 Start: 4453, Stop: 6036, Start Num: 10

Candidate Starts for Kalnoky\_12:

(Start: 10 @4453 has 122 MA's), (20, 4537), (21, 4540), (29, 4660), (43, 4792), (45, 4831), (46, 4843), (49, 4891), (63, 5053), (67, 5071), (75, 5128), (81, 5179), (100, 5383), (102, 5404), (109, 5470), (116, 5539), (118, 5551), (129, 5668), (142, 5716), (147, 5743), (162, 5821), (170, 5845),

Gene: Kimona\_6 Start: 1977, Stop: 3554, Start Num: 10

Candidate Starts for Kimona\_6:

(Start: 10 @1977 has 122 MA's), (43, 2292), (45, 2331), (49, 2391), (60, 2532), (62, 2547), (67, 2568), (81, 2676), (94, 2805), (100, 2865), (102, 2886), (129, 3135), (142, 3183), (167, 3303), (198, 3480),

Gene: Kristoff\_10 Start: 4322, Stop: 5884, Start Num: 10

Candidate Starts for Kristoff\_10:

(Start: 10 @4322 has 122 MA's), (18, 4397), (27, 4511), (29, 4529), (37, 4604), (43, 4661), (45, 4700), (48, 4751), (50, 4775), (64, 4934), (81, 5051), (102, 5282), (106, 5309), (115, 5399), (120, 5471), (123, 5486), (126, 5516), (131, 5540), (134, 5552), (142, 5579), (158, 5675), (166, 5699), (172, 5717), (184, 5795), (186, 5807),

Gene: LBerry\_11 Start: 4418, Stop: 5962, Start Num: 10

Candidate Starts for LBerry\_11:

(Start: 10 @4418 has 122 MA's), (20, 4502), (29, 4625), (43, 4757), (45, 4796), (49, 4856), (53, 4889), (63, 5024), (75, 5099), (81, 5150), (100, 5321), (101, 5336), (112, 5429), (129, 5597), (142, 5645), (147, 5672), (162, 5750), (170, 5774),

Gene: Lambert1\_10 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for Lambert1\_10:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: LarryKay\_11 Start: 4501, Stop: 6048, Start Num: 10

Candidate Starts for LarryKay\_11:

(Start: 10 @4501 has 122 MA's), (20, 4585), (29, 4708), (41, 4834), (43, 4840), (45, 4879), (46, 4891), (49, 4939), (53, 4972), (79, 5203), (81, 5236), (100, 5407), (101, 5422), (129, 5683), (142, 5731), (147, 5758), (162, 5836), (170, 5860),

Gene: LastHope\_30 Start: 23955, Stop: 25601, Start Num: 12

Candidate Starts for LastHope\_30:

(Start: 12 @23955 has 141 MA's), (20, 24036), (24, 24060), (26, 24099), (27, 24117), (32, 24150), (34, 24174), (38, 24219), (41, 24261), (42, 24264), (43, 24267), (44, 24276), (46, 24318), (49, 24366), (51, 24384), (53, 24405), (69, 24570), (75, 24618), (81, 24669), (85, 24714), (95, 24828), (98, 24852), (100, 24885), (104, 24924), (108, 24954), (110, 24984), (114, 25014), (120, 25092), (129, 25137), (136, 25170), (138, 25179), (154, 25287), (196, 25491), (197, 25494), (202, 25527), (203, 25575),

Gene: LaterM\_30 Start: 24741, Stop: 26390, Start Num: 12

Candidate Starts for LaterM\_30:

(Start: 12 @24741 has 141 MA's), (20, 24822), (23, 24843), (24, 24846), (26, 24885), (32, 24936), (34, 24960), (38, 25005), (41, 25047), (43, 25053), (46, 25104), (47, 25131), (49, 25152), (53, 25185), (66, 25347), (69, 25356), (75, 25404), (81, 25455), (85, 25500), (98, 25638), (100, 25671), (104, 25710), (108, 25740), (110, 25770), (114, 25800), (120, 25878), (129, 25923), (136, 25956), (138, 25965), (154, 26073), (196, 26280), (203, 26364),

Gene: Leopard\_44 Start: 34781, Stop: 36364, Start Num: 12

Candidate Starts for Leopard\_44:

(Start: 12 @34781 has 141 MA's), (20, 34865), (21, 34868), (25, 34904), (27, 34946), (29, 34964), (34, 35003), (36, 35024), (40, 35063), (43, 35096), (45, 35135), (49, 35195), (52, 35219), (65, 35378), (69, 35390), (82, 35495), (83, 35519), (90, 35585), (102, 35720), (104, 35738), (120, 35936), (122, 35945), (124, 35954), (127, 35984), (133, 36008), (135, 36020), (146, 36068), (159, 36149), (160, 36152), (171, 36182), (193, 36329),

Gene: Lilith\_11 Start: 4411, Stop: 5955, Start Num: 10

Candidate Starts for Lilit\_11:

(Start: 10 @4411 has 122 MA's), (20, 4495), (29, 4618), (43, 4750), (45, 4789), (49, 4849), (53, 4882), (63, 5017), (75, 5092), (81, 5143), (100, 5314), (101, 5329), (129, 5590), (142, 5638), (147, 5665), (162, 5743), (170, 5767),

Gene: LindNT\_30 Start: 24775, Stop: 26430, Start Num: 12

Candidate Starts for LindNT\_30:

(Start: 12 @24775 has 141 MA's), (20, 24856), (24, 24880), (26, 24919), (32, 24970), (34, 24994), (38, 25039), (41, 25081), (43, 25087), (46, 25138), (47, 25165), (49, 25186), (53, 25219), (66, 25381), (69, 25390), (75, 25438), (81, 25489), (85, 25534), (95, 25648), (98, 25672), (100, 25705), (104, 25744), (110, 25804), (114, 25834), (120, 25912), (129, 25957), (136, 25990), (138, 25999), (147, 26065), (149, 26074), (154, 26107), (164, 26152), (196, 26320), (203, 26404),

Gene: Llorens\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Llorens\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Louie6\_11 Start: 4502, Stop: 6049, Start Num: 10

Candidate Starts for Louie6\_11:

(Start: 10 @4502 has 122 MA's), (20, 4586), (29, 4709), (32, 4724), (41, 4835), (43, 4841), (45, 4880), (46, 4892), (49, 4940), (63, 5108), (75, 5183), (81, 5234), (100, 5405), (101, 5420), (129, 5684), (142, 5732), (147, 5759), (162, 5837), (170, 5861),

Gene: LugYA\_13 Start: 4416, Stop: 5960, Start Num: 10

Candidate Starts for LugYA\_13:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: Lunahalos\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Lunahalos\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: MA5\_9 Start: 3787, Stop: 5340, Start Num: 10

Candidate Starts for MA5\_9:

(Start: 10 @3787 has 122 MA's), (20, 3871), (35, 4039), (41, 4120), (43, 4126), (45, 4165), (49, 4225), (81, 4504), (102, 4714), (106, 4741), (119, 4879), (129, 4966), (142, 5014), (147, 5041), (174, 5155),

Gene: MK4\_9 Start: 4048, Stop: 5613, Start Num: 10

Candidate Starts for MK4\_9:

(Start: 10 @4048 has 122 MA's), (20, 4132), (34, 4294), (35, 4300), (38, 4339), (41, 4381), (43, 4387), (45, 4426), (49, 4486), (81, 4777), (102, 4987), (106, 5014), (119, 5152), (129, 5239), (142, 5287), (150, 5335), (175, 5437), (177, 5446), (181, 5461), (185, 5497),

Gene: MadMarie\_11 Start: 4420, Stop: 5964, Start Num: 10

Candidate Starts for MadMarie\_11:

(Start: 10 @4420 has 122 MA's), (20, 4504), (29, 4627), (43, 4759), (45, 4798), (49, 4858), (53, 4891), (63, 5026), (75, 5101), (81, 5152), (100, 5323), (101, 5338), (129, 5599), (142, 5647), (147, 5674), (162, 5752), (170, 5776),

Gene: Magsby\_28 Start: 22831, Stop: 24339, Start Num: 12

Candidate Starts for Magsby\_28:

(Start: 12 @22831 has 141 MA's), (20, 22915), (29, 23014), (32, 23029), (42, 23143), (43, 23146), (48, 23236), (49, 23245), (53, 23278), (55, 23320), (69, 23455), (71, 23470), (77, 23518), (80, 23542), (85, 23602), (120, 23968), (132, 24034), (140, 24058), (148, 24091), (152, 24106), (175, 24196),

Gene: Mainiac\_11 Start: 4411, Stop: 5955, Start Num: 10

Candidate Starts for Mainiac\_11:

(Start: 10 @4411 has 122 MA's), (20, 4495), (29, 4618), (43, 4750), (45, 4789), (49, 4849), (53, 4882), (63, 5017), (75, 5092), (81, 5143), (100, 5314), (101, 5329), (129, 5590), (142, 5638), (147, 5665), (162, 5743), (170, 5767), (172, 5773),

Gene: Malinsilva\_13 Start: 4410, Stop: 5954, Start Num: 10

Candidate Starts for Malinsilva\_13:

(Start: 10 @4410 has 122 MA's), (20, 4494), (29, 4617), (43, 4749), (45, 4788), (49, 4848), (53, 4881), (63, 5016), (75, 5091), (81, 5142), (100, 5313), (101, 5328), (129, 5589), (142, 5637), (147, 5664), (162, 5742), (170, 5766), (172, 5772),

Gene: Manu\_12 Start: 4453, Stop: 6036, Start Num: 10

Candidate Starts for Manu\_12:

(Start: 10 @4453 has 122 MA's), (20, 4537), (21, 4540), (29, 4660), (43, 4792), (45, 4831), (46, 4843), (49, 4891), (63, 5053), (67, 5071), (75, 5128), (81, 5179), (100, 5383), (102, 5404), (109, 5470), (116, 5539), (118, 5551), (129, 5668), (142, 5716), (147, 5743), (162, 5821), (170, 5845),

Gene: MarQuardt\_11 Start: 4419, Stop: 5963, Start Num: 10

Candidate Starts for MarQuardt\_11:

(Start: 10 @4419 has 122 MA's), (20, 4503), (29, 4626), (43, 4758), (45, 4797), (49, 4857), (53, 4890), (63, 5025), (75, 5100), (81, 5151), (100, 5322), (101, 5337), (129, 5598), (142, 5646), (147, 5673), (162, 5751), (170, 5775),

Gene: Marcoliusprime\_28 Start: 23083, Stop: 24801, Start Num: 9

Candidate Starts for Marcoliusprime\_28:

(Start: 9 @23083 has 6 MA's), (17, 23119), (20, 23167), (34, 23308), (39, 23365), (41, 23395), (42, 23398), (46, 23452), (47, 23479), (49, 23500), (53, 23533), (61, 23641), (64, 23683), (69, 23698), (75, 23746), (81, 23797), (85, 23842), (100, 24001), (104, 24040), (113, 24112), (120, 24211), (129, 24259), (145, 24331), (158, 24418), (161, 24427), (177, 24481), (201, 24709),

Gene: Margo\_10 Start: 4515, Stop: 6077, Start Num: 10

Candidate Starts for Margo\_10:

(Start: 10 @4515 has 122 MA's), (20, 4599), (38, 4806), (41, 4848), (43, 4854), (45, 4893), (46, 4905), (49, 4953), (53, 4986), (81, 5250), (82, 5256), (102, 5460), (106, 5487), (119, 5625), (120, 5664), (129, 5712), (142, 5760), (147, 5787), (162, 5865),

Gene: Marie\_11 Start: 4416, Stop: 5960, Start Num: 10

Candidate Starts for Marie\_11:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: Marius\_12 Start: 4453, Stop: 6036, Start Num: 10

Candidate Starts for Marius\_12:

(Start: 10 @4453 has 122 MA's), (20, 4537), (21, 4540), (29, 4660), (43, 4792), (45, 4831), (46, 4843), (49, 4891), (63, 5053), (67, 5071), (75, 5128), (81, 5179), (100, 5383), (102, 5404), (109, 5470), (116, 5539), (118, 5551), (129, 5668), (142, 5716), (147, 5743), (162, 5821), (170, 5845),

Gene: Marshawn\_31 Start: 24590, Stop: 26275, Start Num: 11

Candidate Starts for Marshawn\_31:

(Start: 11 @24590 has 1 MA's), (14, 24605), (17, 24626), (20, 24674), (26, 24737), (32, 24788), (34, 24812), (41, 24899), (42, 24902), (43, 24905), (49, 25004), (53, 25037), (55, 25079), (64, 25193), (69, 25208), (75, 25256), (81, 25307), (85, 25352), (95, 25466), (98, 25490), (100, 25523), (104, 25562), (108, 25592), (114, 25652), (120, 25730), (129, 25775), (139, 25820), (153, 25919), (158, 25958), (160, 25964), (182, 26036), (196, 26162), (202, 26198),

Gene: MeaningOfLife\_30 Start: 24778, Stop: 26433, Start Num: 12

Candidate Starts for MeaningOfLife\_30:

(Start: 12 @24778 has 141 MA's), (20, 24859), (24, 24883), (26, 24922), (27, 24940), (32, 24973), (34, 24997), (38, 25042), (41, 25084), (42, 25087), (43, 25090), (46, 25141), (47, 25168), (49, 25189), (53, 25222), (69, 25393), (75, 25441), (81, 25492), (83, 25522), (85, 25537), (98, 25675), (100, 25708), (104, 25747), (110, 25807), (114, 25837), (120, 25915), (129, 25960), (136, 25993), (141, 26014), (147, 26068), (154, 26110), (164, 26155), (196, 26323), (203, 26407),

Gene: Megsy\_30 Start: 24778, Stop: 26433, Start Num: 12

Candidate Starts for Megsy\_30:

(Start: 12 @24778 has 141 MA's), (20, 24859), (24, 24883), (26, 24922), (32, 24973), (34, 24997), (38, 25042), (41, 25084), (46, 25141), (47, 25168), (49, 25189), (53, 25222), (66, 25384), (69, 25393), (75, 25441), (81, 25492), (85, 25537), (95, 25651), (98, 25675), (100, 25708), (104, 25747), (110, 25807), (114, 25837), (120, 25915), (129, 25960), (136, 25993), (138, 26002), (147, 26068), (149, 26077), (154, 26110), (164, 26155), (196, 26323), (203, 26407),

Gene: Melville\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Melville\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Methuselah\_11 Start: 4501, Stop: 6045, Start Num: 10

Candidate Starts for Methuselah\_11:

(Start: 10 @4501 has 122 MA's), (20, 4585), (29, 4708), (43, 4840), (45, 4879), (49, 4939), (53, 4972), (63, 5107), (75, 5182), (81, 5233), (100, 5404), (101, 5419), (129, 5680), (142, 5728), (147, 5755), (162, 5833), (170, 5857),

Gene: MichelleMyBell\_26 Start: 21831, Stop: 23330, Start Num: 12

Candidate Starts for MichelleMyBell\_26:

(5, 21672), (Start: 12 @21831 has 141 MA's), (19, 21912), (20, 21915), (32, 22029), (43, 22146), (46, 22197), (48, 22236), (49, 22245), (53, 22278), (55, 22320), (69, 22449), (71, 22464), (72, 22479), (77, 22512), (80, 22536), (84, 22587), (85, 22596), (115, 22875), (120, 22962), (130, 23019), (132, 23025), (140, 23049), (148, 23082), (152, 23097), (175, 23187),

Gene: Microwolf\_11 Start: 4419, Stop: 5963, Start Num: 10

Candidate Starts for Microwolf\_11:

(Start: 10 @4419 has 122 MA's), (20, 4503), (29, 4626), (43, 4758), (45, 4797), (49, 4857), (53, 4890), (63, 5025), (75, 5100), (81, 5151), (100, 5322), (101, 5337), (129, 5598), (142, 5646), (147, 5673), (162, 5751), (170, 5775),

Gene: Milly\_28 Start: 23083, Stop: 24774, Start Num: 9

Candidate Starts for Milly\_28:

(Start: 9 @23083 has 6 MA's), (17, 23119), (20, 23167), (34, 23308), (39, 23365), (41, 23395), (42, 23398), (46, 23452), (47, 23479), (49, 23500), (53, 23533), (61, 23641), (64, 23683), (69, 23698), (70, 23710), (75, 23746), (81, 23797), (85, 23842), (100, 24001), (104, 24040), (109, 24088), (113, 24112), (120, 24211), (129, 24259), (145, 24331), (184, 24547), (200, 24679), (201, 24682),

Gene: Misomonster\_13 Start: 4501, Stop: 6045, Start Num: 10

Candidate Starts for Misomonster\_13:

(Start: 10 @4501 has 122 MA's), (20, 4585), (29, 4708), (32, 4723), (41, 4834), (43, 4840), (45, 4879), (46, 4891), (49, 4939), (63, 5107), (75, 5182), (81, 5233), (100, 5404), (101, 5419), (112, 5512), (129, 5680), (142, 5728), (147, 5755), (162, 5833), (170, 5857),

Gene: MoneyMay\_11 Start: 4416, Stop: 5960, Start Num: 10

Candidate Starts for MoneyMay\_11:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: MuchMore\_13 Start: 4410, Stop: 5954, Start Num: 10

Candidate Starts for MuchMore\_13:

(Start: 10 @4410 has 122 MA's), (20, 4494), (29, 4617), (43, 4749), (45, 4788), (49, 4848), (53, 4881), (63, 5016), (75, 5091), (81, 5142), (100, 5313), (101, 5328), (129, 5589), (142, 5637), (147, 5664), (162, 5742), (170, 5766),

Gene: Murucutumbu\_30 Start: 24760, Stop: 26409, Start Num: 12

Candidate Starts for Murucutumbu\_30:

(Start: 12 @24760 has 141 MA's), (13, 24769), (20, 24841), (23, 24862), (24, 24865), (26, 24904), (32, 24955), (34, 24979), (38, 25024), (41, 25066), (43, 25072), (46, 25123), (47, 25150), (49, 25171), (53, 25204), (66, 25366), (69, 25375), (75, 25423), (81, 25474), (85, 25519), (98, 25657), (100, 25690), (104, 25729), (110, 25789), (114, 25819), (120, 25897), (129, 25942), (136, 25975), (138, 25984), (154, 26092), (196, 26299), (203, 26383),

Gene: Mynx\_30 Start: 24825, Stop: 26480, Start Num: 12

Candidate Starts for Mynx\_30:

(Start: 12 @24825 has 141 MA's), (20, 24906), (24, 24930), (26, 24969), (27, 24987), (32, 25020), (34, 25044), (38, 25089), (41, 25131), (42, 25134), (43, 25137), (46, 25188), (47, 25215), (49, 25236), (53, 25269), (69, 25440), (75, 25488), (81, 25539), (83, 25569), (85, 25584), (98, 25722), (100, 25755), (104, 25794), (110, 25854), (114, 25884), (120, 25962), (129, 26007), (136, 26040), (141, 26061), (147, 26115), (154, 26157), (164, 26202), (196, 26370), (203, 26454),

Gene: Nenae\_25 Start: 21893, Stop: 23392, Start Num: 12

Candidate Starts for Nenae\_25:

(Start: 12 @21893 has 141 MA's), (20, 21977), (32, 22091), (43, 22208), (46, 22259), (48, 22298), (49, 22307), (53, 22340), (55, 22382), (69, 22511), (71, 22526), (72, 22541), (77, 22574), (80, 22598), (84, 22649), (85, 22658), (115, 22937), (120, 23024), (130, 23081), (132, 23087), (140, 23111), (148, 23144), (152, 23159), (175, 23249),

Gene: Niklas\_30 Start: 24180, Stop: 25856, Start Num: 12

Candidate Starts for Niklas\_30:

(Start: 12 @24180 has 141 MA's), (17, 24213), (20, 24261), (24, 24285), (26, 24324), (27, 24342), (32, 24375), (34, 24399), (41, 24486), (42, 24489), (43, 24492), (46, 24543), (49, 24591), (51, 24609), (53, 24630), (58, 24729), (66, 24786), (69, 24795), (73, 24831), (75, 24843), (81, 24897), (85, 24942), (98, 25080), (100, 25113), (107, 25176), (110, 25212), (114, 25242), (120, 25320), (129, 25365), (130, 25374), (136, 25398), (137, 25401), (139, 25410), (145, 25458), (158, 25548), (196, 25743), (201, 25776), (203, 25827),

Gene: Noella\_10 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for Noella\_10:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: Norbert\_9 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for Norbert\_9:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: OKCentral2016\_9 Start: 3843, Stop: 5411, Start Num: 10

Candidate Starts for OKCentral2016\_9:

(Start: 10 @3843 has 122 MA's), (18, 3918), (19, 3924), (27, 4032), (29, 4050), (37, 4125), (43, 4182), (45, 4221), (48, 4272), (50, 4296), (64, 4455), (81, 4572), (100, 4782), (102, 4803), (106, 4830), (115, 4920), (120, 4992), (123, 5007), (126, 5037), (131, 5061), (134, 5073), (158, 5196), (161, 5205), (177, 5262), (189, 5343),

Gene: OlanP\_11 Start: 4633, Stop: 6216, Start Num: 10

Candidate Starts for OlanP\_11:

(Start: 10 @4633 has 122 MA's), (20, 4717), (21, 4720), (29, 4840), (43, 4972), (45, 5011), (46, 5023), (49, 5071), (63, 5233), (67, 5251), (75, 5308), (81, 5359), (100, 5563), (102, 5584), (109, 5650), (116, 5719), (118, 5731), (129, 5848), (142, 5896), (147, 5923), (162, 6001), (170, 6025),

Gene: Ollie\_11 Start: 4283, Stop: 5833, Start Num: 10

Candidate Starts for Ollie\_11:

(Start: 10 @4283 has 122 MA's), (20, 4367), (29, 4490), (43, 4622), (45, 4661), (49, 4721), (53, 4754), (63, 4895), (75, 4970), (81, 5021), (100, 5192), (101, 5207), (129, 5468), (142, 5516), (147, 5543), (162, 5621), (170, 5645),

Gene: Onyinye\_45 Start: 34660, Stop: 36243, Start Num: 12

Candidate Starts for Onyinye\_45:

(Start: 12 @34660 has 141 MA's), (20, 34744), (21, 34747), (25, 34783), (27, 34825), (29, 34843), (34, 34882), (36, 34903), (40, 34942), (43, 34975), (45, 35014), (49, 35074), (52, 35098), (65, 35257), (69, 35269), (82, 35374), (83, 35398), (90, 35464), (102, 35599), (104, 35617), (120, 35815), (122, 35824), (124, 35833), (127, 35863), (133, 35887), (135, 35899), (146, 35947), (159, 36028), (160, 36031), (171, 36061), (193, 36208),

Gene: P28Green\_11 Start: 4417, Stop: 5961, Start Num: 10

Candidate Starts for P28Green\_11:

(Start: 10 @4417 has 122 MA's), (20, 4501), (29, 4624), (43, 4756), (45, 4795), (49, 4855), (53, 4888), (63, 5023), (75, 5098), (81, 5149), (100, 5320), (101, 5335), (129, 5596), (142, 5644), (147, 5671), (162, 5749), (170, 5773),

Gene: PGHhamlin\_13 Start: 4410, Stop: 5954, Start Num: 10

Candidate Starts for PGHhamlin\_13:

(Start: 10 @4410 has 122 MA's), (20, 4494), (29, 4617), (43, 4749), (45, 4788), (49, 4848), (53, 4881), (63, 5016), (75, 5091), (81, 5142), (100, 5313), (101, 5328), (129, 5589), (142, 5637), (147, 5664), (162, 5742), (170, 5766),

Gene: Padfoot\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Padfoot\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Padpat\_30 Start: 24802, Stop: 26457, Start Num: 12

Candidate Starts for Padpat\_30:

(Start: 12 @24802 has 141 MA's), (20, 24883), (24, 24907), (26, 24946), (27, 24964), (32, 24997), (34, 25021), (38, 25066), (41, 25108), (42, 25111), (43, 25114), (46, 25165), (47, 25192), (49, 25213), (53, 25246), (69, 25417), (75, 25465), (81, 25516), (83, 25546), (85, 25561), (98, 25699), (100, 25732), (104, 25771), (110, 25831), (114, 25861), (120, 25939), (129, 25984), (136, 26017), (141, 26038), (147, 26092), (154, 26134), (164, 26179), (196, 26347), (203, 26431),

Gene: Panamaxus\_10 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for Panamaxus\_10:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: Panchino\_25 Start: 21997, Stop: 23352, Start Num: 12

Candidate Starts for Panchino\_25:

(Start: 12 @21997 has 141 MA's), (19, 22078), (20, 22081), (27, 22162), (32, 22195), (43, 22312), (46, 22363), (48, 22402), (49, 22411), (53, 22444), (55, 22486), (63, 22585), (70, 22618), (72, 22636), (88, 22732), (89, 22735), (96, 22795), (97, 22798), (102, 22843), (117, 22939), (132, 23053), (148, 23110), (152, 23125), (175, 23215),

Gene: Parmesanjohn\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Parmesanjohn\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Pawn\_12 Start: 4453, Stop: 6036, Start Num: 10

Candidate Starts for Pawn\_12:

(Start: 10 @4453 has 122 MA's), (20, 4537), (21, 4540), (29, 4660), (43, 4792), (45, 4831), (46, 4843), (49, 4891), (63, 5053), (67, 5071), (75, 5128), (81, 5179), (100, 5383), (102, 5404), (109, 5470), (116, 5539), (118, 5551), (129, 5668), (142, 5716), (147, 5743), (162, 5821), (170, 5845),

Gene: Peanam\_30 Start: 24177, Stop: 25853, Start Num: 12

Candidate Starts for Peanam\_30:

(Start: 12 @24177 has 141 MA's), (17, 24210), (20, 24258), (24, 24282), (26, 24321), (27, 24339), (32, 24372), (34, 24396), (41, 24483), (42, 24486), (43, 24489), (46, 24540), (49, 24588), (51, 24606), (53, 24627), (58, 24726), (66, 24783), (69, 24792), (73, 24828), (75, 24840), (81, 24894), (85, 24939), (98, 25077), (100, 25110), (107, 25173), (110, 25209), (114, 25239), (120, 25317), (129, 25362), (130,



25371), (136, 25395), (137, 25398), (139, 25407), (145, 25455), (158, 25545), (196, 25740), (201, 25773), (203, 25824),

Gene: Peel\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Peel\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Pembroke\_11 Start: 4419, Stop: 5963, Start Num: 10

Candidate Starts for Pembroke\_11:

(Start: 10 @4419 has 122 MA's), (20, 4503), (29, 4626), (43, 4758), (45, 4797), (49, 4857), (53, 4890), (63, 5025), (75, 5100), (81, 5151), (100, 5322), (101, 5337), (129, 5598), (142, 5646), (147, 5673), (162, 5751), (170, 5775),

Gene: Penny1\_11 Start: 4418, Stop: 5962, Start Num: 10

Candidate Starts for Penny1\_11:

(Start: 10 @4418 has 122 MA's), (20, 4502), (29, 4625), (43, 4757), (45, 4796), (49, 4856), (53, 4889), (63, 5024), (75, 5099), (81, 5150), (100, 5321), (101, 5336), (112, 5429), (129, 5597), (142, 5645), (147, 5672), (162, 5750), (170, 5774),

Gene: PhancyPhin\_25 Start: 21890, Stop: 23389, Start Num: 12

Candidate Starts for PhancyPhin\_25:

(Start: 12 @21890 has 141 MA's), (20, 21974), (32, 22088), (43, 22205), (46, 22256), (48, 22295), (49, 22304), (53, 22337), (55, 22379), (69, 22508), (71, 22523), (72, 22538), (77, 22571), (80, 22595), (84, 22646), (85, 22655), (115, 22934), (120, 23021), (130, 23078), (132, 23084), (140, 23108), (148, 23141), (152, 23156), (175, 23246),

Gene: Phantastic\_9 Start: 4145, Stop: 5704, Start Num: 10

Candidate Starts for Phantastic\_9:

(Start: 10 @4145 has 122 MA's), (20, 4229), (35, 4397), (38, 4436), (41, 4478), (43, 4484), (45, 4523), (49, 4583), (81, 4874), (102, 5084), (119, 5249), (129, 5336), (142, 5384), (162, 5489), (170, 5513), (172, 5519), (175, 5534),

Gene: Philonius\_28 Start: 22834, Stop: 24333, Start Num: 12

Candidate Starts for Philonius\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23452), (71, 23467), (72, 23482), (77, 23515), (80, 23539), (85, 23599), (115, 23878), (120, 23965), (130, 24022), (132, 24028), (140, 24052), (148, 24085), (152, 24100), (175, 24190),

Gene: PhishRPhriends\_10 Start: 3644, Stop: 5227, Start Num: 10

Candidate Starts for PhishRPhriends\_10:

(Start: 10 @3644 has 122 MA's), (20, 3728), (21, 3731), (29, 3851), (43, 3983), (45, 4022), (46, 4034), (49, 4082), (63, 4244), (67, 4262), (75, 4319), (81, 4370), (100, 4574), (102, 4595), (109, 4661), (116, 4730), (118, 4742), (129, 4859), (142, 4907), (147, 4934), (162, 5012), (170, 5036),

Gene: Phlei\_6 Start: 6046, Stop: 7533, Start Num: 12

Candidate Starts for Phlei\_6:

(Start: 12 @6046 has 141 MA's), (16, 6076), (23, 6148), (25, 6166), (29, 6226), (41, 6352), (43, 6358), (45, 6397), (48, 6448), (49, 6457), (75, 6679), (77, 6691), (81, 6730), (100, 6934), (102, 6955), (104,

6973), (106, 6982), (120, 7144), (129, 7189), (154, 7306), (187, 7450),

Gene: Phloss\_25 Start: 22261, Stop: 23769, Start Num: 12

Candidate Starts for Phloss\_25:

(Start: 12 @22261 has 141 MA's), (20, 22345), (29, 22444), (32, 22459), (42, 22573), (43, 22576), (48, 22666), (49, 22675), (53, 22708), (55, 22750), (69, 22885), (71, 22900), (77, 22948), (80, 22972), (85, 23032), (120, 23398), (132, 23464), (140, 23488), (148, 23521), (152, 23536), (175, 23626),

Gene: Phoebe\_11 Start: 4416, Stop: 5960, Start Num: 10

Candidate Starts for Phoebe\_11:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: Phoxy\_11 Start: 4502, Stop: 6046, Start Num: 10

Candidate Starts for Phoxy\_11:

(Start: 10 @4502 has 122 MA's), (20, 4586), (29, 4709), (32, 4724), (41, 4835), (43, 4841), (45, 4880), (46, 4892), (49, 4940), (63, 5108), (75, 5183), (81, 5234), (100, 5405), (101, 5420), (112, 5513), (129, 5681), (142, 5729), (147, 5756), (162, 5834), (170, 5858),

Gene: Phranny\_12 Start: 4451, Stop: 6034, Start Num: 10

Candidate Starts for Phranny\_12:

(Start: 10 @4451 has 122 MA's), (20, 4535), (21, 4538), (29, 4658), (43, 4790), (45, 4829), (46, 4841), (49, 4889), (63, 5051), (67, 5069), (75, 5126), (81, 5177), (100, 5381), (102, 5402), (109, 5468), (116, 5537), (118, 5549), (129, 5666), (142, 5714), (147, 5741), (162, 5819), (170, 5843),

Gene: Phrappuccino\_1 Start: 1, Stop: 1641, Start Num: 12

Candidate Starts for Phrappuccino\_1:

(Start: 12 @1 has 141 MA's), (16, 34), (19, 82), (20, 85), (30, 211), (41, 334), (42, 337), (43, 340), (44, 349), (46, 391), (49, 439), (53, 472), (58, 571), (69, 634), (71, 649), (77, 697), (80, 721), (85, 781), (104, 952), (125, 1183), (128, 1213), (133, 1234), (135, 1246), (169, 1396), (173, 1408), (177, 1426), (179, 1441), (185, 1513), (188, 1534), (191, 1558), (192, 1579), (195, 1618),

Gene: Piatt\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Piatt\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Pipsqueaks\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Pipsqueaks\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Pistachio\_10 Start: 3724, Stop: 5289, Start Num: 10

Candidate Starts for Pistachio\_10:

(Start: 10 @3724 has 122 MA's), (20, 3808), (35, 3976), (38, 4015), (41, 4057), (43, 4063), (45, 4102), (49, 4162), (81, 4453), (102, 4663), (106, 4690), (119, 4828), (129, 4915), (142, 4963), (147, 4990), (174, 5104), (177, 5122), (199, 5260),

Gene: Pocahontas\_10 Start: 4490, Stop: 6049, Start Num: 10

Candidate Starts for Pocahontas\_10:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5189), (81, 5222), (82, 5228), (102, 5432), (106, 5459), (119, 5597), (120, 5636), (129, 5684), (142, 5732), (147, 5759), (162, 5837),

Gene: Pokerus\_29 Start: 24759, Stop: 26414, Start Num: 12

Candidate Starts for Pokerus\_29:

(Start: 12 @24759 has 141 MA's), (20, 24840), (24, 24864), (26, 24903), (27, 24921), (32, 24954), (34, 24978), (38, 25023), (41, 25065), (42, 25068), (43, 25071), (46, 25122), (47, 25149), (49, 25170), (53, 25203), (69, 25374), (75, 25422), (81, 25473), (83, 25503), (85, 25518), (98, 25656), (99, 25659), (100, 25689), (104, 25728), (110, 25788), (114, 25818), (120, 25896), (129, 25941), (136, 25974), (141, 25995), (147, 26049), (154, 26091), (164, 26136), (196, 26304), (203, 26388),

Gene: Popcicle\_10 Start: 4490, Stop: 6049, Start Num: 10

Candidate Starts for Popcicle\_10:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5189), (81, 5222), (82, 5228), (102, 5432), (106, 5459), (119, 5597), (120, 5636), (129, 5684), (142, 5732), (147, 5759), (162, 5837),

Gene: PotatoSplit\_12 Start: 4418, Stop: 5962, Start Num: 10

Candidate Starts for PotatoSplit\_12:

(Start: 10 @4418 has 122 MA's), (20, 4502), (29, 4625), (43, 4757), (45, 4796), (49, 4856), (53, 4889), (63, 5024), (75, 5099), (81, 5150), (100, 5321), (101, 5336), (112, 5429), (129, 5597), (142, 5645), (147, 5672), (162, 5750), (170, 5774),

Gene: Prithvi\_30 Start: 24775, Stop: 26430, Start Num: 12

Candidate Starts for Prithvi\_30:

(Start: 12 @24775 has 141 MA's), (20, 24856), (24, 24880), (26, 24919), (32, 24970), (34, 24994), (38, 25039), (41, 25081), (43, 25087), (46, 25138), (47, 25165), (49, 25186), (53, 25219), (66, 25381), (69, 25390), (75, 25438), (81, 25489), (85, 25534), (95, 25648), (98, 25672), (100, 25705), (104, 25744), (110, 25804), (114, 25834), (120, 25912), (129, 25957), (136, 25990), (138, 25999), (147, 26065), (149, 26074), (154, 26107), (164, 26152), (196, 26320), (203, 26404),

Gene: Puppy\_10 Start: 3796, Stop: 5361, Start Num: 10

Candidate Starts for Puppy\_10:

(Start: 10 @3796 has 122 MA's), (20, 3880), (35, 4048), (38, 4087), (41, 4129), (43, 4135), (45, 4174), (49, 4234), (81, 4525), (102, 4735), (106, 4762), (119, 4900), (129, 4987), (142, 5035), (147, 5062), (174, 5176), (177, 5194), (199, 5332),

Gene: Purgamenstris\_25 Start: 21893, Stop: 23392, Start Num: 12

Candidate Starts for Purgamenstris\_25:

(Start: 12 @21893 has 141 MA's), (20, 21977), (32, 22091), (43, 22208), (46, 22259), (48, 22298), (49, 22307), (53, 22340), (55, 22382), (69, 22511), (71, 22526), (72, 22541), (77, 22574), (80, 22598), (84, 22649), (85, 22658), (115, 22937), (120, 23024), (130, 23081), (132, 23087), (140, 23111), (148, 23144), (152, 23159), (175, 23249),

Gene: Purky\_26 Start: 23374, Stop: 24729, Start Num: 12

Candidate Starts for Purky\_26:

(Start: 12 @23374 has 141 MA's), (19, 23455), (34, 23596), (43, 23689), (46, 23740), (49, 23788), (53, 23821), (55, 23863), (70, 23995), (72, 24013), (86, 24097), (96, 24172), (97, 24175), (102, 24220), (105, 24241), (132, 24430), (148, 24487), (152, 24502), (175, 24592),

Gene: PurpleHaze\_11 Start: 4452, Stop: 6035, Start Num: 10

Candidate Starts for PurpleHaze\_11:

(Start: 10 @4452 has 122 MA's), (20, 4536), (21, 4539), (29, 4659), (43, 4791), (45, 4830), (46, 4842), (49, 4890), (63, 5052), (67, 5070), (75, 5127), (81, 5178), (100, 5382), (102, 5403), (109, 5469), (116, 5538), (118, 5550), (129, 5667), (142, 5715), (147, 5742), (162, 5820), (170, 5844),

Gene: QuincyRose\_29 Start: 24822, Stop: 26477, Start Num: 12

Candidate Starts for QuincyRose\_29:

(Start: 12 @24822 has 141 MA's), (20, 24903), (24, 24927), (26, 24966), (27, 24984), (32, 25017), (34, 25041), (38, 25086), (41, 25128), (42, 25131), (43, 25134), (46, 25185), (47, 25212), (49, 25233), (53, 25266), (69, 25437), (75, 25485), (81, 25536), (83, 25566), (85, 25581), (98, 25719), (100, 25752), (104, 25791), (110, 25851), (114, 25881), (120, 25959), (129, 26004), (136, 26037), (141, 26058), (147, 26112), (154, 26154), (164, 26199), (196, 26367), (203, 26451),

Gene: QuinnKiro\_9 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for QuinnKiro\_9:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: Ramen\_30 Start: 24808, Stop: 26463, Start Num: 12

Candidate Starts for Ramen\_30:

(Start: 12 @24808 has 141 MA's), (20, 24889), (24, 24913), (26, 24952), (27, 24970), (32, 25003), (34, 25027), (38, 25072), (41, 25114), (42, 25117), (43, 25120), (46, 25171), (47, 25198), (49, 25219), (53, 25252), (69, 25423), (75, 25471), (81, 25522), (83, 25552), (85, 25567), (98, 25705), (100, 25738), (104, 25777), (110, 25837), (114, 25867), (120, 25945), (129, 25990), (136, 26023), (141, 26044), (147, 26098), (154, 26140), (164, 26185), (196, 26353), (203, 26437),

Gene: Rando14\_30 Start: 24227, Stop: 25912, Start Num: 12

Candidate Starts for Rando14\_30:

(Start: 12 @24227 has 141 MA's), (13, 24239), (17, 24263), (22, 24329), (24, 24335), (26, 24374), (31, 24419), (34, 24449), (41, 24536), (42, 24539), (43, 24542), (46, 24593), (49, 24641), (53, 24680), (64, 24836), (66, 24842), (69, 24851), (70, 24863), (75, 24899), (78, 24914), (81, 24950), (85, 24995), (100, 25169), (104, 25208), (107, 25232), (110, 25268), (120, 25391), (129, 25436), (130, 25445), (136, 25469), (138, 25478), (154, 25586), (196, 25802), (203, 25886), (204, 25889), (205, 25901),

Gene: Rapunzel97\_30 Start: 24809, Stop: 26464, Start Num: 12

Candidate Starts for Rapunzel97\_30:

(Start: 12 @24809 has 141 MA's), (20, 24890), (24, 24914), (26, 24953), (27, 24971), (32, 25004), (34, 25028), (38, 25073), (41, 25115), (42, 25118), (43, 25121), (46, 25172), (47, 25199), (49, 25220), (53, 25253), (69, 25424), (75, 25472), (81, 25523), (83, 25553), (85, 25568), (98, 25706), (100, 25739), (104, 25778), (110, 25838), (114, 25868), (120, 25946), (129, 25991), (136, 26024), (141, 26045), (147, 26099), (154, 26141), (164, 26186), (196, 26354), (203, 26438),

Gene: Raymond7\_25 Start: 22217, Stop: 23719, Start Num: 12

Candidate Starts for Raymond7\_25:

(Start: 12 @22217 has 141 MA's), (19, 22298), (20, 22301), (29, 22400), (32, 22415), (42, 22529), (43, 22532), (46, 22583), (48, 22622), (49, 22631), (53, 22664), (55, 22706), (69, 22838), (71, 22853), (72, 22868), (77, 22901), (80, 22925), (84, 22976), (85, 22985), (115, 23264), (120, 23351), (130, 23408), (132, 23414), (140, 23438), (148, 23471), (152, 23486), (175, 23576),

Gene: Reba\_12 Start: 4124, Stop: 5707, Start Num: 10

Candidate Starts for Reba\_12:

(Start: 10 @4124 has 122 MA's), (20, 4208), (21, 4211), (29, 4331), (43, 4463), (45, 4502), (46, 4514), (49, 4562), (63, 4724), (67, 4742), (75, 4799), (81, 4850), (100, 5054), (102, 5075), (109, 5141), (116, 5210), (118, 5222), (129, 5339), (142, 5387), (147, 5414), (162, 5492), (170, 5516),

Gene: Rebel\_25 Start: 21682, Stop: 23181, Start Num: 12

Candidate Starts for Rebel\_25:

(Start: 12 @21682 has 141 MA's), (20, 21766), (32, 21880), (43, 21997), (46, 22048), (48, 22087), (49, 22096), (53, 22129), (55, 22171), (69, 22300), (71, 22315), (72, 22330), (77, 22363), (80, 22387), (84, 22438), (85, 22447), (115, 22726), (120, 22813), (130, 22870), (132, 22876), (140, 22900), (148, 22933), (152, 22948), (175, 23038),

Gene: Rebeuca\_10 Start: 4323, Stop: 5885, Start Num: 10

Candidate Starts for Rebeuca\_10:

(Start: 10 @4323 has 122 MA's), (18, 4398), (27, 4512), (29, 4530), (37, 4605), (43, 4662), (45, 4701), (48, 4752), (50, 4776), (64, 4935), (81, 5052), (102, 5283), (106, 5310), (115, 5400), (120, 5472), (123, 5487), (126, 5517), (131, 5541), (134, 5553), (142, 5580), (158, 5676), (166, 5700), (172, 5718), (184, 5796), (186, 5808),

Gene: Redi\_25 Start: 21893, Stop: 23392, Start Num: 12

Candidate Starts for Redi\_25:

(Start: 12 @21893 has 141 MA's), (20, 21977), (32, 22091), (43, 22208), (46, 22259), (48, 22298), (49, 22307), (53, 22340), (55, 22382), (69, 22511), (71, 22526), (72, 22541), (77, 22574), (80, 22598), (84, 22649), (85, 22658), (115, 22937), (120, 23024), (130, 23081), (132, 23087), (140, 23111), (148, 23144), (152, 23159), (175, 23249),

Gene: ResDef\_10 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for ResDef\_10:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: RhynO\_10 Start: 4286, Stop: 5848, Start Num: 10

Candidate Starts for RhynO\_10:

(Start: 10 @4286 has 122 MA's), (18, 4361), (27, 4475), (29, 4493), (37, 4568), (43, 4625), (45, 4664), (48, 4715), (50, 4739), (64, 4898), (81, 5015), (102, 5246), (106, 5273), (115, 5363), (120, 5435), (123, 5450), (126, 5480), (131, 5504), (134, 5516), (142, 5543), (158, 5639), (166, 5663), (172, 5681), (186, 5771),

Gene: Rockstar\_9 Start: 4048, Stop: 5613, Start Num: 10

Candidate Starts for Rockstar\_9:

(Start: 10 @4048 has 122 MA's), (20, 4132), (34, 4294), (35, 4300), (38, 4339), (41, 4381), (43, 4387), (45, 4426), (49, 4486), (81, 4777), (93, 4882), (102, 4987), (106, 5014), (119, 5152), (129, 5239), (142, 5287), (175, 5437), (177, 5446), (181, 5461), (185, 5497),

Gene: Rosmarinus\_30 Start: 24830, Stop: 26485, Start Num: 12

Candidate Starts for Rosmarinus\_30:

(Start: 12 @24830 has 141 MA's), (20, 24911), (24, 24935), (26, 24974), (27, 24992), (32, 25025), (34, 25049), (41, 25136), (42, 25139), (43, 25142), (46, 25193), (47, 25220), (49, 25241), (53, 25274), (69, 25445), (75, 25493), (81, 25544), (83, 25574), (85, 25589), (98, 25727), (100, 25760), (104, 25799), (110, 25859), (114, 25889), (120, 25967), (129, 26012), (136, 26045), (141, 26066), (147, 26120), (154, 26162), (164, 26207), (196, 26375), (203, 26459),

Gene: Rummer\_11 Start: 4502, Stop: 6046, Start Num: 10

Candidate Starts for Rummer\_11:

(Start: 10 @4502 has 122 MA's), (20, 4586), (29, 4709), (32, 4724), (41, 4835), (43, 4841), (45, 4880), (46, 4892), (49, 4940), (53, 4973), (63, 5108), (75, 5183), (81, 5234), (100, 5405), (101, 5420), (129, 5681), (142, 5729), (147, 5756), (162, 5834), (170, 5858),

Gene: Sabia\_11 Start: 4411, Stop: 5955, Start Num: 10

Candidate Starts for Sabia\_11:

(Start: 10 @4411 has 122 MA's), (20, 4495), (29, 4618), (43, 4750), (45, 4789), (49, 4849), (53, 4882), (63, 5017), (75, 5092), (81, 5143), (100, 5314), (101, 5329), (129, 5590), (142, 5638), (147, 5665), (162, 5743), (170, 5767), (172, 5773),

Gene: Sabinator\_11 Start: 4416, Stop: 5960, Start Num: 10

Candidate Starts for Sabinator\_11:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: SamuelLPlaqson\_30 Start: 24769, Stop: 26385, Start Num: 12

Candidate Starts for SamuelLPlaqson\_30:

(Start: 12 @24769 has 141 MA's), (17, 24802), (20, 24850), (24, 24874), (26, 24913), (27, 24931), (32, 24964), (34, 24988), (38, 25033), (41, 25075), (42, 25078), (43, 25081), (49, 25180), (53, 25213), (66, 25375), (69, 25384), (75, 25432), (81, 25483), (85, 25528), (98, 25666), (100, 25699), (104, 25738), (110, 25798), (114, 25828), (120, 25906), (129, 25951), (143, 26005), (154, 26089), (168, 26146), (196, 26275), (200, 26305), (203, 26359),

Gene: SaturnRing\_9 Start: 4177, Stop: 5742, Start Num: 10

Candidate Starts for SaturnRing\_9:

(Start: 10 @4177 has 122 MA's), (20, 4261), (35, 4429), (38, 4468), (41, 4510), (43, 4516), (45, 4555), (49, 4615), (81, 4906), (102, 5116), (106, 5143), (119, 5281), (129, 5368), (142, 5416), (147, 5443), (174, 5557), (177, 5575), (199, 5713),

Gene: Schnauzer\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Schnauzer\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Scitech\_25 Start: 22011, Stop: 23519, Start Num: 12

Candidate Starts for Scitech\_25:

(Start: 12 @22011 has 141 MA's), (20, 22095), (32, 22209), (43, 22326), (46, 22377), (48, 22416), (49, 22425), (53, 22458), (55, 22500), (69, 22635), (71, 22650), (77, 22698), (80, 22722), (85, 22782), (120, 23148), (132, 23214), (140, 23238), (148, 23271), (152, 23286), (175, 23376),

Gene: Scout\_9 Start: 3470, Stop: 5035, Start Num: 10

Candidate Starts for Scout\_9:

(Start: 10 @3470 has 122 MA's), (20, 3554), (35, 3722), (41, 3803), (43, 3809), (45, 3848), (49, 3908), (81, 4199), (102, 4409), (119, 4574), (129, 4661), (142, 4709), (150, 4757), (175, 4859), (177, 4868), (181, 4883), (185, 4919), (199, 5006),

Gene: Settecandela\_1 Start: 1, Stop: 1641, Start Num: 12

Candidate Starts for Settecandela\_1:

(Start: 12 @1 has 141 MA's), (16, 34), (19, 82), (20, 85), (30, 211), (41, 334), (42, 337), (43, 340), (44, 349), (46, 391), (49, 439), (53, 472), (58, 571), (69, 634), (71, 649), (77, 697), (80, 721), (85, 781),

(104, 952), (125, 1183), (128, 1213), (133, 1234), (135, 1246), (169, 1396), (173, 1408), (177, 1426), (179, 1441), (185, 1513), (188, 1534), (191, 1558), (192, 1579), (195, 1618),

Gene: Shaobing\_30 Start: 24177, Stop: 25853, Start Num: 12

Candidate Starts for Shaobing\_30:

(Start: 12 @24177 has 141 MA's), (17, 24210), (20, 24258), (24, 24282), (26, 24321), (27, 24339), (32, 24372), (34, 24396), (41, 24483), (42, 24486), (43, 24489), (46, 24540), (49, 24588), (51, 24606), (53, 24627), (58, 24726), (66, 24783), (69, 24792), (73, 24828), (75, 24840), (81, 24894), (85, 24939), (98, 25077), (100, 25110), (107, 25173), (110, 25209), (114, 25239), (120, 25317), (129, 25362), (130, 25371), (136, 25395), (137, 25398), (139, 25407), (145, 25455), (158, 25545), (196, 25740), (201, 25773), (203, 25824),

Gene: ShiaSurprise\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for ShiaSurprise\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (38, 25106), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: ShrimpFriedEgg\_25 Start: 21893, Stop: 23392, Start Num: 12

Candidate Starts for ShrimpFriedEgg\_25:

(Start: 12 @21893 has 141 MA's), (20, 21977), (32, 22091), (43, 22208), (46, 22259), (48, 22298), (49, 22307), (53, 22340), (55, 22382), (69, 22511), (71, 22526), (72, 22541), (77, 22574), (80, 22598), (84, 22649), (85, 22658), (115, 22937), (120, 23024), (130, 23081), (132, 23087), (140, 23111), (148, 23144), (152, 23159), (175, 23249),

Gene: Shweta\_25 Start: 22021, Stop: 23520, Start Num: 12

Candidate Starts for Shweta\_25:

(Start: 12 @22021 has 141 MA's), (20, 22105), (32, 22219), (43, 22336), (46, 22387), (48, 22426), (49, 22435), (53, 22468), (55, 22510), (69, 22639), (71, 22654), (72, 22669), (77, 22702), (80, 22726), (84, 22777), (85, 22786), (115, 23065), (120, 23152), (130, 23209), (132, 23215), (140, 23239), (148, 23272), (152, 23287), (175, 23377),

Gene: Silvafighter\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Silvafighter\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Silvy\_28 Start: 22835, Stop: 24343, Start Num: 12

Candidate Starts for Silvy\_28:

(Start: 12 @22835 has 141 MA's), (20, 22919), (29, 23018), (32, 23033), (42, 23147), (43, 23150), (46, 23201), (48, 23240), (49, 23249), (53, 23282), (55, 23324), (69, 23459), (71, 23474), (77, 23522), (80, 23546), (85, 23606), (120, 23972), (132, 24038), (140, 24062), (148, 24095), (152, 24110), (175, 24200),

Gene: SkinnyPete\_25 Start: 22021, Stop: 23382, Start Num: 12

Candidate Starts for SkinnyPete\_25:

(Start: 12 @22021 has 141 MA's), (19, 22102), (20, 22105), (27, 22186), (32, 22219), (43, 22336), (46, 22387), (48, 22426), (49, 22435), (53, 22468), (55, 22510), (63, 22609), (70, 22642), (72, 22660), (88, 22756), (89, 22759), (96, 22819), (97, 22822), (102, 22867), (117, 22963), (132, 23077), (148, 23134), (152, 23149), (175, 23239),

Gene: Slimphazie\_30 Start: 24809, Stop: 26464, Start Num: 12

Candidate Starts for Slimphazie\_30:

(Start: 12 @24809 has 141 MA's), (20, 24890), (24, 24914), (26, 24953), (27, 24971), (32, 25004), (34, 25028), (38, 25073), (41, 25115), (42, 25118), (43, 25121), (46, 25172), (47, 25199), (49, 25220), (53, 25253), (69, 25424), (75, 25472), (81, 25523), (83, 25553), (85, 25568), (98, 25706), (100, 25739), (104, 25778), (110, 25838), (114, 25868), (120, 25946), (129, 25991), (136, 26024), (141, 26045), (147, 26099), (154, 26141), (164, 26186), (196, 26354), (203, 26438),

Gene: Smurph\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Smurph\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Snekmaggedon\_25 Start: 21893, Stop: 23392, Start Num: 12

Candidate Starts for Snekmaggedon\_25:

(Start: 12 @21893 has 141 MA's), (20, 21977), (32, 22091), (43, 22208), (46, 22259), (48, 22298), (49, 22307), (53, 22340), (55, 22382), (69, 22511), (71, 22526), (72, 22541), (77, 22574), (80, 22598), (84, 22649), (85, 22658), (115, 22937), (120, 23024), (130, 23081), (132, 23087), (140, 23111), (148, 23144), (152, 23159), (175, 23249),

Gene: Snickers\_11 Start: 4392, Stop: 5936, Start Num: 10

Candidate Starts for Snickers\_11:

(Start: 10 @4392 has 122 MA's), (20, 4476), (29, 4599), (43, 4731), (45, 4770), (49, 4830), (53, 4863), (63, 4998), (75, 5073), (81, 5124), (100, 5295), (101, 5310), (129, 5571), (142, 5619), (147, 5646), (162, 5724), (170, 5748),

Gene: SoYo\_11 Start: 4329, Stop: 5873, Start Num: 10

Candidate Starts for SoYo\_11:

(Start: 10 @4329 has 122 MA's), (20, 4413), (29, 4536), (43, 4668), (45, 4707), (49, 4767), (53, 4800), (63, 4935), (73, 4998), (75, 5010), (81, 5061), (100, 5232), (101, 5247), (129, 5508), (142, 5556), (147, 5583), (162, 5661), (170, 5685),

Gene: SoilDragon\_11 Start: 4091, Stop: 5647, Start Num: 10

Candidate Starts for SoilDragon\_11:

(Start: 10 @4091 has 122 MA's), (20, 4175), (29, 4298), (43, 4430), (45, 4469), (46, 4481), (49, 4529), (75, 4784), (81, 4835), (100, 5006), (101, 5021), (112, 5114), (129, 5282), (142, 5330), (147, 5357), (162, 5435), (170, 5459),

Gene: Soshari\_13 Start: 4501, Stop: 6045, Start Num: 10

Candidate Starts for Soshari\_13:

(Start: 10 @4501 has 122 MA's), (20, 4585), (29, 4708), (43, 4840), (45, 4879), (49, 4939), (53, 4972), (63, 5107), (75, 5182), (81, 5233), (100, 5404), (101, 5419), (129, 5680), (142, 5728), (147, 5755), (162, 5833), (170, 5857),

Gene: Spike509\_11 Start: 4502, Stop: 6046, Start Num: 10

Candidate Starts for Spike509\_11:

(Start: 10 @4502 has 122 MA's), (20, 4586), (29, 4709), (32, 4724), (41, 4835), (43, 4841), (45, 4880), (46, 4892), (49, 4940), (63, 5108), (75, 5183), (81, 5234), (100, 5405), (101, 5420), (112, 5513), (129, 5681), (142, 5729), (147, 5756), (162, 5834), (170, 5858),

Gene: Spock\_30 Start: 24842, Stop: 26497, Start Num: 12



Candidate Starts for Spock\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: SpongeBob\_25 Start: 21893, Stop: 23392, Start Num: 12

Candidate Starts for SpongeBob\_25:

(Start: 12 @21893 has 141 MA's), (20, 21977), (32, 22091), (43, 22208), (46, 22259), (48, 22298), (49, 22307), (53, 22340), (55, 22382), (69, 22511), (71, 22526), (72, 22541), (77, 22574), (80, 22598), (84, 22649), (85, 22658), (115, 22937), (120, 23024), (130, 23081), (132, 23087), (140, 23111), (148, 23144), (152, 23159), (175, 23249),

Gene: Squirty\_26 Start: 22516, Stop: 23880, Start Num: 12

Candidate Starts for Squirty\_26:

(7, 22480), (Start: 12 @22516 has 141 MA's), (19, 22597), (20, 22600), (32, 22714), (34, 22738), (43, 22831), (46, 22882), (48, 22921), (49, 22930), (53, 22963), (55, 23005), (63, 23113), (70, 23146), (72, 23164), (88, 23260), (89, 23263), (96, 23323), (97, 23326), (102, 23371), (117, 23467), (132, 23581), (148, 23638), (152, 23653), (175, 23743),

Gene: Stagni\_11 Start: 4420, Stop: 5964, Start Num: 10

Candidate Starts for Stagni\_11:

(Start: 10 @4420 has 122 MA's), (20, 4504), (29, 4627), (43, 4759), (45, 4798), (49, 4858), (53, 4891), (63, 5026), (75, 5101), (81, 5152), (100, 5323), (101, 5338), (129, 5599), (142, 5647), (147, 5674), (162, 5752), (170, 5776), (172, 5782),

Gene: StepMih\_11 Start: 4411, Stop: 5955, Start Num: 10

Candidate Starts for StepMih\_11:

(Start: 10 @4411 has 122 MA's), (20, 4495), (29, 4618), (43, 4750), (45, 4789), (49, 4849), (53, 4882), (63, 5017), (75, 5092), (81, 5143), (100, 5314), (101, 5329), (129, 5590), (142, 5638), (147, 5665), (162, 5743), (170, 5767), (172, 5773),

Gene: Stinson\_31 Start: 25050, Stop: 26699, Start Num: 12

Candidate Starts for Stinson\_31:

(Start: 12 @25050 has 141 MA's), (20, 25131), (23, 25152), (24, 25155), (26, 25194), (32, 25245), (34, 25269), (38, 25314), (41, 25356), (43, 25362), (46, 25413), (47, 25440), (49, 25461), (53, 25494), (66, 25656), (69, 25665), (75, 25713), (81, 25764), (85, 25809), (98, 25947), (100, 25980), (104, 26019), (110, 26079), (114, 26109), (120, 26187), (129, 26232), (136, 26265), (138, 26274), (154, 26382), (196, 26589), (203, 26673),

Gene: Strobilo\_28 Start: 23083, Stop: 24774, Start Num: 9

Candidate Starts for Strobilo\_28:

(Start: 9 @23083 has 6 MA's), (17, 23119), (20, 23167), (34, 23308), (39, 23365), (41, 23395), (42, 23398), (46, 23452), (47, 23479), (49, 23500), (53, 23533), (61, 23641), (64, 23683), (69, 23698), (75, 23746), (81, 23797), (85, 23842), (100, 24001), (104, 24040), (113, 24112), (120, 24211), (129, 24259), (145, 24331), (158, 24418), (161, 24427), (177, 24481), (201, 24682),

Gene: Sulley\_30 Start: 24775, Stop: 26430, Start Num: 12

Candidate Starts for Sulley\_30:

(Start: 12 @24775 has 141 MA's), (20, 24856), (24, 24880), (26, 24919), (27, 24937), (34, 24994), (38, 25039), (41, 25081), (42, 25084), (43, 25087), (46, 25138), (47, 25165), (49, 25186), (53, 25219), (69, 25390), (73, 25426), (75, 25438), (81, 25489), (83, 25519), (85, 25534), (98, 25672), (100, 25705),

(104, 25744), (110, 25804), (114, 25834), (120, 25912), (129, 25957), (136, 25990), (141, 26011), (147, 26065), (154, 26107), (164, 26152), (196, 26320), (203, 26404),

Gene: TNguyen7\_9 Start: 4147, Stop: 5712, Start Num: 10

Candidate Starts for TNguyen7\_9:

(Start: 10 @4147 has 122 MA's), (20, 4231), (35, 4399), (41, 4480), (43, 4486), (45, 4525), (49, 4585), (81, 4876), (102, 5086), (106, 5113), (119, 5251), (129, 5338), (142, 5386), (147, 5413), (174, 5527), (177, 5545), (199, 5683),

Gene: Tachez\_30 Start: 24771, Stop: 26426, Start Num: 12

Candidate Starts for Tachez\_30:

(Start: 12 @24771 has 141 MA's), (20, 24852), (24, 24876), (26, 24915), (27, 24933), (32, 24966), (34, 24990), (38, 25035), (41, 25077), (42, 25080), (43, 25083), (46, 25134), (47, 25161), (49, 25182), (53, 25215), (69, 25386), (75, 25434), (81, 25485), (83, 25515), (85, 25530), (98, 25668), (100, 25701), (104, 25740), (110, 25800), (114, 25830), (120, 25908), (129, 25953), (136, 25986), (141, 26007), (147, 26061), (154, 26103), (164, 26148), (196, 26316), (203, 26400),

Gene: TaiwanKao\_31 Start: 24781, Stop: 26430, Start Num: 12

Candidate Starts for TaiwanKao\_31:

(Start: 12 @24781 has 141 MA's), (20, 24862), (24, 24886), (26, 24925), (32, 24976), (34, 25000), (38, 25045), (41, 25087), (43, 25093), (46, 25144), (47, 25171), (49, 25192), (53, 25225), (66, 25387), (69, 25396), (75, 25444), (81, 25495), (85, 25540), (95, 25654), (98, 25678), (100, 25711), (104, 25750), (110, 25810), (114, 25840), (120, 25918), (129, 25963), (136, 25996), (138, 26005), (154, 26113), (196, 26320), (203, 26404),

Gene: Tapioca\_28 Start: 22834, Stop: 24342, Start Num: 12

Candidate Starts for Tapioca\_28:

(Start: 12 @22834 has 141 MA's), (20, 22918), (29, 23017), (32, 23032), (42, 23146), (43, 23149), (48, 23239), (49, 23248), (53, 23281), (55, 23323), (69, 23458), (71, 23473), (77, 23521), (80, 23545), (85, 23605), (120, 23971), (132, 24037), (140, 24061), (148, 24094), (152, 24109), (175, 24199),

Gene: Taurus\_11 Start: 4416, Stop: 5960, Start Num: 10

Candidate Starts for Taurus\_11:

(Start: 10 @4416 has 122 MA's), (20, 4500), (29, 4623), (43, 4755), (45, 4794), (49, 4854), (53, 4887), (63, 5022), (75, 5097), (81, 5148), (100, 5319), (101, 5334), (129, 5595), (142, 5643), (147, 5670), (162, 5748), (170, 5772),

Gene: Texage\_9 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for Texage\_9:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: Tiffany\_11 Start: 4312, Stop: 5856, Start Num: 10

Candidate Starts for Tiffany\_11:

(Start: 10 @4312 has 122 MA's), (20, 4396), (29, 4519), (43, 4651), (45, 4690), (49, 4750), (53, 4783), (63, 4918), (75, 4993), (81, 5044), (100, 5215), (101, 5230), (129, 5491), (142, 5539), (147, 5566), (162, 5644), (170, 5668),

Gene: TiniBug\_30 Start: 24766, Stop: 26382, Start Num: 12

Candidate Starts for TiniBug\_30:

(Start: 12 @24766 has 141 MA's), (17, 24799), (20, 24847), (24, 24871), (26, 24910), (27, 24928), (32, 24961), (34, 24985), (38, 25030), (41, 25072), (42, 25075), (43, 25078), (49, 25177), (53, 25210), (66,

25372), (69, 25381), (75, 25429), (81, 25480), (85, 25525), (98, 25663), (100, 25696), (104, 25735), (110, 25795), (114, 25825), (120, 25903), (129, 25948), (143, 26002), (154, 26086), (168, 26143), (196, 26272), (200, 26302), (203, 26356),

Gene: Tiri\_30 Start: 24814, Stop: 26469, Start Num: 12

Candidate Starts for Tiri\_30:

(Start: 12 @24814 has 141 MA's), (20, 24895), (24, 24919), (26, 24958), (27, 24976), (32, 25009), (34, 25033), (38, 25078), (41, 25120), (43, 25126), (46, 25177), (47, 25204), (49, 25225), (53, 25258), (69, 25429), (75, 25477), (81, 25528), (83, 25558), (85, 25573), (98, 25711), (100, 25744), (104, 25783), (110, 25843), (114, 25873), (120, 25951), (129, 25996), (136, 26029), (141, 26050), (147, 26104), (154, 26146), (164, 26191), (196, 26359), (203, 26443),

Gene: Todacoro\_10 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for Todacoro\_10:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (46, 4880), (49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120, 5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: Topanga\_9 Start: 4258, Stop: 5820, Start Num: 10

Candidate Starts for Topanga\_9:

(Start: 10 @4258 has 122 MA's), (18, 4333), (27, 4447), (29, 4465), (37, 4540), (43, 4597), (45, 4636), (48, 4687), (50, 4711), (64, 4870), (81, 4987), (102, 5218), (106, 5245), (115, 5335), (120, 5407), (123, 5422), (126, 5452), (131, 5476), (134, 5488), (142, 5515), (158, 5611), (166, 5635), (172, 5653), (186, 5743),

Gene: Topper\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Topper\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34, 25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69, 25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811), (110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132), (154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Tortellini\_26 Start: 23717, Stop: 25081, Start Num: 12

Candidate Starts for Tortellini\_26:

(Start: 12 @23717 has 141 MA's), (19, 23798), (20, 23801), (27, 23882), (32, 23915), (43, 24032), (46, 24083), (48, 24122), (49, 24131), (53, 24164), (55, 24206), (57, 24230), (62, 24299), (63, 24314), (70, 24347), (72, 24365), (88, 24461), (96, 24524), (97, 24527), (102, 24572), (117, 24668), (130, 24776), (132, 24782), (148, 24839), (152, 24854), (175, 24944),

Gene: TreyKay\_30 Start: 24775, Stop: 26430, Start Num: 12

Candidate Starts for TreyKay\_30:

(Start: 12 @24775 has 141 MA's), (20, 24856), (24, 24880), (26, 24919), (32, 24970), (34, 24994), (38, 25039), (41, 25081), (43, 25087), (46, 25138), (47, 25165), (49, 25186), (53, 25219), (66, 25381), (69, 25390), (75, 25438), (81, 25489), (85, 25534), (95, 25648), (98, 25672), (100, 25705), (104, 25744), (110, 25804), (114, 25834), (120, 25912), (129, 25957), (136, 25990), (138, 25999), (147, 26065), (149, 26074), (154, 26107), (164, 26152), (196, 26320), (203, 26404),

Gene: TruffulaTree\_30 Start: 24805, Stop: 26460, Start Num: 12

Candidate Starts for TruffulaTree\_30:

(Start: 12 @24805 has 141 MA's), (20, 24886), (24, 24910), (26, 24949), (27, 24967), (32, 25000), (34, 25024), (38, 25069), (41, 25111), (42, 25114), (43, 25117), (46, 25168), (47, 25195), (49, 25216), (53, 25249), (69, 25420), (75, 25468), (81, 25519), (83, 25549), (85, 25564), (98, 25702), (100, 25735),

(104, 25774), (110, 25834), (114, 25864), (120, 25942), (129, 25987), (136, 26020), (141, 26041),  
(147, 26095), (154, 26137), (164, 26182), (196, 26350), (203, 26434),

Gene: Twister\_9 Start: 4157, Stop: 5719, Start Num: 10

Candidate Starts for Twister\_9:

(Start: 10 @4157 has 122 MA's), (18, 4232), (27, 4346), (29, 4364), (37, 4439), (43, 4496), (45, 4535),  
(48, 4586), (50, 4610), (64, 4769), (81, 4886), (102, 5117), (106, 5144), (115, 5234), (120, 5306), (123,  
5321), (126, 5351), (131, 5375), (134, 5387), (142, 5414), (158, 5510), (166, 5534), (172, 5552), (186,  
5642),

Gene: Twitch\_30 Start: 24842, Stop: 26497, Start Num: 12

Candidate Starts for Twitch\_30:

(Start: 12 @24842 has 141 MA's), (20, 24923), (24, 24947), (26, 24986), (27, 25004), (32, 25037), (34,  
25061), (41, 25148), (42, 25151), (43, 25154), (46, 25205), (47, 25232), (49, 25253), (53, 25286), (69,  
25457), (75, 25505), (81, 25556), (83, 25586), (85, 25601), (98, 25739), (100, 25772), (104, 25811),  
(110, 25871), (114, 25901), (120, 25979), (129, 26024), (136, 26057), (141, 26078), (147, 26132),  
(154, 26174), (164, 26219), (196, 26387), (203, 26471),

Gene: Urkel\_30 Start: 24769, Stop: 26385, Start Num: 12

Candidate Starts for Urkel\_30:

(Start: 12 @24769 has 141 MA's), (17, 24802), (20, 24850), (24, 24874), (26, 24913), (27, 24931), (32,  
24964), (34, 24988), (38, 25033), (41, 25075), (42, 25078), (43, 25081), (49, 25180), (53, 25213), (66,  
25375), (69, 25384), (75, 25432), (81, 25483), (85, 25528), (98, 25666), (100, 25699), (104, 25738),  
(110, 25798), (114, 25828), (120, 25906), (129, 25951), (143, 26005), (154, 26089), (168, 26146),  
(196, 26275), (200, 26305), (203, 26359),

Gene: Validus\_30 Start: 24115, Stop: 25788, Start Num: 12

Candidate Starts for Validus\_30:

(Start: 12 @24115 has 141 MA's), (17, 24148), (20, 24196), (26, 24259), (32, 24310), (34, 24334), (43,  
24427), (46, 24478), (49, 24526), (53, 24565), (58, 24664), (66, 24721), (69, 24730), (73, 24766), (75,  
24778), (81, 24832), (95, 24991), (100, 25048), (104, 25087), (107, 25111), (110, 25147), (114,  
25177), (120, 25255), (129, 25300), (130, 25309), (136, 25333), (145, 25393), (158, 25483), (196,  
25678), (202, 25714), (203, 25762),

Gene: Veliki\_30 Start: 24845, Stop: 26500, Start Num: 12

Candidate Starts for Veliki\_30:

(Start: 12 @24845 has 141 MA's), (20, 24926), (24, 24950), (26, 24989), (27, 25007), (32, 25040), (34,  
25064), (38, 25109), (41, 25151), (42, 25154), (43, 25157), (46, 25208), (47, 25235), (49, 25256), (53,  
25289), (69, 25460), (75, 25508), (81, 25559), (83, 25589), (85, 25604), (98, 25742), (100, 25775),  
(104, 25814), (110, 25874), (114, 25904), (120, 25982), (129, 26027), (136, 26060), (141, 26081),  
(147, 26135), (154, 26177), (164, 26222), (196, 26390), (203, 26474),

Gene: Veracruz\_9 Start: 4490, Stop: 6052, Start Num: 10

Candidate Starts for Veracruz\_9:

(Start: 10 @4490 has 122 MA's), (20, 4574), (38, 4781), (41, 4823), (43, 4829), (45, 4868), (46, 4880),  
(49, 4928), (53, 4961), (79, 5192), (81, 5225), (82, 5231), (102, 5435), (106, 5462), (119, 5600), (120,  
5639), (129, 5687), (142, 5735), (147, 5762), (162, 5840),

Gene: Vix\_11 Start: 4500, Stop: 6044, Start Num: 10

Candidate Starts for Vix\_11:

(Start: 10 @4500 has 122 MA's), (20, 4584), (29, 4707), (43, 4839), (45, 4878), (49, 4938), (63, 5106),  
(75, 5181), (81, 5232), (100, 5403), (101, 5418), (112, 5511), (129, 5679), (142, 5727), (147, 5754),  
(162, 5832), (170, 5856),

Gene: WalterMcMickey\_9 Start: 4157, Stop: 5719, Start Num: 10

Candidate Starts for WalterMcMickey\_9:

(Start: 10 @4157 has 122 MA's), (18, 4232), (27, 4346), (29, 4364), (37, 4439), (43, 4496), (45, 4535), (48, 4586), (50, 4610), (64, 4769), (81, 4886), (102, 5117), (106, 5144), (115, 5234), (120, 5306), (123, 5321), (126, 5351), (131, 5375), (134, 5387), (142, 5414), (158, 5510), (166, 5534), (172, 5552), (186, 5642),

Gene: Watson\_11 Start: 4410, Stop: 5954, Start Num: 10

Candidate Starts for Watson\_11:

(Start: 10 @4410 has 122 MA's), (20, 4494), (29, 4617), (43, 4749), (45, 4788), (49, 4848), (53, 4881), (63, 5016), (75, 5091), (81, 5142), (100, 5313), (101, 5328), (129, 5589), (142, 5637), (147, 5664), (162, 5742), (170, 5766),

Gene: Willsammy\_26 Start: 23390, Stop: 24745, Start Num: 12

Candidate Starts for Willsammy\_26:

(Start: 12 @23390 has 141 MA's), (19, 23471), (20, 23474), (27, 23555), (32, 23588), (43, 23705), (46, 23756), (48, 23795), (49, 23804), (53, 23837), (55, 23879), (63, 23978), (70, 24011), (72, 24029), (88, 24125), (89, 24128), (96, 24188), (97, 24191), (102, 24236), (117, 24332), (132, 24446), (148, 24503), (152, 24518), (175, 24608),

Gene: Wooldri\_13 Start: 4329, Stop: 5873, Start Num: 10

Candidate Starts for Wooldri\_13:

(Start: 10 @4329 has 122 MA's), (20, 4413), (29, 4536), (43, 4668), (45, 4707), (49, 4767), (53, 4800), (63, 4935), (75, 5010), (81, 5061), (100, 5232), (101, 5247), (129, 5508), (142, 5556), (147, 5583), (162, 5661), (170, 5685),

Gene: Xeno\_27 Start: 22600, Stop: 24108, Start Num: 12

Candidate Starts for Xeno\_27:

(7, 22564), (Start: 12 @22600 has 141 MA's), (19, 22681), (20, 22684), (32, 22798), (34, 22822), (43, 22915), (48, 23005), (49, 23014), (53, 23047), (55, 23089), (69, 23224), (71, 23239), (77, 23287), (80, 23311), (85, 23371), (120, 23737), (132, 23803), (140, 23827), (148, 23860), (152, 23875), (175, 23965),

Gene: Xerxes\_28 Start: 22831, Stop: 24339, Start Num: 12

Candidate Starts for Xerxes\_28:

(Start: 12 @22831 has 141 MA's), (20, 22915), (29, 23014), (32, 23029), (42, 23143), (43, 23146), (48, 23236), (49, 23245), (53, 23278), (55, 23320), (69, 23455), (71, 23470), (77, 23518), (80, 23542), (85, 23602), (120, 23968), (132, 24034), (140, 24058), (148, 24091), (152, 24106), (175, 24196),

Gene: YoureAdopted\_29 Start: 24778, Stop: 26433, Start Num: 12

Candidate Starts for YoureAdopted\_29:

(Start: 12 @24778 has 141 MA's), (20, 24859), (24, 24883), (26, 24922), (27, 24940), (32, 24973), (34, 24997), (38, 25042), (41, 25084), (42, 25087), (43, 25090), (46, 25141), (47, 25168), (49, 25189), (53, 25222), (69, 25393), (73, 25429), (75, 25441), (81, 25492), (83, 25522), (85, 25537), (98, 25675), (100, 25708), (104, 25747), (110, 25807), (114, 25837), (120, 25915), (129, 25960), (136, 25993), (141, 26014), (147, 26068), (154, 26110), (164, 26155), (196, 26323), (203, 26407),

Gene: Yuna\_31 Start: 24671, Stop: 26323, Start Num: 12

Candidate Starts for Yuna\_31:

(1, 24230), (4, 24416), (Start: 12 @24671 has 141 MA's), (17, 24707), (20, 24755), (24, 24779), (26, 24818), (32, 24869), (34, 24893), (42, 24983), (43, 24986), (45, 25025), (46, 25037), (48, 25076), (49, 25085), (53, 25127), (56, 25184), (69, 25298), (73, 25334), (75, 25346), (81, 25397), (85, 25442), (87,

25451), (100, 25613), (104, 25652), (108, 25682), (110, 25712), (114, 25742), (120, 25820), (129, 25865), (155, 26000), (156, 26018), (157, 26024), (163, 26039), (197, 26216), (203, 26297), (205, 26312),

Gene: Yunkel11\_30 Start: 24075, Stop: 25721, Start Num: 12

Candidate Starts for Yunkel11\_30:

(Start: 12 @24075 has 141 MA's), (17, 24108), (20, 24156), (24, 24180), (26, 24219), (27, 24237), (32, 24270), (34, 24294), (41, 24381), (42, 24384), (43, 24387), (46, 24438), (49, 24486), (53, 24516), (69, 24681), (81, 24780), (85, 24825), (98, 24963), (100, 24996), (104, 25035), (110, 25095), (114, 25125), (120, 25203), (129, 25248), (136, 25281), (138, 25290), (154, 25398), (196, 25611), (197, 25614), (203, 25695), (205, 25710),

Gene: Zabiza\_31 Start: 24809, Stop: 26464, Start Num: 12

Candidate Starts for Zabiza\_31:

(Start: 12 @24809 has 141 MA's), (20, 24890), (24, 24914), (26, 24953), (27, 24971), (32, 25004), (34, 25028), (38, 25073), (41, 25115), (42, 25118), (43, 25121), (46, 25172), (47, 25199), (49, 25220), (53, 25253), (69, 25424), (75, 25472), (81, 25523), (83, 25553), (85, 25568), (98, 25706), (100, 25739), (104, 25778), (110, 25838), (114, 25868), (120, 25946), (129, 25991), (136, 26024), (141, 26045), (147, 26099), (154, 26141), (164, 26186), (196, 26354), (203, 26438),

Gene: Zavala\_30 Start: 24784, Stop: 26439, Start Num: 12

Candidate Starts for Zavala\_30:

(Start: 12 @24784 has 141 MA's), (20, 24865), (24, 24889), (26, 24928), (27, 24946), (32, 24979), (34, 25003), (38, 25048), (41, 25090), (42, 25093), (43, 25096), (46, 25147), (47, 25174), (49, 25195), (53, 25228), (69, 25399), (75, 25447), (81, 25498), (83, 25528), (85, 25543), (98, 25681), (100, 25714), (104, 25753), (110, 25813), (114, 25843), (120, 25921), (129, 25966), (136, 25999), (141, 26020), (147, 26074), (154, 26116), (164, 26161), (196, 26329), (203, 26413),

Gene: Zetzy\_10 Start: 3977, Stop: 5527, Start Num: 10

Candidate Starts for Zetzy\_10:

(Start: 10 @3977 has 122 MA's), (20, 4061), (29, 4184), (43, 4316), (45, 4355), (46, 4367), (49, 4415), (63, 4589), (75, 4664), (81, 4715), (100, 4886), (101, 4901), (129, 5162), (142, 5210), (147, 5237), (162, 5315), (170, 5339),

Gene: ZoeJ\_28 Start: 23040, Stop: 24749, Start Num: 12

Candidate Starts for ZoeJ\_28:

(Start: 12 @23040 has 141 MA's), (17, 23076), (20, 23124), (24, 23148), (29, 23223), (32, 23238), (34, 23262), (38, 23307), (41, 23349), (42, 23352), (43, 23355), (44, 23364), (46, 23406), (48, 23445), (49, 23454), (53, 23484), (66, 23640), (69, 23649), (81, 23748), (85, 23793), (95, 23907), (98, 23931), (100, 23964), (104, 24003), (110, 24063), (114, 24093), (120, 24171), (129, 24216), (136, 24249), (147, 24321), (167, 24414), (175, 24444), (190, 24561), (200, 24654), (201, 24657),