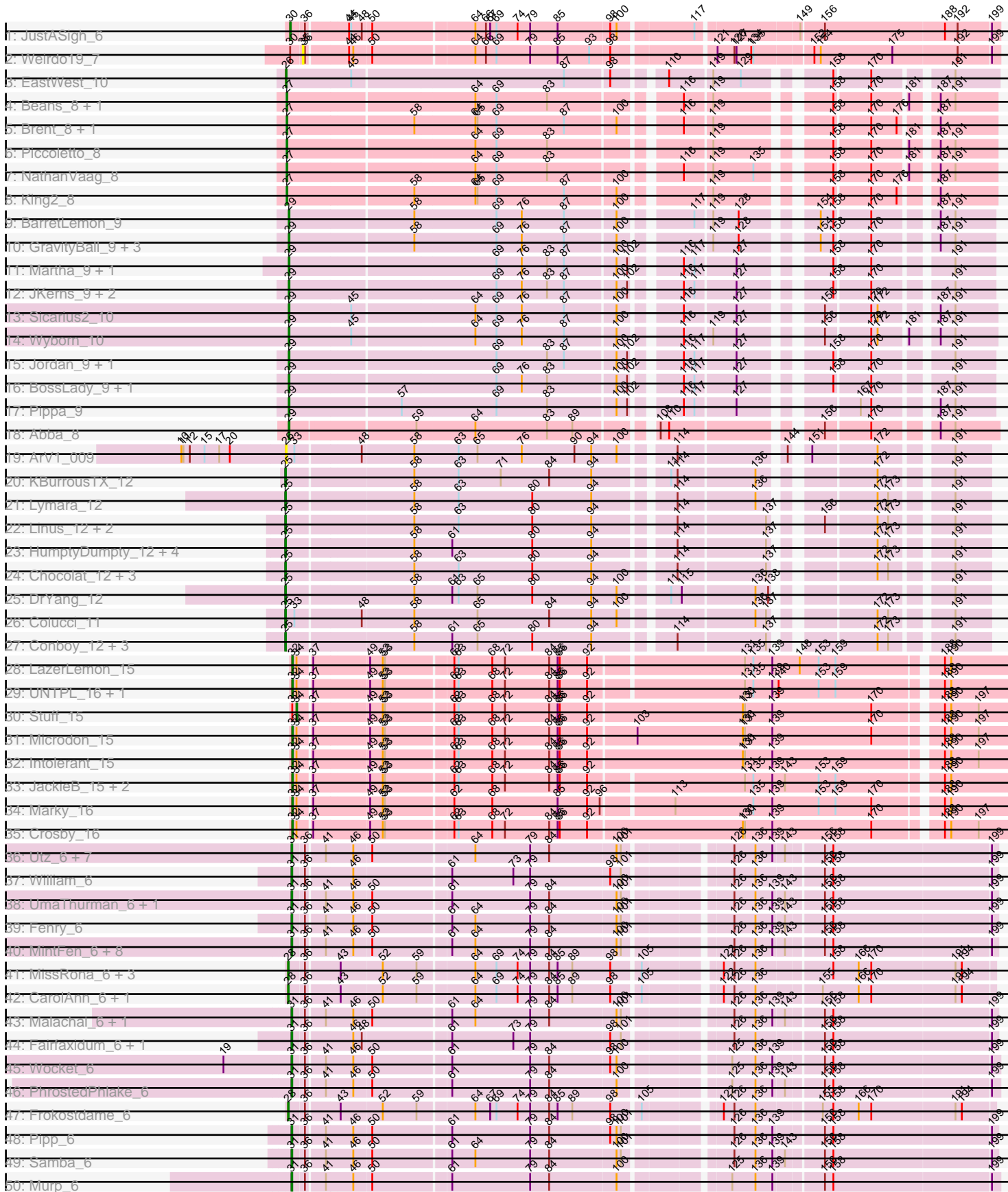
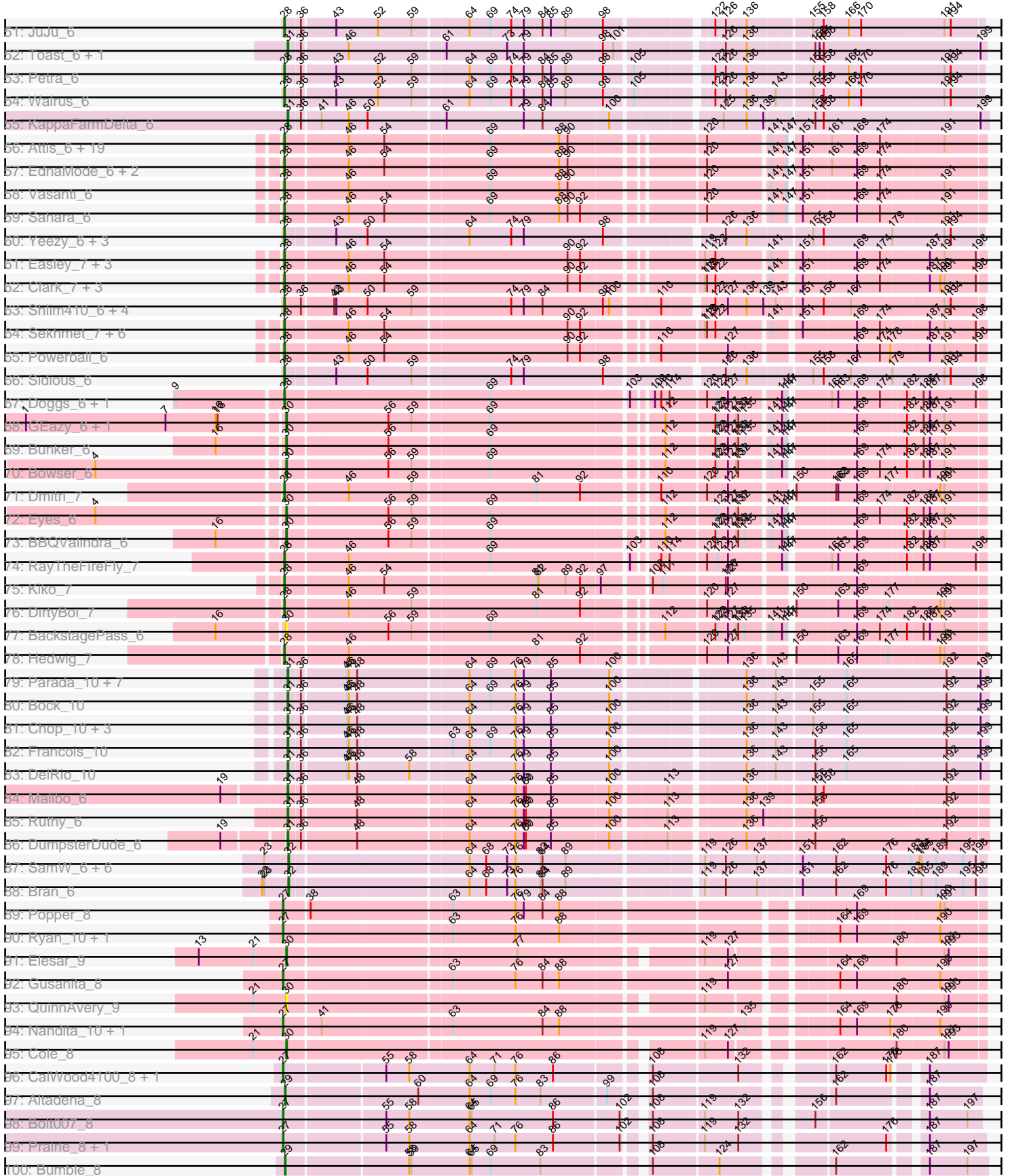


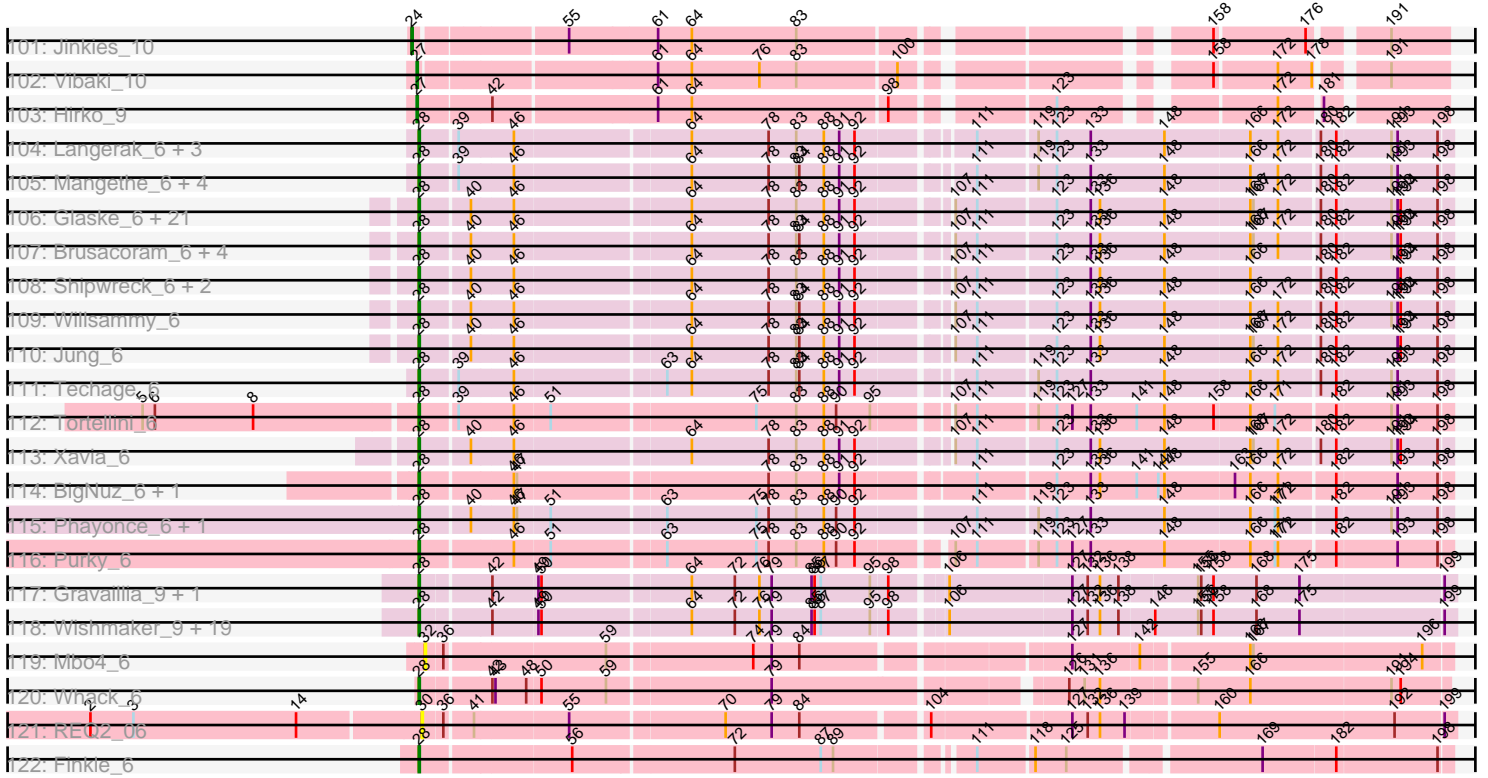
Pham 195366



Pham 195366



Pham 195366



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 195366 Report

This analysis was run 12/09/24 on database version 580.

Pham number 195366 has 288 members, 18 are drafts.

Phages represented in each track:

- Track 1 : JustASigh\_6
- Track 2 : Weirido19\_7
- Track 3 : EastWest\_10
- Track 4 : Beans\_8, Jawnski\_8
- Track 5 : Brent\_8, Franzy\_8
- Track 6 : Piccoletto\_8
- Track 7 : NathanVaag\_8
- Track 8 : King2\_8
- Track 9 : BarretLemon\_9
- Track 10 : GravityBall\_9, Timinator\_9, StevieBAY\_9, LeeroyJ\_9
- Track 11 : Martha\_9, TaeYoung\_9
- Track 12 : JKerns\_9, Sonny\_9, Shade\_9
- Track 13 : Sicarius2\_10
- Track 14 : Wyborn\_10
- Track 15 : Jordan\_9, Zartrosa\_9
- Track 16 : BossLady\_9, Grekaycon\_9
- Track 17 : Pippa\_9
- Track 18 : Abba\_8
- Track 19 : ArV1\_009
- Track 20 : KBurroustX\_12
- Track 21 : Lymara\_12
- Track 22 : Linus\_12, PrincessTrina\_12, JayCookie\_12
- Track 23 : HumptyDumpty\_12, Mordred\_12, JaNo\_12, Kabreeze\_12, Scavito\_12
- Track 24 : Chocolat\_12, RosiePosie\_12, Chubster\_12, MoyaNatalis\_12
- Track 25 : DrYang\_12
- Track 26 : Colucci\_11
- Track 27 : Conboy\_12, EdgarPoe\_12, Chipper1996\_120, Tophat\_12
- Track 28 : LazerLemon\_15
- Track 29 : UNTPL\_16, Bogota\_16
- Track 30 : Stuff\_15
- Track 31 : Microdon\_15
- Track 32 : Intolerant\_15
- Track 33 : JackieB\_15, Henoccus\_16, Araceli\_16
- Track 34 : Marky\_16
- Track 35 : Crosby\_16
- Track 36 : Utz\_6, Lysidious\_6, Mellie\_6, ZiggyZoo\_6, Jalammah\_6, Obliviate\_6, BlingBling\_6, Hitter\_6

- Track 37 : William\_6
- Track 38 : UmaThurman\_6, Archis\_6
- Track 39 : Fenry\_6
- Track 40 : MintFen\_6, Guacamole\_6, Zarbodnamra\_6, Melba\_6, JasperJr\_6, Barco\_6, Delian\_6, Wisp\_6, CaptainKirk2\_6
- Track 41 : MissRona\_6, Azula\_6, Blueberry\_6, Gambino\_6
- Track 42 : CarolAnn\_6, Blino\_6
- Track 43 : Malachai\_6, Begonia\_6
- Track 44 : Fairfaxidum\_6, PrincePatrick\_6
- Track 45 : Wocket\_6
- Track 46 : PhrostedPhlake\_6
- Track 47 : Frokostdame\_6
- Track 48 : Pipp\_6
- Track 49 : Samba\_6
- Track 50 : Murp\_6
- Track 51 : JuJu\_6
- Track 52 : Toast\_6, PCoral7\_6
- Track 53 : Petra\_6
- Track 54 : Walrus\_6
- Track 55 : KappaFarmDelta\_6
- Track 56 : Attis\_6, TuertoX\_6, Clap\_6, Cynthia\_6, Yeet412\_6, GemG\_6, Denise\_6, Whiteclaw\_6, LordFarquaad\_6, JCole\_6, Gizermo\_6, Sproutie\_6, Ebert\_6, Matteo\_6, Savage\_6, SoilAssassin\_6, Bjanes7\_6, Pickett\_6, Haley23\_6, Mocha12\_6
- Track 57 : EdnaMode\_6, Lamberg\_6, Nettuno\_6
- Track 58 : Vasanti\_6
- Track 59 : Sahara\_6
- Track 60 : Yeezy\_6, BaxterFox\_6, PantheRoc\_6, Ohgeesy\_6
- Track 61 : Easley\_7, Suerte\_6, MichaelScott\_7, Beenie\_7
- Track 62 : Clark\_7, Annalisa\_7, Dorito\_6, PhriskyACE\_6
- Track 63 : Shlim410\_6, Hortense\_6, Howe\_6, Twinkle\_6, Adora\_6
- Track 64 : Sekhmet\_7, Oregano\_7, DobbysSock\_6, Dolores\_7, Samman98\_7, WinkNick\_7, Thimann\_7
- Track 65 : Powerball\_6
- Track 66 : Sidious\_6
- Track 67 : Doggs\_6, Coriander\_7
- Track 68 : GEazy\_6, HannahD\_6
- Track 69 : Bunker\_6
- Track 70 : Bowser\_6
- Track 71 : Dmitri\_7
- Track 72 : Eyes\_6
- Track 73 : BBQValindra\_6
- Track 74 : RayTheFireFly\_7
- Track 75 : Kiko\_7
- Track 76 : DirtyBoi\_7
- Track 77 : BackstagePass\_6
- Track 78 : Hedwig\_7
- Track 79 : Parada\_10, Mulch\_10, Pimento\_10, WheatThin\_10, Nadeem\_10, BetterKatz\_10, Brylie\_10, NancyRae\_10
- Track 80 : Bock\_10
- Track 81 : Chop\_10, Ayotoya\_10, GrandSlam\_10, Hamood\_10
- Track 82 : Francois\_10
- Track 83 : DelRio\_10
- Track 84 : Malibo\_6

- Track 85 : Ruthy\_6
- Track 86 : DumpsterDude\_6
- Track 87 : SamW\_6, Troy\_6, Lederberg\_6, Adelaide\_6, Dina\_6, StAB\_6, Stiles\_6
- Track 88 : Bran\_6
- Track 89 : Popper\_8
- Track 90 : Ryan\_10, Zaheer\_10
- Track 91 : Elesar\_9
- Track 92 : Gusanita\_8
- Track 93 : QuinnAvery\_9
- Track 94 : Nandita\_10, Lenoxika\_10
- Track 95 : Cole\_8
- Track 96 : CalWood4100\_8, Lilmac1015\_8
- Track 97 : Altadena\_8
- Track 98 : Bolt007\_8
- Track 99 : Prairie\_8, Klevey\_8
- Track 100 : Bumble\_8
- Track 101 : Jinkies\_10
- Track 102 : Vibaki\_10
- Track 103 : Hirko\_9
- Track 104 : Langerak\_6, Donovan\_6, Sonah\_6, Juniormint\_6
- Track 105 : Mangethe\_6, Majeke\_6, Arib1\_6, Phegasus\_6, Jebeks\_6
- Track 106 : Glaske\_6, Camster\_6, Dynamo\_6, StevieRay\_6, Megiddo\_6, Polkaroo\_6, FirstPlacePfu\_6, KilKor\_6, HUHilltop\_6, Necropolis\_6, Fishburne\_6, Phineas\_6, StressBall\_6, GreaseLightnin\_6, Zilizebeth\_6, Venti\_6, CactusJack\_6, Malithi\_6, Phalm\_6, Bartholomew\_6, Kari\_6, Vidya\_6
- Track 107 : Brusacoram\_6, Bunnies\_6, Atcoo\_6, Thespis\_6, Ksquared\_6
- Track 108 : Shipwreck\_6, Pygmy\_6, Bogie\_6
- Track 109 : Willsammy\_6
- Track 110 : Jung\_6
- Track 111 : Techage\_6
- Track 112 : Tortellini\_6
- Track 113 : Xavia\_6
- Track 114 : BigNuz\_6, Nazo\_6
- Track 115 : Phayonce\_6, ThulaThula\_6
- Track 116 : Purky\_6
- Track 117 : Gravaiilia\_9, Gancho\_8
- Track 118 : Wishmaker\_9, Daegal\_10, Dewey\_9, Ubuntu\_9, Giles\_9, Amymech\_9, Luke\_9, Ein37\_9, Forge\_9, LilHazelnut\_9, Hail\_9, Luna22\_9, Kinbote\_9, HH92\_9, DeepSoil15\_9, OBUpride\_9, Hadrien\_9, Webster2\_9, Evanesce\_9, Amochick\_9
- Track 119 : Mbo4\_6
- Track 120 : Whack\_6
- Track 121 : REQ2\_06
- Track 122 : Finkle\_6

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

The start number called the most often in the published annotations is 28, it was called in 134 of the 270 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adora\_6, Amochick\_9, Amymech\_9, Annalisa\_7, Arib1\_6, Atcoo\_6, Attis\_6, Azula\_6, Bartholomew\_6, BaxterFox\_6, Beenie\_7, BigNuz\_6, Bjaner7\_6, Blino\_6, Blueberry\_6, Bogie\_6, Brusacoram\_6, Bunnies\_6, CactusJack\_6, Camster\_6, CarolAnn\_6, Clap\_6, Clark\_7, Coriander\_7, Cynthia\_6, Daegal\_10, DeepSoil15\_9, Denise\_6, Dewey\_9, DirtyBoi\_7, Dmitri\_7, DobbysSock\_6, Doggs\_6, Dolores\_7, Donovan\_6, Dorito\_6, Dynamo\_6, Easley\_7, Ebert\_6, EdnaMode\_6, Ein37\_9, Evanesce\_9, Finkle\_6, FirstPlacePfu\_6, Fishburne\_6, Forge\_9, Frokostdame\_6, Gambino\_6, Gancho\_8, GemG\_6, Giles\_9, Gizermo\_6, Glaske\_6, Gravaillia\_9, GreaseLightnin\_6, HH92\_9, HUHilltop\_6, Hadrien\_9, Hail\_9, Haley23\_6, Hedwig\_7, Hortense\_6, Howe\_6, JCole\_6, Jebeks\_6, JuJu\_6, Jung\_6, Juniormint\_6, Kari\_6, Kiko\_7, KilKor\_6, Kinbote\_9, Ksquared\_6, Lamberg\_6, Langerak\_6, LilHazelNut\_9, LordFarquaad\_6, Luke\_9, Luna22\_9, Majeke\_6, Malithi\_6, Mangethe\_6, Matteo\_6, Megiddo\_6, MichaelScott\_7, MissRona\_6, Mocha12\_6, Nazo\_6, Necropolis\_6, Nettuno\_6, OBUpride\_9, Ohgeesy\_6, Oregano\_7, PantheRoc\_6, Petra\_6, Phalm\_6, Phayonce\_6, Phegasus\_6, Phineas\_6, PhriskyACE\_6, Pickett\_6, Polkaroo\_6, Powerball\_6, Purky\_6, Pygmy\_6, RayTheFireFly\_7, Sahara\_6, Samman98\_7, Savage\_6, Sekhmet\_7, Shipwreck\_6, Shlim410\_6, Sidious\_6, SoilAssassin\_6, Sonah\_6, Sproutie\_6, StevieRay\_6, StressBall\_6, Suerte\_6, Techage\_6, Thespi\_6, Thimann\_7, ThulaThula\_6, Tortellini\_6, TuertoX\_6, Twinkle\_6, Ubuntu\_9, Vasanti\_6, Venti\_6, Vidya\_6, Walrus\_6, Webster2\_9, Whack\_6, Whiteclaw\_6, Willsammy\_6, WinkNick\_7, Wishmaker\_9, Xavia\_6, Yeet412\_6, Yeezy\_6, Zilizebeth\_6,

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

- 

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

- Abba\_8, Adelaide\_6, Altadena\_8, ArV1\_009, Araceli\_16, Archis\_6, Ayotoya\_10, BBQValindra\_6, BackstagePass\_6, Barco\_6, BarretLemon\_9, Beans\_8, Begonia\_6, BetterKatz\_10, BlingBling\_6, Bock\_10, Bogota\_16, Bolt007\_8, BossLady\_9, Bowser\_6, Bran\_6, Brent\_8, Brylie\_10, Bumble\_8, Bunker\_6, CalWood4100\_8, CaptainKirk2\_6, Chipper1996\_120, Chocolat\_12, Chop\_10, Chubster\_12, Cole\_8, Colucci\_11, Conboy\_12, Crosby\_16, DelRio\_10, Delian\_6, Dina\_6, DrYang\_12, DumpsterDude\_6, EastWest\_10, EdgarPoe\_12, Elesar\_9, Eyes\_6, Fairfaxidum\_6, Ferry\_6, Francois\_10, Franzy\_8, GEazy\_6, GrandSlam\_10, GravityBall\_9, Grekaycon\_9, Guacamole\_6, Gusanita\_8, Hamood\_10, HannahD\_6, Henoccus\_16, Hirko\_9, Hitter\_6, HumptyDumpty\_12, Intolerant\_15, JKerns\_9, JaNo\_12, JackieB\_15, Jalammah\_6, JasperJr\_6, Jawnski\_8, JayCookie\_12, Jinkies\_10, Jordan\_9, JustASigh\_6, KBurrousTX\_12, Kabreeze\_12, KappaFarmDelta\_6, King2\_8, Klevey\_8, LazerLemon\_15, Lederberg\_6, LeeroyJ\_9, Lenoxika\_10, Lilmac1015\_8, Linus\_12, Lymara\_12, Lysidious\_6, Malachai\_6, Malibo\_6, Marky\_16, Martha\_9, Mbo4\_6, Melba\_6, Mellie\_6, Microdon\_15, MintFen\_6, Mordred\_12, MoyaNatalis\_12, Mulch\_10, Murp\_6, Nadeem\_10, NancyRae\_10, Nandita\_10, NathanVaag\_8, Obliviate\_6, PCoral7\_6, Parada\_10, PhrostedPhlake\_6, Piccoletto\_8, Pimento\_10, Pipp\_6, Pippa\_9, Popper\_8, Prairie\_8, PrincePatrick\_6, PrincessTrina\_12, QuinnAvery\_9, REQ2\_06, RosiePosie\_12, Ruthy\_6, Ryan\_10, SamW\_6, Samba\_6, Scavito\_12, Shade\_9, Sicarius2\_10, Sonny\_9, StAB\_6, StevieBAY\_9, Stiles\_6, Stuff\_15, TaeYoung\_9, Timinator\_9, Toast\_6, Tophat\_12, Troy\_6, UNTPL\_16, UmaThurman\_6, Utz\_6, Vibaki\_10, Weirido19\_7, WheatThin\_10, William\_6, Wisp\_6, Wocket\_6, Wyborn\_10, Zaheer\_10, Zarbodnamra\_6, Zartrosa\_9, ZiggyZoo\_6,

**Summary by start number:**

Start 24:

- Found in 1 of 288 ( 0.3% ) 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: Jinkies\_10 (FL),

Start 25:

- Found in 20 of 288 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 19 of 270
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chipper1996\_120 (AR), Chocolat\_12 (AR), Chubster\_12 (AR), Colucci\_11 (AR), Conboy\_12 (AR), DrYang\_12 (AR), EdgarPoe\_12 (AR), HumptyDumpty\_12 (AR), JaNo\_12 (AR), JayCookie\_12 (AR), KBurrousTX\_12 (AR), Kabreeze\_12 (AR), Linus\_12 (AR), Lymara\_12 (AR), Mordred\_12 (AR), MoyaNatalis\_12 (AR), PrincessTrina\_12 (AR), RosiePosie\_12 (AR), Scavito\_12 (AR), Tophat\_12 (AR),

Start 26:

- Found in 2 of 288 ( 0.7% ) 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: ArV1\_009 (AR), EastWest\_10 (AO),

Start 27:

- Found in 20 of 288 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 18 of 270
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beans\_8 (AO1), Bolt007\_8 (FH), Brent\_8 (AO1), CalWood4100\_8 (FH), Franzy\_8 (AO1), Gusanita\_8 (FF), Hirko\_9 (FL), Jawnski\_8 (AO1), King2\_8 (AO1), Klevey\_8 (FH), Lenoxika\_10 (FF), Lilmac1015\_8 (FH), Nandita\_10 (FF), NathanVaag\_8 (AO1), Piccoletto\_8 (AO1), Popper\_8 (FF), Prairie\_8 (FH), Ryan\_10 (FF), Vibaki\_10 (FL), Zaheer\_10 (FF),

Start 28:

- Found in 141 of 288 ( 49.0% ) of genes in pham
- Manual Annotations of this start: 134 of 270
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adora\_6 (CZ4), Amochick\_9 (Q), Amymech\_9 (Q), Annalisa\_7 (CZ4), Arib1\_6 (P1), Atcoo\_6 (P1), Attis\_6 (CZ2), Azula\_6 (CV), Bartholomew\_6 (P1), BaxterFox\_6 (CZ3), Beenie\_7 (CZ4), BigNuz\_6 (P4), Bjaner7\_6 (CZ2), Blino\_6 (CV), Blueberry\_6 (CV), Bogie\_6 (P1), Brusacoram\_6 (P1), Bunnies\_6 (P1), CactusJack\_6 (P1), Camster\_6 (P1), CarolAnn\_6 (CV), Clap\_6 (CZ2), Clark\_7 (CZ4), Coriander\_7 (DB), Cynthia\_6 (CZ2), Daegal\_10 (Q), DeepSoil15\_9 (Q), Denise\_6 (CZ5), Dewey\_9 (Q), DirtyBoi\_7 (DB), Dmitri\_7 (DB), DobbysSock\_6 (CZ4), Doggs\_6 (DB), Dolores\_7 (CZ4), Donovan\_6 (P1), Dorito\_6 (CZ4), Dynamo\_6 (P1), Easley\_7 (CZ4), Ebert\_6 (CZ2), EdnaMode\_6 (CZ2), Ein37\_9 (Q), Evanesce\_9 (Q), Finkle\_6 (singleton), FirstPlacePfu\_6 (P1), Fishburne\_6 (P1), Forge\_9 (Q), Frokostdame\_6 (CV), Gambino\_6 (CV), Gancho\_8 (Q), GemG\_6 (CZ2), Giles\_9 (Q), Gizermo\_6 (CZ2), Glaske\_6 (P1), Gravallia\_9 (Q), GreaseLightnin\_6 (P1), HH92\_9 (Q), HUHilltop\_6 (P1), Hadrien\_9 (Q), Hail\_9 (Q), Haley23\_6 (CZ2), Hedwig\_7 (DB), Hortense\_6 (CZ4), Howe\_6 (CZ4), JCole\_6 (CZ2), Jebeks\_6 (P1), JuJu\_6 (CV), Jung\_6 (P1), Juniormint\_6 (P1), Kari\_6 (P1), Kiko\_7 (DB), KilKor\_6 (P1), Kinbote\_9 (Q), Ksqared\_6 (P1), Lamberg\_6 (CZ2), Langerak\_6



(P1), LilHazelNut\_9 (Q), LordFarquaad\_6 (CZ2), Luke\_9 (Q), Luna22\_9 (Q), Majeke\_6 (P1), Malithi\_6 (P1), Mangethe\_6 (P1), Matteo\_6 (CZ2), Megiddo\_6 (P1), MichaelScott\_7 (CZ4), MissRona\_6 (CV), Mocha12\_6 (CZ2), Nazo\_6 (P4), Necropolis\_6 (P1), Nettuno\_6 (CZ2), OBUpriDe\_9 (Q), Ohgeesy\_6 (CZ), Oregano\_7 (CZ4), PantheRoc\_6 (CZ3), Petra\_6 (CV), Phalm\_6 (P1), Phayonce\_6 (P5), Phegasus\_6 (P1), Phineas\_6 (P1), PhriskyACE\_6 (CZ4), Pickett\_6 (CZ2), Polkaroo\_6 (P1), Powerball\_6 (CZ4), Purky\_6 (P6), Pygmy\_6 (P1), RayTheFireFly\_7 (DB), Sahara\_6 (CZ2), Samman98\_7 (CZ4), Savage\_6 (CZ2), Sekhmet\_7 (CZ4), Shipwreck\_6 (P1), Shlim410\_6 (CZ4), Sidious\_6 (CZ7), SoilAssassin\_6 (CZ2), Sonah\_6 (P1), Sproutie\_6 (CZ2), StevieRay\_6 (P1), StressBall\_6 (P1), Suerte\_6 (CZ4), Techage\_6 (P1), Thespis\_6 (P1), Thimann\_7 (CZ4), ThulaThula\_6 (P5), Tortellini\_6 (P2), TuertoX\_6 (CZ2), Twinkle\_6 (CZ4), Ubuntu\_9 (Q), Vasanti\_6 (CZ2), Venti\_6 (P1), Vidya\_6 (P1), Walrus\_6 (CV), Webster2\_9 (Q), Whack\_6 (singleton), Whiteclaw\_6 (CZ2), Willsammy\_6 (P1), WinkNick\_7 (CZ4), Wishmaker\_9 (Q), Xavia\_6 (P3), Yeet412\_6 (CZ2), Yeezy\_6 (CZ3), Zilizebeth\_6 (P1),

#### Start 29:

- Found in 20 of 288 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 19 of 270
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abba\_8 (AO3), Altadena\_8 (FH), BarretLemon\_9 (AO2), BossLady\_9 (AO2), Bumble\_8 (FH), GravityBall\_9 (AO2), Grekaycon\_9 (AO2), JKerns\_9 (AO2), Jordan\_9 (AO2), LeeroyJ\_9 (AO2), Martha\_9 (AO2), Pippa\_9 (AO2), Shade\_9 (AO2), Sicarius2\_10 (AO2), Sonny\_9 (AO2), StevieBAY\_9 (AO2), TaeYoung\_9 (AO2), Timinator\_9 (AO2), Wyborn\_10 (AO2), Zartrosa\_9 (AO2),

#### Start 30:

- Found in 13 of 288 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 9 of 270
- Called 92.3% of time when present
- Phage (with cluster) where this start called: BBQValindra\_6 (DB), BackstagePass\_6 (DB), Bowser\_6 (DB), Bunker\_6 (DB), Cole\_8 (FF), Elesar\_9 (FF), Eyes\_6 (DB), GEazy\_6 (DB), HannahD\_6 (DB), JustASigh\_6 (AH), QuinnAvery\_9 (FF), REQ2\_06 (singleton),

#### Start 31:

- Found in 51 of 288 ( 17.7% ) of genes in pham
- Manual Annotations of this start: 50 of 270
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archis\_6 (CV), Ayotoya\_10 (DI), Barco\_6 (CV), Begonia\_6 (CV), BetterKatz\_10 (DI), BlingBling\_6 (CV), Bock\_10 (DI), Brylie\_10 (DI), CaptainKirk2\_6 (CV), Chop\_10 (DI), DelRio\_10 (DI), Delian\_6 (CV), DumpsterDude\_6 (DW), Fairfaxidum\_6 (CV), Fenry\_6 (CV), Francois\_10 (DI), GrandSlam\_10 (DI), Guacamole\_6 (CV), Hamood\_10 (DI), Hitter\_6 (CV), Jalammah\_6 (CV), JasperJr\_6 (CV), KappaFarmDelta\_6 (CV), Lysidious\_6 (CV), Malachai\_6 (CV), Malibo\_6 (DW), Melba\_6 (CV), Mellie\_6 (CV), MintFen\_6 (CV), Mulch\_10 (DI), Murp\_6 (CV), Nadeem\_10 (DI), NancyRae\_10 (DI), Obliviate\_6 (CV), PCora17\_6 (CV), Parada\_10 (DI), PhrostedPhlake\_6 (CV), Pimento\_10 (DI), Pipp\_6 (CV), PrincePatrick\_6 (CV), Ruthy\_6 (DW), Samba\_6 (CV), Toast\_6 (CV), UmaThurman\_6 (CV), Utz\_6 (CV), WheatThin\_10 (DI), William\_6 (CV), Wisp\_6 (CV), Wocket\_6 (CV), Zarbodnamra\_6 (CV), ZiggyZoo\_6 (CV),

Start 32:

- Found in 20 of 288 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 18 of 270
- Called 95.0% of time when present
- Phage (with cluster) where this start called: Adelaide\_6 (EP), Araceli\_16 (BH), Bogota\_16 (BH), Bran\_6 (EP), Crosby\_16 (BH), Dina\_6 (EP), Henoccus\_16 (BH), Intolerant\_15 (BH), JackieB\_15 (BH), LazerLemon\_15 (BH), Lederberg\_6 (EP), Marky\_16 (BH), Mbo4\_6 (singleton), Microdon\_15 (BH), SamW\_6 (EP), StAB\_6 (EP), Stiles\_6 (EP), Troy\_6 (EP), UNTPL\_16 (BH),

Start 34:

- Found in 11 of 288 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 1 of 270
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Stuff\_15 (BH),

Start 35:

- Found in 1 of 288 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Weirido19\_7 (AH),

**Summary by clusters:**

There are 29 clusters represented in this pham: singleton, DI, CZ2, CZ3, DB, CZ7, CZ4, CZ5, FF, FH, DW, FL, EP, AH, P2, P3, P1, P6, P4, P5, BH, AO, Q, CZ, AR, AO3, AO2, AO1, CV,

Info for manual annotations of cluster AH:

- Start number 30 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster AO:

- Start number 26 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:

- Start number 27 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 29 was manually annotated 16 times for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 29 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster AR:

- Start number 25 was manually annotated 19 times for cluster AR.

Info for manual annotations of cluster BH:

- Start number 32 was manually annotated 10 times for cluster BH.
- Start number 34 was manually annotated 1 time for cluster BH.

Info for manual annotations of cluster CV:

- Start number 28 was manually annotated 10 times for cluster CV.
- Start number 31 was manually annotated 32 times for cluster CV.

Info for manual annotations of cluster CZ:

- Start number 28 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ2:

- Start number 28 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 28 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 28 was manually annotated 19 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 28 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ7:

- Start number 28 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DB:

- Start number 28 was manually annotated 6 times for cluster DB.
- Start number 30 was manually annotated 6 times for cluster DB.

Info for manual annotations of cluster DI:

- Start number 31 was manually annotated 15 times for cluster DI.

Info for manual annotations of cluster DW:

- Start number 31 was manually annotated 3 times for cluster DW.

Info for manual annotations of cluster EP:

- Start number 32 was manually annotated 8 times for cluster EP.

Info for manual annotations of cluster FF:

- Start number 27 was manually annotated 5 times for cluster FF.
- Start number 30 was manually annotated 2 times for cluster FF.

Info for manual annotations of cluster FH:

- Start number 27 was manually annotated 4 times for cluster FH.
- Start number 29 was manually annotated 2 times for cluster FH.

Info for manual annotations of cluster FL:

- Start number 24 was manually annotated 1 time for cluster FL.
- Start number 27 was manually annotated 2 times for cluster FL.

Info for manual annotations of cluster P1:

- Start number 28 was manually annotated 39 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 28 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 28 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:

- Start number 28 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 28 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:

- Start number 28 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:

- Start number 28 was manually annotated 22 times for cluster Q.

### **Gene Information:**

Gene: Abba\_8 Start: 7403, Stop: 8290, Start Num: 29

Candidate Starts for Abba\_8:

(Start: 29 @7403 has 19 MA's), (59, 7568), (64, 7649), (83, 7751), (89, 7787), (108, 7880), (110, 7892), (156, 8072), (170, 8132), (187, 8207), (191, 8228),

Gene: Adelaide\_6 Start: 5118, Stop: 6050, Start Num: 32

Candidate Starts for Adelaide\_6:

(23, 5085), (Start: 32 @5118 has 18 MA's), (64, 5355), (68, 5379), (73, 5409), (76, 5421), (83, 5457), (84, 5460), (89, 5493), (119, 5664), (126, 5691), (137, 5736), (151, 5790), (162, 5838), (176, 5910), (183, 5946), (184, 5958), (185, 5961), (189, 5982), (195, 6021), (198, 6039),

Gene: Adora\_6 Start: 4904, Stop: 5836, Start Num: 28

Candidate Starts for Adora\_6:

(Start: 28 @4904 has 134 MA's), (36, 4928), (42, 4967), (43, 4970), (50, 5012), (59, 5075), (74, 5210), (79, 5228), (84, 5255), (98, 5339), (100, 5348), (110, 5411), (122, 5468), (127, 5486), (136, 5513), (139, 5537), (143, 5552), (151, 5582), (158, 5612), (167, 5651), (191, 5783), (194, 5792),

Gene: Altadena\_8 Start: 7167, Stop: 8045, Start Num: 29

Candidate Starts for Altadena\_8:

(Start: 29 @7167 has 19 MA's), (60, 7341), (64, 7413), (69, 7443), (76, 7479), (83, 7515), (99, 7605), (108, 7644), (162, 7860), (187, 7971),

Gene: Amochick\_9 Start: 6580, Stop: 7536, Start Num: 28

Candidate Starts for Amochick\_9:

(Start: 28 @6580 has 134 MA's), (42, 6640), (49, 6682), (50, 6685), (64, 6823), (72, 6865), (76, 6889), (79, 6901), (85, 6940), (86, 6943), (87, 6949), (95, 6997), (98, 7012), (106, 7057), (127, 7174), (132, 7189), (136, 7201), (138, 7219), (146, 7249), (155, 7291), (156, 7294), (158, 7306), (168, 7348), (175, 7390), (199, 7525),

Gene: Amymech\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Amymech\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Annalisa\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for Annalisa\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (120, 5900), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (190, 6206), (191, 6212), (198, 6257),

Gene: ArV1\_009 Start: 8041, Stop: 8937, Start Num: 26

Candidate Starts for ArV1\_009:

(10, 7894), (11, 7897), (12, 7906), (15, 7927), (17, 7948), (20, 7963), (Start: 26 @8041 has 1 MA's), (33, 8053), (48, 8140), (58, 8212), (63, 8275), (65, 8302), (76, 8365), (90, 8440), (94, 8464), (100, 8500), (114, 8563), (144, 8698), (151, 8713), (172, 8800), (191, 8887),

Gene: Araceli\_16 Start: 11657, Stop: 12625, Start Num: 32

Candidate Starts for Araceli\_16:

(Start: 32 @11657 has 18 MA's), (Start: 34 @11663 has 1 MA's), (37, 11681), (49, 11756), (52, 11774), (53, 11777), (62, 11867), (63, 11873), (68, 11921), (72, 11939), (84, 12002), (85, 12014), (86, 12017), (92, 12056), (131, 12266), (135, 12278), (139, 12305), (143, 12323), (153, 12371), (159, 12395), (188, 12530), (190, 12539),

Gene: Archis\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Archis\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (61, 5413), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: Arib1\_6 Start: 5299, Stop: 6243, Start Num: 28

Candidate Starts for Arib1\_6:

(Start: 28 @5299 has 134 MA's), (39, 5332), (46, 5383), (64, 5545), (78, 5620), (83, 5647), (84, 5650), (88, 5674), (91, 5689), (92, 5704), (111, 5800), (119, 5854), (123, 5872), (133, 5905), (148, 5977), (166, 6058), (172, 6085), (180, 6121), (182, 6136), (191, 6187), (193, 6193), (198, 6232),

Gene: Atcoo\_6 Start: 5282, Stop: 6226, Start Num: 28

Candidate Starts for Atcoo\_6:

(Start: 28 @5282 has 134 MA's), (40, 5327), (46, 5366), (64, 5528), (78, 5603), (83, 5630), (84, 5633), (88, 5657), (91, 5672), (92, 5687), (107, 5762), (111, 5783), (123, 5855), (133, 5888), (136, 5897), (148, 5960), (166, 6041), (167, 6044), (172, 6068), (180, 6104), (182, 6119), (191, 6170), (193, 6176), (194, 6179), (198, 6215),

Gene: Attis\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Attis\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Ayotoya\_10 Start: 7129, Stop: 8061, Start Num: 31

Candidate Starts for Ayotoya\_10:

(Start: 31 @7129 has 50 MA's), (36, 7144), (45, 7201), (46, 7204), (48, 7216), (64, 7366), (76, 7432), (79, 7444), (85, 7483), (100, 7564), (136, 7732), (143, 7771), (155, 7816), (165, 7864), (192, 8005), (199, 8050),

Gene: Azula\_6 Start: 5041, Stop: 5970, Start Num: 28

Candidate Starts for Azula\_6:

(Start: 28 @5041 has 134 MA's), (36, 5062), (43, 5104), (52, 5161), (59, 5209), (64, 5284), (69, 5314), (74, 5344), (79, 5362), (84, 5389), (85, 5401), (89, 5422), (98, 5473), (105, 5509), (122, 5602), (126, 5617), (136, 5647), (158, 5746), (166, 5782), (170, 5800), (191, 5917), (194, 5926),

Gene: BBQValindra\_6 Start: 5200, Stop: 6117, Start Num: 30

Candidate Starts for BBQValindra\_6:

(16, 5116), (Start: 30 @5200 has 9 MA's), (56, 5335), (59, 5368), (69, 5473), (112, 5698), (122, 5764), (123, 5767), (127, 5782), (131, 5794), (132, 5797), (135, 5806), (141, 5836), (145, 5851), (147, 5857), (169, 5944), (182, 6010), (186, 6031), (187, 6040), (191, 6061),

Gene: BackstagePass\_6 Start: 5177, Stop: 6094, Start Num: 30

Candidate Starts for BackstagePass\_6:

(16, 5093), (Start: 30 @5177 has 9 MA's), (56, 5312), (59, 5345), (69, 5450), (112, 5675), (122, 5741), (123, 5744), (127, 5759), (131, 5771), (132, 5774), (135, 5783), (141, 5813), (145, 5828), (147, 5834), (169, 5921), (174, 5954), (182, 5987), (186, 6008), (187, 6017), (191, 6038),

Gene: Barco\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Barco\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (61, 5413), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: BarretLemon\_9 Start: 7550, Stop: 8437, Start Num: 29

Candidate Starts for BarretLemon\_9:

(Start: 29 @7550 has 19 MA's), (58, 7718), (69, 7832), (76, 7868), (87, 7928), (100, 7997), (117, 8081), (119, 8102), (128, 8138), (154, 8219), (158, 8237), (170, 8285), (187, 8360), (191, 8381),

Gene: Bartholomew\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Bartholomew\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: BaxterFox\_6 Start: 4895, Stop: 5824, Start Num: 28

Candidate Starts for BaxterFox\_6:

(Start: 28 @4895 has 134 MA's), (43, 4958), (50, 5000), (64, 5138), (74, 5198), (79, 5216), (98, 5327), (126, 5471), (136, 5501), (155, 5585), (158, 5600), (179, 5699), (191, 5771), (194, 5780),

Gene: Beans\_8 Start: 7217, Stop: 8110, Start Num: 27

Candidate Starts for Beans\_8:

(Start: 27 @7217 has 18 MA's), (64, 7472), (69, 7502), (83, 7574), (116, 7736), (119, 7772), (158, 7907), (170, 7955), (181, 8000), (187, 8030), (191, 8051),

Gene: Beenie\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for Beenie\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (191, 6212), (198, 6257),

Gene: Begonia\_6 Start: 5212, Stop: 6141, Start Num: 31

Candidate Starts for Begonia\_6:

(Start: 31 @5212 has 50 MA's), (36, 5227), (41, 5251), (46, 5287), (50, 5311), (61, 5416), (64, 5449), (79, 5527), (84, 5554), (100, 5647), (101, 5653), (126, 5785), (136, 5815), (139, 5839), (143, 5854), (156, 5902), (158, 5914), (199, 6133),

Gene: BetterKatz\_10 Start: 7097, Stop: 8029, Start Num: 31

Candidate Starts for BetterKatz\_10:

(Start: 31 @7097 has 50 MA's), (36, 7112), (45, 7169), (46, 7172), (48, 7184), (64, 7334), (69, 7364), (76, 7400), (79, 7412), (85, 7451), (100, 7532), (136, 7700), (143, 7739), (165, 7832), (192, 7973), (199, 8018),

Gene: BigNuz\_6 Start: 5266, Stop: 6216, Start Num: 28

Candidate Starts for BigNuz\_6:

(Start: 28 @5266 has 134 MA's), (46, 5350), (47, 5353), (78, 5587), (83, 5614), (88, 5641), (91, 5656), (92, 5671), (111, 5773), (123, 5845), (133, 5878), (136, 5887), (141, 5923), (147, 5944), (148, 5950), (163, 6016), (166, 6031), (172, 6058), (182, 6109), (193, 6166), (198, 6205),

Gene: Bjaner7\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Bjaner7\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: BlingBling\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for BlingBling\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: Blino\_6 Start: 5044, Stop: 5973, Start Num: 28

Candidate Starts for Blino\_6:

(Start: 28 @5044 has 134 MA's), (36, 5065), (43, 5107), (52, 5164), (59, 5212), (64, 5287), (69, 5317), (74, 5347), (79, 5365), (84, 5392), (85, 5404), (89, 5425), (98, 5476), (105, 5512), (122, 5605), (126, 5620), (136, 5650), (155, 5734), (166, 5785), (170, 5803), (191, 5920), (194, 5929),

Gene: Blueberry\_6 Start: 5041, Stop: 5970, Start Num: 28

Candidate Starts for Blueberry\_6:

(Start: 28 @5041 has 134 MA's), (36, 5062), (43, 5104), (52, 5161), (59, 5209), (64, 5284), (69, 5314), (74, 5344), (79, 5362), (84, 5389), (85, 5401), (89, 5422), (98, 5473), (105, 5509), (122, 5602), (126, 5617), (136, 5647), (158, 5746), (166, 5782), (170, 5800), (191, 5917), (194, 5926),

Gene: Bock\_10 Start: 6847, Stop: 7779, Start Num: 31

Candidate Starts for Bock\_10:

(Start: 31 @6847 has 50 MA's), (36, 6862), (45, 6919), (46, 6922), (48, 6934), (64, 7084), (69, 7114), (76, 7150), (79, 7162), (85, 7201), (100, 7282), (136, 7450), (143, 7489), (155, 7534), (165, 7582), (192, 7723), (199, 7768),

Gene: Bogie\_6 Start: 5282, Stop: 6226, Start Num: 28

Candidate Starts for Bogie\_6:

(Start: 28 @5282 has 134 MA's), (40, 5327), (46, 5366), (64, 5528), (78, 5603), (83, 5630), (88, 5657), (91, 5672), (92, 5687), (107, 5762), (111, 5783), (123, 5855), (133, 5888), (136, 5897), (148, 5960), (166, 6041), (180, 6104), (182, 6119), (193, 6176), (194, 6179), (198, 6215),

Gene: Bogota\_16 Start: 11786, Stop: 12754, Start Num: 32

Candidate Starts for Bogota\_16:

(Start: 32 @11786 has 18 MA's), (Start: 34 @11792 has 1 MA's), (37, 11810), (49, 11885), (52, 11903), (53, 11906), (62, 11996), (63, 12002), (68, 12050), (72, 12068), (84, 12131), (85, 12143), (86, 12146), (92, 12185), (131, 12395), (135, 12407), (139, 12434), (140, 12443), (153, 12500), (159, 12524), (188, 12659), (190, 12668),

Gene: Bolt007\_8 Start: 7115, Stop: 7996, Start Num: 27

Candidate Starts for Bolt007\_8:

(Start: 27 @7115 has 18 MA's), (55, 7247), (58, 7280), (64, 7364), (65, 7367), (86, 7484), (102, 7574), (108, 7595), (119, 7664), (132, 7712), (156, 7787), (187, 7922), (197, 7976),

Gene: BossLady\_9 Start: 7568, Stop: 8455, Start Num: 29

Candidate Starts for BossLady\_9:

(Start: 29 @7568 has 19 MA's), (69, 7850), (76, 7886), (83, 7922), (100, 8015), (102, 8030), (116, 8084), (117, 8099), (127, 8153), (158, 8255), (170, 8303), (191, 8399),

Gene: Bowser\_6 Start: 5198, Stop: 6115, Start Num: 30

Candidate Starts for Bowser\_6:

(4, 4940), (Start: 30 @5198 has 9 MA's), (56, 5333), (59, 5366), (69, 5471), (112, 5696), (122, 5762), (123, 5765), (127, 5780), (131, 5792), (132, 5795), (141, 5834), (145, 5849), (147, 5855), (169, 5942), (174, 5975), (182, 6008), (186, 6029), (187, 6038), (191, 6059),

Gene: Bran\_6 Start: 5123, Stop: 6055, Start Num: 32

Candidate Starts for Bran\_6:

(22, 5087), (23, 5090), (Start: 32 @5123 has 18 MA's), (64, 5360), (68, 5384), (73, 5414), (76, 5426), (83, 5462), (84, 5465), (89, 5498), (119, 5669), (126, 5696), (137, 5741), (151, 5795), (162, 5843), (176, 5915), (183, 5951), (185, 5966), (189, 5987), (195, 6026), (198, 6044),

Gene: Brent\_8 Start: 7215, Stop: 8108, Start Num: 27

Candidate Starts for Brent\_8:

(Start: 27 @7215 has 18 MA's), (58, 7386), (64, 7470), (65, 7473), (69, 7500), (87, 7596), (100, 7665), (116, 7734), (119, 7770), (158, 7905), (170, 7953), (176, 7989), (187, 8028),

Gene: Brusacoram\_6 Start: 5281, Stop: 6225, Start Num: 28

Candidate Starts for Brusacoram\_6:

(Start: 28 @5281 has 134 MA's), (40, 5326), (46, 5365), (64, 5527), (78, 5602), (83, 5629), (84, 5632), (88, 5656), (91, 5671), (92, 5686), (107, 5761), (111, 5782), (123, 5854), (133, 5887), (136, 5896), (148, 5959), (166, 6040), (167, 6043), (172, 6067), (180, 6103), (182, 6118), (191, 6169), (193, 6175), (194, 6178), (198, 6214),

Gene: Brylie\_10 Start: 6844, Stop: 7776, Start Num: 31

Candidate Starts for Brylie\_10:

(Start: 31 @6844 has 50 MA's), (36, 6859), (45, 6916), (46, 6919), (48, 6931), (64, 7081), (69, 7111), (76, 7147), (79, 7159), (85, 7198), (100, 7279), (136, 7447), (143, 7486), (165, 7579), (192, 7720), (199, 7765),

Gene: Bumble\_8 Start: 7175, Stop: 8062, Start Num: 29

Candidate Starts for Bumble\_8:

(Start: 29 @7175 has 19 MA's), (58, 7337), (59, 7340), (64, 7421), (65, 7424), (69, 7451), (83, 7523), (108, 7652), (124, 7742), (162, 7868), (187, 7979), (197, 8033),

Gene: Bunker\_6 Start: 5200, Stop: 6117, Start Num: 30

Candidate Starts for Bunker\_6:

(16, 5116), (Start: 30 @5200 has 9 MA's), (56, 5335), (69, 5473), (112, 5698), (122, 5764), (123, 5767), (127, 5782), (131, 5794), (132, 5797), (135, 5806), (141, 5836), (145, 5851), (147, 5857), (169, 5944), (182, 6010), (186, 6031), (187, 6040), (191, 6061),

Gene: Bunnies\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Bunnies\_6:



(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (84, 5645), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: CactusJack\_6 Start: 5281, Stop: 6225, Start Num: 28

Candidate Starts for CactusJack\_6:

(Start: 28 @5281 has 134 MA's), (40, 5326), (46, 5365), (64, 5527), (78, 5602), (83, 5629), (88, 5656), (91, 5671), (92, 5686), (107, 5761), (111, 5782), (123, 5854), (133, 5887), (136, 5896), (148, 5959), (166, 6040), (167, 6043), (172, 6067), (180, 6103), (182, 6118), (191, 6169), (193, 6175), (194, 6178), (198, 6214),

Gene: CalWood4100\_8 Start: 7095, Stop: 7982, Start Num: 27

Candidate Starts for CalWood4100\_8:

(Start: 27 @7095 has 18 MA's), (55, 7227), (58, 7260), (64, 7344), (71, 7380), (76, 7410), (86, 7464), (108, 7575), (132, 7692), (162, 7791), (176, 7863), (178, 7869), (187, 7902),

Gene: Camster\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Camster\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: CaptainKirk2\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for CaptainKirk2\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (61, 5413), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: CarolAnn\_6 Start: 5043, Stop: 5972, Start Num: 28

Candidate Starts for CarolAnn\_6:

(Start: 28 @5043 has 134 MA's), (36, 5064), (43, 5106), (52, 5163), (59, 5211), (64, 5286), (69, 5316), (74, 5346), (79, 5364), (84, 5391), (85, 5403), (89, 5424), (98, 5475), (105, 5511), (122, 5604), (126, 5619), (136, 5649), (155, 5733), (166, 5784), (170, 5802), (191, 5919), (194, 5928),

Gene: Chipper1996\_120 Start: 9682, Stop: 10578, Start Num: 25

Candidate Starts for Chipper1996\_120:

(Start: 25 @9682 has 19 MA's), (58, 9853), (61, 9907), (65, 9943), (80, 10021), (94, 10105), (114, 10204), (137, 10324), (172, 10441), (173, 10456), (191, 10528),

Gene: Chocolat\_12 Start: 9683, Stop: 10579, Start Num: 25

Candidate Starts for Chocolat\_12:

(Start: 25 @9683 has 19 MA's), (58, 9854), (63, 9917), (80, 10022), (94, 10106), (114, 10205), (137, 10325), (172, 10442), (173, 10457), (191, 10529),

Gene: Chop\_10 Start: 6877, Stop: 7809, Start Num: 31

Candidate Starts for Chop\_10:

(Start: 31 @6877 has 50 MA's), (36, 6892), (45, 6949), (46, 6952), (48, 6964), (64, 7114), (76, 7180), (79, 7192), (85, 7231), (100, 7312), (136, 7480), (143, 7519), (155, 7564), (165, 7612), (192, 7753), (199, 7798),

Gene: Chubster\_12 Start: 9453, Stop: 10349, Start Num: 25

Candidate Starts for Chubster\_12:

(Start: 25 @9453 has 19 MA's), (58, 9624), (63, 9687), (80, 9792), (94, 9876), (114, 9975), (137, 10095), (172, 10212), (173, 10227), (191, 10299),

Gene: Clap\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Clap\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Clark\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for Clark\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (120, 5900), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (190, 6206), (191, 6212), (198, 6257),

Gene: Cole\_8 Start: 6211, Stop: 7122, Start Num: 30

Candidate Starts for Cole\_8:

(21, 6163), (Start: 30 @6211 has 9 MA's), (119, 6763), (127, 6796), (180, 7000), (191, 7066), (193, 7072),

Gene: Colucci\_11 Start: 9183, Stop: 10079, Start Num: 25

Candidate Starts for Colucci\_11:

(Start: 25 @9183 has 19 MA's), (33, 9195), (48, 9282), (58, 9354), (65, 9444), (84, 9546), (94, 9606), (100, 9642), (136, 9810), (137, 9825), (172, 9942), (173, 9957), (191, 10029),

Gene: Conboy\_12 Start: 9681, Stop: 10577, Start Num: 25

Candidate Starts for Conboy\_12:

(Start: 25 @9681 has 19 MA's), (58, 9852), (61, 9906), (65, 9942), (80, 10020), (94, 10104), (114, 10203), (137, 10323), (172, 10440), (173, 10455), (191, 10527),

Gene: Coriander\_7 Start: 5582, Stop: 6502, Start Num: 28

Candidate Starts for Coriander\_7:

(9, 5435), (Start: 28 @5582 has 134 MA's), (69, 5858), (103, 6047), (109, 6068), (110, 6077), (114, 6089), (120, 6137), (123, 6152), (127, 6167), (145, 6236), (147, 6242), (161, 6293), (163, 6302), (169, 6329), (174, 6362), (182, 6395), (186, 6416), (187, 6425), (198, 6491),

Gene: Crosby\_16 Start: 11773, Stop: 12753, Start Num: 32

Candidate Starts for Crosby\_16:

(Start: 32 @11773 has 18 MA's), (Start: 34 @11779 has 1 MA's), (37, 11797), (49, 11872), (52, 11890), (53, 11893), (62, 11983), (63, 11989), (68, 12037), (72, 12055), (84, 12118), (85, 12130), (86, 12133), (92, 12172), (130, 12388), (131, 12391), (139, 12430), (170, 12571), (188, 12655), (190, 12664), (197, 12703),

Gene: Cynthia\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Cynthia\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Daegal\_10 Start: 6877, Stop: 7833, Start Num: 28

Candidate Starts for Daegal\_10:

(Start: 28 @6877 has 134 MA's), (42, 6937), (49, 6979), (50, 6982), (64, 7120), (72, 7162), (76, 7186), (79, 7198), (85, 7237), (86, 7240), (87, 7246), (95, 7294), (98, 7309), (106, 7354), (127, 7471), (132, 7486), (136, 7498), (138, 7516), (146, 7546), (155, 7588), (156, 7591), (158, 7603), (168, 7645), (175,

7687), (199, 7822),

Gene: DeepSoil15\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for DeepSoil15\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: DelRio\_10 Start: 7141, Stop: 8073, Start Num: 31

Candidate Starts for DelRio\_10:

(Start: 31 @7141 has 50 MA's), (36, 7156), (45, 7213), (46, 7216), (48, 7228), (58, 7300), (64, 7378), (76, 7444), (79, 7456), (85, 7495), (100, 7576), (136, 7744), (143, 7783), (156, 7831), (165, 7876), (192, 8017), (199, 8062),

Gene: Delian\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Delian\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (61, 5413), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: Denise\_6 Start: 4863, Stop: 5786, Start Num: 28

Candidate Starts for Denise\_6:

(Start: 28 @4863 has 134 MA's), (46, 4947), (54, 4995), (69, 5139), (88, 5238), (90, 5250), (120, 5418), (141, 5502), (147, 5523), (151, 5535), (161, 5574), (169, 5610), (174, 5643), (191, 5730),

Gene: Dewey\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Dewey\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Dina\_6 Start: 5118, Stop: 6050, Start Num: 32

Candidate Starts for Dina\_6:

(23, 5085), (Start: 32 @5118 has 18 MA's), (64, 5355), (68, 5379), (73, 5409), (76, 5421), (83, 5457), (84, 5460), (89, 5493), (119, 5664), (126, 5691), (137, 5736), (151, 5790), (162, 5838), (176, 5910), (183, 5946), (184, 5958), (185, 5961), (189, 5982), (195, 6021), (198, 6039),

Gene: DirtyBoi\_7 Start: 5561, Stop: 6481, Start Num: 28

Candidate Starts for DirtyBoi\_7:

(Start: 28 @5561 has 134 MA's), (46, 5645), (59, 5732), (81, 5903), (92, 5966), (120, 6116), (127, 6146), (150, 6224), (163, 6281), (169, 6308), (177, 6350), (190, 6419), (191, 6425),

Gene: Dmitri\_7 Start: 5561, Stop: 6481, Start Num: 28

Candidate Starts for Dmitri\_7:

(Start: 28 @5561 has 134 MA's), (46, 5645), (59, 5732), (81, 5903), (92, 5966), (110, 6056), (120, 6116), (127, 6146), (150, 6224), (162, 6278), (163, 6281), (169, 6308), (177, 6350), (190, 6419), (191, 6425),

Gene: DobbysSock\_6 Start: 4843, Stop: 5766, Start Num: 28

Candidate Starts for DobbysSock\_6:

(Start: 28 @4843 has 134 MA's), (46, 4927), (54, 4975), (90, 5230), (92, 5248), (119, 5395), (120, 5398), (122, 5410), (141, 5482), (151, 5515), (169, 5590), (174, 5623), (187, 5689), (191, 5710), (198, 5755),

Gene: Doggs\_6 Start: 5279, Stop: 6199, Start Num: 28

Candidate Starts for Doggs\_6:

(9, 5132), (Start: 28 @5279 has 134 MA's), (69, 5555), (103, 5744), (109, 5765), (110, 5774), (114, 5786), (120, 5834), (123, 5849), (127, 5864), (145, 5933), (147, 5939), (161, 5990), (163, 5999), (169, 6026), (174, 6059), (182, 6092), (186, 6113), (187, 6122), (198, 6188),

Gene: Dolores\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for Dolores\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (120, 5900), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (191, 6212), (198, 6257),

Gene: Donovan\_6 Start: 5299, Stop: 6243, Start Num: 28

Candidate Starts for Donovan\_6:

(Start: 28 @5299 has 134 MA's), (39, 5332), (46, 5383), (64, 5545), (78, 5620), (83, 5647), (88, 5674), (91, 5689), (92, 5704), (111, 5800), (119, 5854), (123, 5872), (133, 5905), (148, 5977), (166, 6058), (172, 6085), (180, 6121), (182, 6136), (191, 6187), (193, 6193), (198, 6232),

Gene: Dorito\_6 Start: 4843, Stop: 5766, Start Num: 28

Candidate Starts for Dorito\_6:

(Start: 28 @4843 has 134 MA's), (46, 4927), (54, 4975), (90, 5230), (92, 5248), (119, 5395), (120, 5398), (122, 5410), (141, 5482), (151, 5515), (169, 5590), (174, 5623), (187, 5689), (190, 5704), (191, 5710), (198, 5755),

Gene: DrYang\_12 Start: 9617, Stop: 10513, Start Num: 25

Candidate Starts for DrYang\_12:

(Start: 25 @9617 has 19 MA's), (58, 9788), (61, 9842), (63, 9851), (65, 9878), (80, 9956), (94, 10040), (100, 10076), (111, 10130), (115, 10145), (136, 10244), (138, 10262), (191, 10463),

Gene: DumpsterDude\_6 Start: 5417, Stop: 6349, Start Num: 31

Candidate Starts for DumpsterDude\_6:

(19, 5339), (Start: 31 @5417 has 50 MA's), (36, 5432), (48, 5504), (64, 5654), (76, 5720), (79, 5732), (80, 5735), (85, 5771), (100, 5852), (113, 5924), (136, 6020), (156, 6107), (192, 6293),

Gene: Dynamo\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Dynamo\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Easley\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for Easley\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (191, 6212), (198, 6257),

Gene: EastWest\_10 Start: 7632, Stop: 8534, Start Num: 26

Candidate Starts for EastWest\_10:

(Start: 26 @7632 has 1 MA's), (45, 7722), (87, 8016), (98, 8076), (110, 8136), (119, 8193), (129, 8232), (158, 8328), (170, 8376), (191, 8472),

Gene: Ebert\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Ebert\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: EdgarPoe\_12 Start: 9681, Stop: 10577, Start Num: 25

Candidate Starts for EdgarPoe\_12:

(Start: 25 @9681 has 19 MA's), (58, 9852), (61, 9906), (65, 9942), (80, 10020), (94, 10104), (114, 10203), (137, 10323), (172, 10440), (173, 10455), (191, 10527),

Gene: EdnaMode\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for EdnaMode\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634),

Gene: Ein37\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Ein37\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Elesar\_9 Start: 6600, Stop: 7511, Start Num: 30

Candidate Starts for Elesar\_9:

(13, 6474), (21, 6552), (Start: 30 @6600 has 9 MA's), (77, 6918), (119, 7152), (127, 7185), (180, 7389), (191, 7455), (193, 7461),

Gene: Evanesce\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Evanesce\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Eyes\_6 Start: 5207, Stop: 6124, Start Num: 30

Candidate Starts for Eyes\_6:

(4, 4949), (Start: 30 @5207 has 9 MA's), (56, 5342), (59, 5375), (69, 5480), (112, 5705), (123, 5774), (127, 5789), (131, 5801), (132, 5804), (141, 5843), (145, 5858), (147, 5864), (169, 5951), (174, 5984), (182, 6017), (186, 6038), (187, 6047), (191, 6068),

Gene: Fairfaxidum\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Fairfaxidum\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (46, 5284), (48, 5296), (61, 5413), (73, 5500), (79, 5524), (98, 5635), (101, 5650), (126, 5782), (136, 5812), (156, 5899), (158, 5911), (199, 6130),

Gene: Fenry\_6 Start: 5212, Stop: 6141, Start Num: 31

Candidate Starts for Fenry\_6:

(Start: 31 @5212 has 50 MA's), (36, 5227), (41, 5251), (46, 5287), (50, 5311), (61, 5416), (64, 5449), (79, 5527), (84, 5554), (100, 5647), (101, 5653), (126, 5785), (136, 5815), (139, 5839), (143, 5854), (156, 5902), (158, 5914), (199, 6133),

Gene: Finkle\_6 Start: 4987, Stop: 5913, Start Num: 28

Candidate Starts for Finkle\_6:

(Start: 28 @4987 has 134 MA's), (56, 5125), (72, 5275), (87, 5359), (89, 5371), (111, 5485), (118, 5536), (125, 5566), (169, 5737), (182, 5806), (198, 5902),

Gene: FirstPlacePfu\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for FirstPlacePfu\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Fishburne\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Fishburne\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Forge\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Forge\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Francois\_10 Start: 6846, Stop: 7778, Start Num: 31

Candidate Starts for Francois\_10:

(Start: 31 @6846 has 50 MA's), (36, 6861), (45, 6918), (46, 6921), (48, 6933), (63, 7059), (64, 7083), (69, 7113), (76, 7149), (79, 7161), (85, 7200), (100, 7281), (136, 7449), (143, 7488), (156, 7536), (165, 7581), (192, 7722), (199, 7767),

Gene: Franzy\_8 Start: 7215, Stop: 8108, Start Num: 27

Candidate Starts for Franzy\_8:

(Start: 27 @7215 has 18 MA's), (58, 7386), (64, 7470), (65, 7473), (69, 7500), (87, 7596), (100, 7665), (116, 7734), (119, 7770), (158, 7905), (170, 7953), (176, 7989), (187, 8028),

Gene: Frokostdame\_6 Start: 5112, Stop: 6041, Start Num: 28

Candidate Starts for Frokostdame\_6:

(Start: 28 @5112 has 134 MA's), (36, 5133), (43, 5175), (52, 5232), (59, 5280), (64, 5355), (67, 5376), (69, 5385), (74, 5415), (79, 5433), (84, 5460), (85, 5472), (89, 5493), (98, 5544), (105, 5580), (122, 5673), (126, 5688), (136, 5718), (155, 5802), (158, 5817), (166, 5853), (170, 5871), (191, 5988), (194, 5997),

Gene: GEazy\_6 Start: 5209, Stop: 6126, Start Num: 30

Candidate Starts for GEazy\_6:

(1, 4852), (7, 5053), (16, 5125), (18, 5128), (Start: 30 @5209 has 9 MA's), (56, 5344), (59, 5377), (69, 5482), (112, 5707), (122, 5773), (123, 5776), (127, 5791), (131, 5803), (132, 5806), (135, 5815), (141, 5845), (145, 5860), (147, 5866), (169, 5953), (182, 6019), (186, 6040), (187, 6049), (191, 6070),

Gene: Gambino\_6 Start: 5041, Stop: 5970, Start Num: 28

Candidate Starts for Gambino\_6:

(Start: 28 @5041 has 134 MA's), (36, 5062), (43, 5104), (52, 5161), (59, 5209), (64, 5284), (69, 5314), (74, 5344), (79, 5362), (84, 5389), (85, 5401), (89, 5422), (98, 5473), (105, 5509), (122, 5602), (126, 5617), (136, 5647), (158, 5746), (166, 5782), (170, 5800), (191, 5917), (194, 5926),

Gene: Gancho\_8 Start: 6286, Stop: 7242, Start Num: 28

Candidate Starts for Gancho\_8:

(Start: 28 @6286 has 134 MA's), (42, 6346), (49, 6388), (50, 6391), (64, 6529), (72, 6571), (76, 6595), (79, 6607), (85, 6646), (86, 6649), (87, 6655), (95, 6703), (98, 6718), (106, 6763), (127, 6880), (132, 6895), (136, 6907), (138, 6925), (155, 6997), (156, 7000), (158, 7012), (168, 7054), (175, 7096), (199, 7231),

Gene: GemG\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for GemG\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Giles\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Giles\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Gizermo\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Gizermo\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Glaske\_6 Start: 5281, Stop: 6225, Start Num: 28

Candidate Starts for Glaske\_6:

(Start: 28 @5281 has 134 MA's), (40, 5326), (46, 5365), (64, 5527), (78, 5602), (83, 5629), (88, 5656), (91, 5671), (92, 5686), (107, 5761), (111, 5782), (123, 5854), (133, 5887), (136, 5896), (148, 5959), (166, 6040), (167, 6043), (172, 6067), (180, 6103), (182, 6118), (191, 6169), (193, 6175), (194, 6178), (198, 6214),

Gene: GrandSlam\_10 Start: 6877, Stop: 7809, Start Num: 31

Candidate Starts for GrandSlam\_10:

(Start: 31 @6877 has 50 MA's), (36, 6892), (45, 6949), (46, 6952), (48, 6964), (64, 7114), (76, 7180), (79, 7192), (85, 7231), (100, 7312), (136, 7480), (143, 7519), (155, 7564), (165, 7612), (192, 7753), (199, 7798),

Gene: Gravaillia\_9 Start: 6319, Stop: 7275, Start Num: 28

Candidate Starts for Gravaillia\_9:

(Start: 28 @6319 has 134 MA's), (42, 6379), (49, 6421), (50, 6424), (64, 6562), (72, 6604), (76, 6628), (79, 6640), (85, 6679), (86, 6682), (87, 6688), (95, 6736), (98, 6751), (106, 6796), (127, 6913), (132, 6928), (136, 6940), (138, 6958), (155, 7030), (156, 7033), (158, 7045), (168, 7087), (175, 7129), (199, 7264),

Gene: GravityBall\_9 Start: 7550, Stop: 8437, Start Num: 29

Candidate Starts for GravityBall\_9:

(Start: 29 @7550 has 19 MA's), (58, 7718), (69, 7832), (76, 7868), (87, 7928), (100, 7997), (119, 8102), (128, 8138), (154, 8219), (158, 8237), (170, 8285), (187, 8360), (191, 8381),

Gene: GreaseLightnin\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for GreaseLightnin\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Grekaycon\_9 Start: 7577, Stop: 8464, Start Num: 29

Candidate Starts for Grekaycon\_9:

(Start: 29 @7577 has 19 MA's), (69, 7859), (76, 7895), (83, 7931), (100, 8024), (102, 8039), (116, 8093), (117, 8108), (127, 8162), (158, 8264), (170, 8312), (191, 8408),

Gene: Guacamole\_6 Start: 5213, Stop: 6142, Start Num: 31

Candidate Starts for Guacamole\_6:

(Start: 31 @5213 has 50 MA's), (36, 5228), (41, 5252), (46, 5288), (50, 5312), (61, 5417), (64, 5450), (79, 5528), (84, 5555), (100, 5648), (101, 5654), (126, 5786), (136, 5816), (139, 5840), (143, 5855), (156, 5903), (158, 5915), (199, 6134),

Gene: Gusanita\_8 Start: 6480, Stop: 7409, Start Num: 27

Candidate Starts for Gusanita\_8:

(Start: 27 @6480 has 18 MA's), (63, 6702), (76, 6792), (84, 6831), (88, 6855), (127, 7077), (164, 7209), (169, 7233), (190, 7347),

Gene: HH92\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for HH92\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: HUHilltop\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for HUHilltop\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Hadrien\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Hadrien\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Hail\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Hail\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Haley23\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Haley23\_6:



(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Hamood\_10 Start: 6877, Stop: 7809, Start Num: 31

Candidate Starts for Hamood\_10:

(Start: 31 @6877 has 50 MA's), (36, 6892), (45, 6949), (46, 6952), (48, 6964), (64, 7114), (76, 7180), (79, 7192), (85, 7231), (100, 7312), (136, 7480), (143, 7519), (155, 7564), (165, 7612), (192, 7753), (199, 7798),

Gene: HannahD\_6 Start: 5209, Stop: 6126, Start Num: 30

Candidate Starts for HannahD\_6:

(1, 4852), (7, 5053), (16, 5125), (18, 5128), (Start: 30 @5209 has 9 MA's), (56, 5344), (59, 5377), (69, 5482), (112, 5707), (122, 5773), (123, 5776), (127, 5791), (131, 5803), (132, 5806), (135, 5815), (141, 5845), (145, 5860), (147, 5866), (169, 5953), (182, 6019), (186, 6040), (187, 6049), (191, 6070),

Gene: Hedwig\_7 Start: 5561, Stop: 6481, Start Num: 28

Candidate Starts for Hedwig\_7:

(Start: 28 @5561 has 134 MA's), (46, 5645), (81, 5903), (92, 5966), (120, 6116), (127, 6146), (150, 6224), (163, 6281), (169, 6308), (177, 6350), (190, 6419), (191, 6425),

Gene: Henoccus\_16 Start: 11667, Stop: 12635, Start Num: 32

Candidate Starts for Henoccus\_16:

(Start: 32 @11667 has 18 MA's), (Start: 34 @11673 has 1 MA's), (37, 11691), (49, 11766), (52, 11784), (53, 11787), (62, 11877), (63, 11883), (68, 11931), (72, 11949), (84, 12012), (85, 12024), (86, 12027), (92, 12066), (131, 12276), (135, 12288), (139, 12315), (143, 12333), (153, 12381), (159, 12405), (188, 12540), (190, 12549),

Gene: Hirko\_9 Start: 8724, Stop: 9608, Start Num: 27

Candidate Starts for Hirko\_9:

(Start: 27 @8724 has 18 MA's), (42, 8787), (61, 8940), (64, 8973), (98, 9159), (123, 9291), (172, 9465), (181, 9501),

Gene: Hitter\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Hitter\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: Hortense\_6 Start: 4904, Stop: 5836, Start Num: 28

Candidate Starts for Hortense\_6:

(Start: 28 @4904 has 134 MA's), (36, 4928), (42, 4967), (43, 4970), (50, 5012), (59, 5075), (74, 5210), (79, 5228), (84, 5255), (98, 5339), (100, 5348), (110, 5411), (122, 5468), (127, 5486), (136, 5513), (139, 5537), (143, 5552), (151, 5582), (158, 5612), (167, 5651), (191, 5783), (194, 5792),

Gene: Howe\_6 Start: 4904, Stop: 5836, Start Num: 28

Candidate Starts for Howe\_6:

(Start: 28 @4904 has 134 MA's), (36, 4928), (42, 4967), (43, 4970), (50, 5012), (59, 5075), (74, 5210), (79, 5228), (84, 5255), (98, 5339), (100, 5348), (110, 5411), (122, 5468), (127, 5486), (136, 5513), (139, 5537), (143, 5552), (151, 5582), (158, 5612), (167, 5651), (191, 5783), (194, 5792),

Gene: HumptyDumpty\_12 Start: 9680, Stop: 10576, Start Num: 25

Candidate Starts for HumptyDumpty\_12:

(Start: 25 @9680 has 19 MA's), (58, 9851), (61, 9905), (80, 10019), (94, 10103), (114, 10202), (137, 10322), (172, 10439), (173, 10454), (191, 10526),

Gene: Intolerant\_15 Start: 11652, Stop: 12632, Start Num: 32

Candidate Starts for Intolerant\_15:

(Start: 32 @11652 has 18 MA's), (Start: 34 @11658 has 1 MA's), (37, 11676), (49, 11751), (52, 11769), (53, 11772), (62, 11862), (63, 11868), (68, 11916), (72, 11934), (84, 11997), (85, 12009), (86, 12012), (92, 12051), (130, 12267), (131, 12270), (139, 12309), (188, 12534), (190, 12543), (197, 12582),

Gene: JCole\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for JCole\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: JKerns\_9 Start: 7607, Stop: 8494, Start Num: 29

Candidate Starts for JKerns\_9:

(Start: 29 @7607 has 19 MA's), (69, 7889), (76, 7925), (83, 7961), (87, 7985), (100, 8054), (102, 8069), (116, 8123), (117, 8138), (127, 8192), (158, 8294), (170, 8342), (191, 8438),

Gene: JaNo\_12 Start: 9680, Stop: 10576, Start Num: 25

Candidate Starts for JaNo\_12:

(Start: 25 @9680 has 19 MA's), (58, 9851), (61, 9905), (80, 10019), (94, 10103), (114, 10202), (137, 10322), (172, 10439), (173, 10454), (191, 10526),

Gene: JackieB\_15 Start: 11522, Stop: 12490, Start Num: 32

Candidate Starts for JackieB\_15:

(Start: 32 @11522 has 18 MA's), (Start: 34 @11528 has 1 MA's), (37, 11546), (49, 11621), (52, 11639), (53, 11642), (62, 11732), (63, 11738), (68, 11786), (72, 11804), (84, 11867), (85, 11879), (86, 11882), (92, 11921), (131, 12131), (135, 12143), (139, 12170), (143, 12188), (153, 12236), (159, 12260), (188, 12395), (190, 12404),

Gene: Jalammah\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Jalammah\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: JasperJr\_6 Start: 5213, Stop: 6142, Start Num: 31

Candidate Starts for JasperJr\_6:

(Start: 31 @5213 has 50 MA's), (36, 5228), (41, 5252), (46, 5288), (50, 5312), (61, 5417), (64, 5450), (79, 5528), (84, 5555), (100, 5648), (101, 5654), (126, 5786), (136, 5816), (139, 5840), (143, 5855), (156, 5903), (158, 5915), (199, 6134),

Gene: Jawnski\_8 Start: 7212, Stop: 8105, Start Num: 27

Candidate Starts for Jawnski\_8:

(Start: 27 @7212 has 18 MA's), (64, 7467), (69, 7497), (83, 7569), (116, 7731), (119, 7767), (158, 7902), (170, 7950), (181, 7995), (187, 8025), (191, 8046),

Gene: JayCookie\_12 Start: 9683, Stop: 10579, Start Num: 25

Candidate Starts for JayCookie\_12:

(Start: 25 @9683 has 19 MA's), (58, 9854), (63, 9917), (80, 10022), (94, 10106), (114, 10205), (137, 10325), (156, 10373), (172, 10442), (173, 10457), (191, 10529),

Gene: Jebeks\_6 Start: 5299, Stop: 6243, Start Num: 28

Candidate Starts for Jebeks\_6:

(Start: 28 @5299 has 134 MA's), (39, 5332), (46, 5383), (64, 5545), (78, 5620), (83, 5647), (84, 5650), (88, 5674), (91, 5689), (92, 5704), (111, 5800), (119, 5854), (123, 5872), (133, 5905), (148, 5977), (166, 6058), (172, 6085), (180, 6121), (182, 6136), (191, 6187), (193, 6193), (198, 6232),

Gene: Jinkies\_10 Start: 8046, Stop: 8930, Start Num: 24

Candidate Starts for Jinkies\_10:

(Start: 24 @8046 has 1 MA's), (55, 8178), (61, 8262), (64, 8295), (83, 8397), (158, 8730), (176, 8814), (191, 8874),

Gene: Jordan\_9 Start: 7577, Stop: 8464, Start Num: 29

Candidate Starts for Jordan\_9:

(Start: 29 @7577 has 19 MA's), (69, 7859), (83, 7931), (87, 7955), (100, 8024), (102, 8039), (116, 8093), (117, 8108), (127, 8162), (158, 8264), (170, 8312), (191, 8408),

Gene: JuJu\_6 Start: 5054, Stop: 5983, Start Num: 28

Candidate Starts for JuJu\_6:

(Start: 28 @5054 has 134 MA's), (36, 5075), (43, 5117), (52, 5174), (59, 5222), (64, 5297), (69, 5327), (74, 5357), (79, 5375), (84, 5402), (85, 5414), (89, 5435), (98, 5486), (122, 5615), (126, 5630), (136, 5660), (155, 5744), (158, 5759), (166, 5795), (170, 5813), (191, 5930), (194, 5939),

Gene: Jung\_6 Start: 5281, Stop: 6225, Start Num: 28

Candidate Starts for Jung\_6:

(Start: 28 @5281 has 134 MA's), (40, 5326), (46, 5365), (64, 5527), (78, 5602), (83, 5629), (84, 5632), (88, 5656), (91, 5671), (92, 5686), (107, 5761), (111, 5782), (123, 5854), (133, 5887), (136, 5896), (148, 5959), (166, 6040), (167, 6043), (172, 6067), (180, 6103), (182, 6118), (193, 6175), (194, 6178), (198, 6214),

Gene: Juniormint\_6 Start: 5302, Stop: 6246, Start Num: 28

Candidate Starts for Juniormint\_6:

(Start: 28 @5302 has 134 MA's), (39, 5335), (46, 5386), (64, 5548), (78, 5623), (83, 5650), (88, 5677), (91, 5692), (92, 5707), (111, 5803), (119, 5857), (123, 5875), (133, 5908), (148, 5980), (166, 6061), (172, 6088), (180, 6124), (182, 6139), (191, 6190), (193, 6196), (198, 6235),

Gene: JustASigh\_6 Start: 5596, Stop: 6537, Start Num: 30

Candidate Starts for JustASigh\_6:

(Start: 30 @5596 has 9 MA's), (36, 5614), (44, 5668), (45, 5671), (48, 5686), (50, 5698), (64, 5836), (66, 5851), (67, 5857), (69, 5866), (74, 5896), (79, 5914), (85, 5953), (98, 6025), (100, 6034), (117, 6133), (149, 6265), (156, 6295), (188, 6463), (192, 6481), (199, 6526),

Gene: KBurrousTX\_12 Start: 9457, Stop: 10353, Start Num: 25

Candidate Starts for KBurrousTX\_12:

(Start: 25 @9457 has 19 MA's), (58, 9628), (63, 9691), (71, 9751), (84, 9820), (94, 9880), (111, 9970), (114, 9979), (136, 10084), (172, 10216), (191, 10303),

Gene: Kabreeze\_12 Start: 9680, Stop: 10576, Start Num: 25

Candidate Starts for Kabreeze\_12:

(Start: 25 @9680 has 19 MA's), (58, 9851), (61, 9905), (80, 10019), (94, 10103), (114, 10202), (137, 10322), (172, 10439), (173, 10454), (191, 10526),

Gene: KappaFarmDelta\_6 Start: 5194, Stop: 6126, Start Num: 31

Candidate Starts for KappaFarmDelta\_6:

(Start: 31 @5194 has 50 MA's), (36, 5209), (41, 5233), (46, 5269), (50, 5293), (61, 5398), (79, 5509), (84, 5536), (100, 5629), (125, 5764), (136, 5797), (139, 5821), (156, 5884), (158, 5896), (199, 6115),

Gene: Kari\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Kari\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Kiko\_7 Start: 5416, Stop: 6342, Start Num: 28

Candidate Starts for Kiko\_7:

(Start: 28 @5416 has 134 MA's), (46, 5500), (54, 5548), (81, 5758), (82, 5761), (89, 5800), (92, 5821), (97, 5848), (108, 5905), (111, 5920), (126, 6004), (127, 6007), (169, 6169),

Gene: KilKor\_6 Start: 5281, Stop: 6225, Start Num: 28

Candidate Starts for KilKor\_6:

(Start: 28 @5281 has 134 MA's), (40, 5326), (46, 5365), (64, 5527), (78, 5602), (83, 5629), (88, 5656), (91, 5671), (92, 5686), (107, 5761), (111, 5782), (123, 5854), (133, 5887), (136, 5896), (148, 5959), (166, 6040), (167, 6043), (172, 6067), (180, 6103), (182, 6118), (191, 6169), (193, 6175), (194, 6178), (198, 6214),

Gene: Kinbote\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Kinbote\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: King2\_8 Start: 7217, Stop: 8110, Start Num: 27

Candidate Starts for King2\_8:

(Start: 27 @7217 has 18 MA's), (58, 7388), (64, 7472), (65, 7475), (69, 7502), (87, 7598), (100, 7667), (119, 7772), (158, 7907), (170, 7955), (176, 7991), (187, 8030),

Gene: Klevey\_8 Start: 7102, Stop: 7989, Start Num: 27

Candidate Starts for Klevey\_8:

(Start: 27 @7102 has 18 MA's), (55, 7234), (58, 7267), (64, 7351), (71, 7387), (76, 7417), (86, 7471), (102, 7561), (108, 7582), (119, 7651), (132, 7699), (176, 7870), (187, 7909),

Gene: Ksquared\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Ksquared\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (84, 5645), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Lamberg\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Lamberg\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634),

Gene: Langerak\_6 Start: 5299, Stop: 6243, Start Num: 28

Candidate Starts for Langerak\_6:

(Start: 28 @5299 has 134 MA's), (39, 5332), (46, 5383), (64, 5545), (78, 5620), (83, 5647), (88, 5674), (91, 5689), (92, 5704), (111, 5800), (119, 5854), (123, 5872), (133, 5905), (148, 5977), (166, 6058), (172, 6085), (180, 6121), (182, 6136), (191, 6187), (193, 6193), (198, 6232),

Gene: LazerLemon\_15 Start: 11860, Stop: 12828, Start Num: 32

Candidate Starts for LazerLemon\_15:

(Start: 32 @11860 has 18 MA's), (Start: 34 @11866 has 1 MA's), (37, 11884), (49, 11959), (52, 11977), (53, 11980), (62, 12070), (63, 12076), (68, 12124), (72, 12142), (84, 12205), (85, 12217), (86, 12220), (92, 12259), (131, 12469), (135, 12481), (139, 12508), (148, 12547), (153, 12574), (159, 12598), (188, 12733), (190, 12742),

Gene: Lederberg\_6 Start: 5118, Stop: 6050, Start Num: 32

Candidate Starts for Lederberg\_6:

(23, 5085), (Start: 32 @5118 has 18 MA's), (64, 5355), (68, 5379), (73, 5409), (76, 5421), (83, 5457), (84, 5460), (89, 5493), (119, 5664), (126, 5691), (137, 5736), (151, 5790), (162, 5838), (176, 5910), (183, 5946), (184, 5958), (185, 5961), (189, 5982), (195, 6021), (198, 6039),

Gene: LeeroyJ\_9 Start: 7549, Stop: 8436, Start Num: 29

Candidate Starts for LeeroyJ\_9:

(Start: 29 @7549 has 19 MA's), (58, 7717), (69, 7831), (76, 7867), (87, 7927), (100, 7996), (119, 8101), (128, 8137), (154, 8218), (158, 8236), (170, 8284), (187, 8359), (191, 8380),

Gene: Lenoxika\_10 Start: 6591, Stop: 7520, Start Num: 27

Candidate Starts for Lenoxika\_10:

(Start: 27 @6591 has 18 MA's), (41, 6639), (63, 6813), (84, 6942), (88, 6966), (135, 7212), (164, 7320), (169, 7344), (178, 7392), (190, 7458),

Gene: LilHazelnut\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for LilHazelnut\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Lilmac1015\_8 Start: 7095, Stop: 7982, Start Num: 27

Candidate Starts for Lilmac1015\_8:

(Start: 27 @7095 has 18 MA's), (55, 7227), (58, 7260), (64, 7344), (71, 7380), (76, 7410), (86, 7464), (108, 7575), (132, 7692), (162, 7791), (176, 7863), (178, 7869), (187, 7902),

Gene: Linus\_12 Start: 9680, Stop: 10576, Start Num: 25

Candidate Starts for Linus\_12:

(Start: 25 @9680 has 19 MA's), (58, 9851), (63, 9914), (80, 10019), (94, 10103), (114, 10202), (137, 10322), (156, 10370), (172, 10439), (173, 10454), (191, 10526),

Gene: LordFarquaad\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for LordFarquaad\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Luke\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Luke\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Luna22\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Luna22\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Lymara\_12 Start: 9669, Stop: 10565, Start Num: 25

Candidate Starts for Lymara\_12:

(Start: 25 @9669 has 19 MA's), (58, 9840), (63, 9903), (80, 10008), (94, 10092), (114, 10191), (136, 10296), (172, 10428), (173, 10443), (191, 10515),

Gene: Lysidious\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Lysidious\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: Majeke\_6 Start: 5299, Stop: 6243, Start Num: 28

Candidate Starts for Majeke\_6:

(Start: 28 @5299 has 134 MA's), (39, 5332), (46, 5383), (64, 5545), (78, 5620), (83, 5647), (84, 5650), (88, 5674), (91, 5689), (92, 5704), (111, 5800), (119, 5854), (123, 5872), (133, 5905), (148, 5977), (166, 6058), (172, 6085), (180, 6121), (182, 6136), (191, 6187), (193, 6193), (198, 6232),

Gene: Malachai\_6 Start: 5212, Stop: 6141, Start Num: 31

Candidate Starts for Malachai\_6:

(Start: 31 @5212 has 50 MA's), (36, 5227), (41, 5251), (46, 5287), (50, 5311), (61, 5416), (64, 5449), (79, 5527), (84, 5554), (100, 5647), (101, 5653), (126, 5785), (136, 5815), (139, 5839), (143, 5854), (156, 5902), (158, 5914), (199, 6133),

Gene: Malibo\_6 Start: 5429, Stop: 6361, Start Num: 31

Candidate Starts for Malibo\_6:

(19, 5345), (Start: 31 @5429 has 50 MA's), (36, 5444), (48, 5516), (64, 5666), (76, 5732), (79, 5744), (80, 5747), (85, 5783), (100, 5864), (113, 5936), (136, 6032), (156, 6119), (158, 6131), (192, 6305),

Gene: Malithi\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Malithi\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Mangethe\_6 Start: 5299, Stop: 6243, Start Num: 28

Candidate Starts for Mangethe\_6:

(Start: 28 @5299 has 134 MA's), (39, 5332), (46, 5383), (64, 5545), (78, 5620), (83, 5647), (84, 5650), (88, 5674), (91, 5689), (92, 5704), (111, 5800), (119, 5854), (123, 5872), (133, 5905), (148, 5977), (166, 6058), (172, 6085), (180, 6121), (182, 6136), (191, 6187), (193, 6193), (198, 6232),

Gene: Marky\_16 Start: 11698, Stop: 12666, Start Num: 32

Candidate Starts for Marky\_16:

(Start: 32 @11698 has 18 MA's), (Start: 34 @11704 has 1 MA's), (37, 11722), (49, 11797), (52, 11815), (53, 11818), (62, 11908), (68, 11962), (85, 12055), (92, 12097), (96, 12115), (113, 12208), (135, 12319), (139, 12346), (153, 12412), (159, 12436), (170, 12487), (188, 12571), (190, 12580),

Gene: Martha\_9 Start: 7515, Stop: 8402, Start Num: 29

Candidate Starts for Martha\_9:

(Start: 29 @7515 has 19 MA's), (69, 7797), (76, 7833), (83, 7869), (87, 7893), (100, 7962), (102, 7977), (116, 8031), (117, 8046), (127, 8100), (158, 8202), (170, 8250), (191, 8346),

Gene: Matteo\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Matteo\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Mbo4\_6 Start: 5456, Stop: 6385, Start Num: 32

Candidate Starts for Mbo4\_6:

(Start: 32 @5456 has 18 MA's), (36, 5471), (59, 5618), (74, 5753), (79, 5771), (84, 5798), (127, 6032), (142, 6095), (166, 6194), (167, 6197), (196, 6359),

Gene: Megiddo\_6 Start: 5281, Stop: 6225, Start Num: 28

Candidate Starts for Megiddo\_6:

(Start: 28 @5281 has 134 MA's), (40, 5326), (46, 5365), (64, 5527), (78, 5602), (83, 5629), (88, 5656), (91, 5671), (92, 5686), (107, 5761), (111, 5782), (123, 5854), (133, 5887), (136, 5896), (148, 5959), (166, 6040), (167, 6043), (172, 6067), (180, 6103), (182, 6118), (191, 6169), (193, 6175), (194, 6178), (198, 6214),

Gene: Melba\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Melba\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (61, 5413), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: Mellie\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Mellie\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: MichaelScott\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for MichaelScott\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (191, 6212), (198, 6257),

Gene: Microdon\_15 Start: 11458, Stop: 12438, Start Num: 32

Candidate Starts for Microdon\_15:

(Start: 32 @11458 has 18 MA's), (Start: 34 @11464 has 1 MA's), (37, 11482), (49, 11557), (52, 11575), (53, 11578), (62, 11668), (63, 11674), (68, 11722), (72, 11740), (84, 11803), (85, 11815), (86, 11818), (92, 11857), (103, 11923), (130, 12073), (131, 12076), (139, 12115), (170, 12256), (188, 12340), (190, 12349), (197, 12388),

Gene: MintFen\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for MintFen\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (61, 5413), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: MissRona\_6 Start: 5041, Stop: 5970, Start Num: 28

Candidate Starts for MissRona\_6:

(Start: 28 @5041 has 134 MA's), (36, 5062), (43, 5104), (52, 5161), (59, 5209), (64, 5284), (69, 5314), (74, 5344), (79, 5362), (84, 5389), (85, 5401), (89, 5422), (98, 5473), (105, 5509), (122, 5602), (126, 5617), (136, 5647), (158, 5746), (166, 5782), (170, 5800), (191, 5917), (194, 5926),

Gene: Mocha12\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Mocha12\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Mordred\_12 Start: 9680, Stop: 10576, Start Num: 25

Candidate Starts for Mordred\_12:

(Start: 25 @9680 has 19 MA's), (58, 9851), (61, 9905), (80, 10019), (94, 10103), (114, 10202), (137, 10322), (172, 10439), (173, 10454), (191, 10526),

Gene: MoyaNatalis\_12 Start: 9683, Stop: 10579, Start Num: 25

Candidate Starts for MoyaNatalis\_12:

(Start: 25 @9683 has 19 MA's), (58, 9854), (63, 9917), (80, 10022), (94, 10106), (114, 10205), (137, 10325), (172, 10442), (173, 10457), (191, 10529),

Gene: Mulch\_10 Start: 6844, Stop: 7776, Start Num: 31

Candidate Starts for Mulch\_10:

(Start: 31 @6844 has 50 MA's), (36, 6859), (45, 6916), (46, 6919), (48, 6931), (64, 7081), (69, 7111), (76, 7147), (79, 7159), (85, 7198), (100, 7279), (136, 7447), (143, 7486), (165, 7579), (192, 7720), (199, 7765),

Gene: Murp\_6 Start: 5197, Stop: 6129, Start Num: 31

Candidate Starts for Murp\_6:

(Start: 31 @5197 has 50 MA's), (36, 5212), (41, 5236), (46, 5272), (50, 5296), (61, 5401), (79, 5512), (84, 5539), (100, 5632), (125, 5767), (136, 5800), (139, 5824), (156, 5887), (158, 5899), (199, 6118),

Gene: Nadeem\_10 Start: 6844, Stop: 7776, Start Num: 31

Candidate Starts for Nadeem\_10:

(Start: 31 @6844 has 50 MA's), (36, 6859), (45, 6916), (46, 6919), (48, 6931), (64, 7081), (69, 7111), (76, 7147), (79, 7159), (85, 7198), (100, 7279), (136, 7447), (143, 7486), (165, 7579), (192, 7720), (199, 7765),

Gene: NancyRae\_10 Start: 6844, Stop: 7776, Start Num: 31

Candidate Starts for NancyRae\_10:

(Start: 31 @6844 has 50 MA's), (36, 6859), (45, 6916), (46, 6919), (48, 6931), (64, 7081), (69, 7111), (76, 7147), (79, 7159), (85, 7198), (100, 7279), (136, 7447), (143, 7486), (165, 7579), (192, 7720), (199, 7765),

Gene: Nandita\_10 Start: 6592, Stop: 7521, Start Num: 27

Candidate Starts for Nandita\_10:

(Start: 27 @6592 has 18 MA's), (41, 6640), (63, 6814), (84, 6943), (88, 6967), (135, 7213), (164, 7321), (169, 7345), (178, 7393), (190, 7459),



Gene: NathanVaag\_8 Start: 7217, Stop: 8110, Start Num: 27

Candidate Starts for NathanVaag\_8:

(Start: 27 @7217 has 18 MA's), (64, 7472), (69, 7502), (83, 7574), (116, 7736), (119, 7772), (135, 7829), (158, 7907), (170, 7955), (181, 8000), (187, 8030), (191, 8051),

Gene: Nazo\_6 Start: 5266, Stop: 6216, Start Num: 28

Candidate Starts for Nazo\_6:

(Start: 28 @5266 has 134 MA's), (46, 5350), (47, 5353), (78, 5587), (83, 5614), (88, 5641), (91, 5656), (92, 5671), (111, 5773), (123, 5845), (133, 5878), (136, 5887), (141, 5923), (147, 5944), (148, 5950), (163, 6016), (166, 6031), (172, 6058), (182, 6109), (193, 6166), (198, 6205),

Gene: Necropolis\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Necropolis\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Nettuno\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Nettuno\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634),

Gene: OBUpride\_9 Start: 6580, Stop: 7536, Start Num: 28

Candidate Starts for OBUpride\_9:

(Start: 28 @6580 has 134 MA's), (42, 6640), (49, 6682), (50, 6685), (64, 6823), (72, 6865), (76, 6889), (79, 6901), (85, 6940), (86, 6943), (87, 6949), (95, 6997), (98, 7012), (106, 7057), (127, 7174), (132, 7189), (136, 7201), (138, 7219), (146, 7249), (155, 7291), (156, 7294), (158, 7306), (168, 7348), (175, 7390), (199, 7525),

Gene: Obliviate\_6 Start: 5233, Stop: 6162, Start Num: 31

Candidate Starts for Obliviate\_6:

(Start: 31 @5233 has 50 MA's), (36, 5248), (41, 5272), (46, 5308), (50, 5332), (64, 5470), (79, 5548), (84, 5575), (100, 5668), (101, 5674), (126, 5806), (136, 5836), (139, 5860), (143, 5875), (156, 5923), (158, 5935), (199, 6154),

Gene: Ohgeesy\_6 Start: 4895, Stop: 5824, Start Num: 28

Candidate Starts for Ohgeesy\_6:

(Start: 28 @4895 has 134 MA's), (43, 4958), (50, 5000), (64, 5138), (74, 5198), (79, 5216), (98, 5327), (126, 5471), (136, 5501), (155, 5585), (158, 5600), (179, 5699), (191, 5771), (194, 5780),

Gene: Oregano\_7 Start: 5016, Stop: 5939, Start Num: 28

Candidate Starts for Oregano\_7:

(Start: 28 @5016 has 134 MA's), (46, 5100), (54, 5148), (90, 5403), (92, 5421), (119, 5568), (120, 5571), (122, 5583), (141, 5655), (151, 5688), (169, 5763), (174, 5796), (187, 5862), (191, 5883), (198, 5928),

Gene: PCoral7\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for PCoral7\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (46, 5284), (61, 5413), (73, 5500), (79, 5524), (98, 5635), (101, 5650), (126, 5782), (136, 5812), (156, 5899), (157, 5905), (158, 5911), (199, 6130),

Gene: PantheRoc\_6 Start: 4895, Stop: 5824, Start Num: 28

Candidate Starts for PantheRoc\_6:

(Start: 28 @4895 has 134 MA's), (43, 4958), (50, 5000), (64, 5138), (74, 5198), (79, 5216), (98, 5327), (126, 5471), (136, 5501), (155, 5585), (158, 5600), (179, 5699), (191, 5771), (194, 5780),

Gene: Parada\_10 Start: 6844, Stop: 7776, Start Num: 31

Candidate Starts for Parada\_10:

(Start: 31 @6844 has 50 MA's), (36, 6859), (45, 6916), (46, 6919), (48, 6931), (64, 7081), (69, 7111), (76, 7147), (79, 7159), (85, 7198), (100, 7279), (136, 7447), (143, 7486), (165, 7579), (192, 7720), (199, 7765),

Gene: Petra\_6 Start: 5041, Stop: 5970, Start Num: 28

Candidate Starts for Petra\_6:

(Start: 28 @5041 has 134 MA's), (36, 5062), (43, 5104), (52, 5161), (59, 5209), (64, 5284), (69, 5314), (74, 5344), (79, 5362), (84, 5389), (85, 5401), (89, 5422), (98, 5473), (105, 5509), (122, 5602), (126, 5617), (136, 5647), (155, 5731), (158, 5746), (166, 5782), (170, 5800), (191, 5917), (194, 5926),

Gene: Phalm\_6 Start: 5281, Stop: 6225, Start Num: 28

Candidate Starts for Phalm\_6:

(Start: 28 @5281 has 134 MA's), (40, 5326), (46, 5365), (64, 5527), (78, 5602), (83, 5629), (88, 5656), (91, 5671), (92, 5686), (107, 5761), (111, 5782), (123, 5854), (133, 5887), (136, 5896), (148, 5959), (166, 6040), (167, 6043), (172, 6067), (180, 6103), (182, 6118), (191, 6169), (193, 6175), (194, 6178), (198, 6214),

Gene: Phayonce\_6 Start: 5268, Stop: 6224, Start Num: 28

Candidate Starts for Phayonce\_6:

(Start: 28 @5268 has 134 MA's), (40, 5313), (46, 5352), (47, 5355), (51, 5385), (63, 5490), (75, 5577), (78, 5589), (83, 5616), (88, 5643), (90, 5655), (92, 5673), (111, 5781), (119, 5835), (123, 5853), (133, 5886), (148, 5958), (166, 6039), (171, 6063), (172, 6066), (182, 6117), (191, 6168), (193, 6174), (198, 6213),

Gene: Phegasus\_6 Start: 5299, Stop: 6243, Start Num: 28

Candidate Starts for Phegasus\_6:

(Start: 28 @5299 has 134 MA's), (39, 5332), (46, 5383), (64, 5545), (78, 5620), (83, 5647), (84, 5650), (88, 5674), (91, 5689), (92, 5704), (111, 5800), (119, 5854), (123, 5872), (133, 5905), (148, 5977), (166, 6058), (172, 6085), (180, 6121), (182, 6136), (191, 6187), (193, 6193), (198, 6232),

Gene: Phineas\_6 Start: 5282, Stop: 6226, Start Num: 28

Candidate Starts for Phineas\_6:

(Start: 28 @5282 has 134 MA's), (40, 5327), (46, 5366), (64, 5528), (78, 5603), (83, 5630), (88, 5657), (91, 5672), (92, 5687), (107, 5762), (111, 5783), (123, 5855), (133, 5888), (136, 5897), (148, 5960), (166, 6041), (167, 6044), (172, 6068), (180, 6104), (182, 6119), (191, 6170), (193, 6176), (194, 6179), (198, 6215),

Gene: PhriskyACE\_6 Start: 4843, Stop: 5766, Start Num: 28

Candidate Starts for PhriskyACE\_6:

(Start: 28 @4843 has 134 MA's), (46, 4927), (54, 4975), (90, 5230), (92, 5248), (119, 5395), (120, 5398), (122, 5410), (141, 5482), (151, 5515), (169, 5590), (174, 5623), (187, 5689), (190, 5704), (191, 5710), (198, 5755),

Gene: PhrostedPhlake\_6 Start: 5231, Stop: 6163, Start Num: 31

Candidate Starts for PhrostedPhlake\_6:

(Start: 31 @5231 has 50 MA's), (36, 5246), (41, 5270), (46, 5306), (50, 5330), (61, 5435), (79, 5546), (84, 5573), (100, 5666), (125, 5801), (136, 5834), (139, 5858), (143, 5873), (156, 5921), (158, 5933), (199, 6152),

Gene: Piccoletto\_8 Start: 7218, Stop: 8111, Start Num: 27

Candidate Starts for Piccoletto\_8:

(Start: 27 @7218 has 18 MA's), (64, 7473), (69, 7503), (83, 7575), (119, 7773), (158, 7908), (170, 7956), (181, 8001), (187, 8031), (191, 8052),

Gene: Pickett\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Pickett\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Pimento\_10 Start: 6841, Stop: 7773, Start Num: 31

Candidate Starts for Pimento\_10:

(Start: 31 @6841 has 50 MA's), (36, 6856), (45, 6913), (46, 6916), (48, 6928), (64, 7078), (69, 7108), (76, 7144), (79, 7156), (85, 7195), (100, 7276), (136, 7444), (143, 7483), (165, 7576), (192, 7717), (199, 7762),

Gene: Pipp\_6 Start: 5233, Stop: 6162, Start Num: 31

Candidate Starts for Pipp\_6:

(Start: 31 @5233 has 50 MA's), (36, 5248), (41, 5272), (46, 5308), (50, 5332), (61, 5437), (79, 5548), (84, 5575), (98, 5659), (100, 5668), (101, 5674), (126, 5806), (136, 5836), (139, 5860), (156, 5923), (158, 5935), (199, 6154),

Gene: Pippa\_9 Start: 7607, Stop: 8494, Start Num: 29

Candidate Starts for Pippa\_9:

(Start: 29 @7607 has 19 MA's), (57, 7757), (69, 7889), (83, 7961), (100, 8054), (102, 8069), (116, 8123), (117, 8138), (127, 8192), (167, 8327), (170, 8342), (187, 8417), (191, 8438),

Gene: Polkaroo\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Polkaroo\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Popper\_8 Start: 6084, Stop: 7013, Start Num: 27

Candidate Starts for Popper\_8:

(Start: 27 @6084 has 18 MA's), (38, 6117), (63, 6306), (76, 6396), (79, 6408), (84, 6435), (88, 6459), (169, 6837), (190, 6951), (191, 6957),

Gene: Powerball\_6 Start: 4843, Stop: 5766, Start Num: 28

Candidate Starts for Powerball\_6:

(Start: 28 @4843 has 134 MA's), (46, 4927), (54, 4975), (90, 5230), (92, 5248), (110, 5338), (127, 5428), (169, 5590), (174, 5623), (178, 5638), (187, 5689), (191, 5710), (198, 5755),

Gene: Prairie\_8 Start: 7102, Stop: 7989, Start Num: 27

Candidate Starts for Prairie\_8:

(Start: 27 @7102 has 18 MA's), (55, 7234), (58, 7267), (64, 7351), (71, 7387), (76, 7417), (86, 7471), (102, 7561), (108, 7582), (119, 7651), (132, 7699), (176, 7870), (187, 7909),

Gene: PrincePatrick\_6 Start: 5210, Stop: 6139, Start Num: 31

Candidate Starts for PrincePatrick\_6:

(Start: 31 @5210 has 50 MA's), (36, 5225), (46, 5285), (48, 5297), (61, 5414), (73, 5501), (79, 5525), (98, 5636), (101, 5651), (126, 5783), (136, 5813), (156, 5900), (158, 5912), (199, 6131),

Gene: PrincessTrina\_12 Start: 9683, Stop: 10579, Start Num: 25

Candidate Starts for PrincessTrina\_12:

(Start: 25 @9683 has 19 MA's), (58, 9854), (63, 9917), (80, 10022), (94, 10106), (114, 10205), (137, 10325), (156, 10373), (172, 10442), (173, 10457), (191, 10529),

Gene: Purky\_6 Start: 5271, Stop: 6215, Start Num: 28

Candidate Starts for Purky\_6:

(Start: 28 @5271 has 134 MA's), (46, 5355), (51, 5388), (63, 5493), (75, 5580), (78, 5592), (83, 5619), (88, 5646), (90, 5658), (92, 5676), (107, 5751), (111, 5772), (119, 5826), (123, 5844), (127, 5859), (133, 5877), (148, 5949), (166, 6030), (171, 6054), (172, 6057), (182, 6108), (193, 6165), (198, 6204),

Gene: Pygmy\_6 Start: 5282, Stop: 6226, Start Num: 28

Candidate Starts for Pygmy\_6:

(Start: 28 @5282 has 134 MA's), (40, 5327), (46, 5366), (64, 5528), (78, 5603), (83, 5630), (88, 5657), (91, 5672), (92, 5687), (107, 5762), (111, 5783), (123, 5855), (133, 5888), (136, 5897), (148, 5960), (166, 6041), (180, 6104), (182, 6119), (193, 6176), (194, 6179), (198, 6215),

Gene: QuinnAvery\_9 Start: 6551, Stop: 7462, Start Num: 30

Candidate Starts for QuinnAvery\_9:

(21, 6503), (Start: 30 @6551 has 9 MA's), (119, 7103), (180, 7340), (191, 7406), (193, 7412),

Gene: REQ2\_06 Start: 4914, Stop: 5852, Start Num: 30

Candidate Starts for REQ2\_06:

(2, 4599), (3, 4641), (14, 4800), (Start: 30 @4914 has 9 MA's), (36, 4932), (41, 4956), (55, 5043), (70, 5187), (79, 5232), (84, 5259), (104, 5370), (127, 5496), (132, 5511), (136, 5523), (139, 5547), (160, 5628), (192, 5796), (199, 5841),

Gene: RayTheFireFly\_7 Start: 5588, Stop: 6508, Start Num: 28

Candidate Starts for RayTheFireFly\_7:

(Start: 28 @5588 has 134 MA's), (46, 5672), (69, 5864), (103, 6053), (110, 6083), (114, 6095), (120, 6143), (123, 6158), (127, 6173), (145, 6242), (147, 6248), (161, 6299), (163, 6308), (169, 6335), (182, 6401), (186, 6422), (187, 6431), (198, 6497),

Gene: RosiePosie\_12 Start: 9683, Stop: 10579, Start Num: 25

Candidate Starts for RosiePosie\_12:

(Start: 25 @9683 has 19 MA's), (58, 9854), (63, 9917), (80, 10022), (94, 10106), (114, 10205), (137, 10325), (172, 10442), (173, 10457), (191, 10529),

Gene: Ruthy\_6 Start: 5494, Stop: 6426, Start Num: 31

Candidate Starts for Ruthy\_6:

(Start: 31 @5494 has 50 MA's), (36, 5509), (48, 5581), (64, 5731), (76, 5797), (79, 5809), (80, 5812), (85, 5848), (100, 5929), (113, 6001), (136, 6097), (139, 6121), (156, 6184), (192, 6370),

Gene: Ryan\_10 Start: 6702, Stop: 7631, Start Num: 27

Candidate Starts for Ryan\_10:

(Start: 27 @6702 has 18 MA's), (63, 6924), (76, 7014), (88, 7077), (164, 7431), (169, 7455), (190, 7569),

Gene: Sahara\_6 Start: 4845, Stop: 5768, Start Num: 28

Candidate Starts for Sahara\_6:

(Start: 28 @4845 has 134 MA's), (46, 4929), (54, 4977), (69, 5121), (88, 5220), (90, 5232), (92, 5250), (120, 5400), (141, 5484), (147, 5505), (151, 5517), (169, 5592), (174, 5625), (191, 5712),

Gene: SamW\_6 Start: 5118, Stop: 6050, Start Num: 32

Candidate Starts for SamW\_6:

(23, 5085), (Start: 32 @5118 has 18 MA's), (64, 5355), (68, 5379), (73, 5409), (76, 5421), (83, 5457), (84, 5460), (89, 5493), (119, 5664), (126, 5691), (137, 5736), (151, 5790), (162, 5838), (176, 5910), (183, 5946), (184, 5958), (185, 5961), (189, 5982), (195, 6021), (198, 6039),

Gene: Samba\_6 Start: 5210, Stop: 6139, Start Num: 31

Candidate Starts for Samba\_6:

(Start: 31 @5210 has 50 MA's), (36, 5225), (41, 5249), (46, 5285), (50, 5309), (61, 5414), (64, 5447), (79, 5525), (84, 5552), (100, 5645), (101, 5651), (126, 5783), (136, 5813), (139, 5837), (143, 5852), (156, 5900), (158, 5912), (199, 6131),

Gene: Samman98\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for Samman98\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (120, 5900), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (191, 6212), (198, 6257),

Gene: Savage\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Savage\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Scavito\_12 Start: 9680, Stop: 10576, Start Num: 25

Candidate Starts for Scavito\_12:

(Start: 25 @9680 has 19 MA's), (58, 9851), (61, 9905), (80, 10019), (94, 10103), (114, 10202), (137, 10322), (172, 10439), (173, 10454), (191, 10526),

Gene: Sekhmet\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for Sekhmet\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (120, 5900), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (191, 6212), (198, 6257),

Gene: Shade\_9 Start: 7556, Stop: 8443, Start Num: 29

Candidate Starts for Shade\_9:

(Start: 29 @7556 has 19 MA's), (69, 7838), (76, 7874), (83, 7910), (87, 7934), (100, 8003), (102, 8018), (116, 8072), (117, 8087), (127, 8141), (158, 8243), (170, 8291), (191, 8387),

Gene: Shipwreck\_6 Start: 5282, Stop: 6226, Start Num: 28

Candidate Starts for Shipwreck\_6:

(Start: 28 @5282 has 134 MA's), (40, 5327), (46, 5366), (64, 5528), (78, 5603), (83, 5630), (88, 5657), (91, 5672), (92, 5687), (107, 5762), (111, 5783), (123, 5855), (133, 5888), (136, 5897), (148, 5960), (166, 6041), (180, 6104), (182, 6119), (193, 6176), (194, 6179), (198, 6215),

Gene: Shlim410\_6 Start: 4904, Stop: 5836, Start Num: 28

Candidate Starts for Shlim410\_6:

(Start: 28 @4904 has 134 MA's), (36, 4928), (42, 4967), (43, 4970), (50, 5012), (59, 5075), (74, 5210), (79, 5228), (84, 5255), (98, 5339), (100, 5348), (110, 5411), (122, 5468), (127, 5486), (136, 5513), (139, 5537), (143, 5552), (151, 5582), (158, 5612), (167, 5651), (191, 5783), (194, 5792),

Gene: Sicarius2\_10 Start: 8104, Stop: 8994, Start Num: 29

Candidate Starts for Sicarius2\_10:

(Start: 29 @8104 has 19 MA's), (45, 8188), (64, 8356), (69, 8386), (76, 8422), (87, 8482), (100, 8551), (116, 8620), (127, 8689), (156, 8779), (170, 8839), (172, 8848), (187, 8914), (191, 8935),

Gene: Sidious\_6 Start: 4898, Stop: 5827, Start Num: 28

Candidate Starts for Sidious\_6:

(Start: 28 @4898 has 134 MA's), (43, 4961), (50, 5003), (59, 5066), (74, 5201), (79, 5219), (98, 5330), (126, 5474), (136, 5504), (155, 5588), (158, 5603), (167, 5642), (179, 5702), (191, 5774), (194, 5783),

Gene: SoilAssassin\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for SoilAssassin\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Sonah\_6 Start: 5299, Stop: 6243, Start Num: 28

Candidate Starts for Sonah\_6:

(Start: 28 @5299 has 134 MA's), (39, 5332), (46, 5383), (64, 5545), (78, 5620), (83, 5647), (88, 5674), (91, 5689), (92, 5704), (111, 5800), (119, 5854), (123, 5872), (133, 5905), (148, 5977), (166, 6058), (172, 6085), (180, 6121), (182, 6136), (191, 6187), (193, 6193), (198, 6232),

Gene: Sonny\_9 Start: 7577, Stop: 8464, Start Num: 29

Candidate Starts for Sonny\_9:

(Start: 29 @7577 has 19 MA's), (69, 7859), (76, 7895), (83, 7931), (87, 7955), (100, 8024), (102, 8039), (116, 8093), (117, 8108), (127, 8162), (158, 8264), (170, 8312), (191, 8408),

Gene: Sproutie\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Sproutie\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: StAB\_6 Start: 5123, Stop: 6055, Start Num: 32

Candidate Starts for StAB\_6:

(23, 5090), (Start: 32 @5123 has 18 MA's), (64, 5360), (68, 5384), (73, 5414), (76, 5426), (83, 5462), (84, 5465), (89, 5498), (119, 5669), (126, 5696), (137, 5741), (151, 5795), (162, 5843), (176, 5915), (183, 5951), (184, 5963), (185, 5966), (189, 5987), (195, 6026), (198, 6044),

Gene: StevieBAY\_9 Start: 7550, Stop: 8437, Start Num: 29

Candidate Starts for StevieBAY\_9:

(Start: 29 @7550 has 19 MA's), (58, 7718), (69, 7832), (76, 7868), (87, 7928), (100, 7997), (119, 8102), (128, 8138), (154, 8219), (158, 8237), (170, 8285), (187, 8360), (191, 8381),

Gene: StevieRay\_6 Start: 5285, Stop: 6229, Start Num: 28

Candidate Starts for StevieRay\_6:

(Start: 28 @5285 has 134 MA's), (40, 5330), (46, 5369), (64, 5531), (78, 5606), (83, 5633), (88, 5660), (91, 5675), (92, 5690), (107, 5765), (111, 5786), (123, 5858), (133, 5891), (136, 5900), (148, 5963), (166, 6044), (167, 6047), (172, 6071), (180, 6107), (182, 6122), (191, 6173), (193, 6179), (194, 6182), (198, 6218),

Gene: Stiles\_6 Start: 5123, Stop: 6055, Start Num: 32

Candidate Starts for Stiles\_6:

(23, 5090), (Start: 32 @5123 has 18 MA's), (64, 5360), (68, 5384), (73, 5414), (76, 5426), (83, 5462), (84, 5465), (89, 5498), (119, 5669), (126, 5696), (137, 5741), (151, 5795), (162, 5843), (176, 5915), (183, 5951), (184, 5963), (185, 5966), (189, 5987), (195, 6026), (198, 6044),

Gene: StressBall\_6 Start: 5281, Stop: 6225, Start Num: 28

Candidate Starts for StressBall\_6:

(Start: 28 @5281 has 134 MA's), (40, 5326), (46, 5365), (64, 5527), (78, 5602), (83, 5629), (88, 5656), (91, 5671), (92, 5686), (107, 5761), (111, 5782), (123, 5854), (133, 5887), (136, 5896), (148, 5959), (166, 6040), (167, 6043), (172, 6067), (180, 6103), (182, 6118), (191, 6169), (193, 6175), (194, 6178), (198, 6214),

Gene: Stuff\_15 Start: 11658, Stop: 12632, Start Num: 34

Candidate Starts for Stuff\_15:

(Start: 32 @11652 has 18 MA's), (Start: 34 @11658 has 1 MA's), (37, 11676), (49, 11751), (52, 11769), (53, 11772), (62, 11862), (63, 11868), (68, 11916), (72, 11934), (84, 11997), (85, 12009), (86, 12012), (92, 12051), (130, 12267), (131, 12270), (139, 12309), (170, 12450), (188, 12534), (190, 12543), (197, 12582),

Gene: Suerte\_6 Start: 4843, Stop: 5766, Start Num: 28

Candidate Starts for Suerte\_6:

(Start: 28 @4843 has 134 MA's), (46, 4927), (54, 4975), (90, 5230), (92, 5248), (119, 5395), (122, 5410), (141, 5482), (151, 5515), (169, 5590), (174, 5623), (187, 5689), (191, 5710), (198, 5755),

Gene: TaeYoung\_9 Start: 7578, Stop: 8465, Start Num: 29

Candidate Starts for TaeYoung\_9:

(Start: 29 @7578 has 19 MA's), (69, 7860), (76, 7896), (83, 7932), (87, 7956), (100, 8025), (102, 8040), (116, 8094), (117, 8109), (127, 8163), (158, 8265), (170, 8313), (191, 8409),

Gene: Techage\_6 Start: 5302, Stop: 6246, Start Num: 28

Candidate Starts for Techage\_6:

(Start: 28 @5302 has 134 MA's), (39, 5335), (46, 5386), (63, 5524), (64, 5548), (78, 5623), (83, 5650), (84, 5653), (88, 5677), (91, 5692), (92, 5707), (111, 5803), (119, 5857), (123, 5875), (133, 5908), (148, 5980), (166, 6061), (172, 6088), (180, 6124), (182, 6139), (191, 6190), (193, 6196), (198, 6235),

Gene: Thespis\_6 Start: 5281, Stop: 6225, Start Num: 28

Candidate Starts for Thespis\_6:

(Start: 28 @5281 has 134 MA's), (40, 5326), (46, 5365), (64, 5527), (78, 5602), (83, 5629), (84, 5632), (88, 5656), (91, 5671), (92, 5686), (107, 5761), (111, 5782), (123, 5854), (133, 5887), (136, 5896), (148, 5959), (166, 6040), (167, 6043), (172, 6067), (180, 6103), (182, 6118), (191, 6169), (193, 6175), (194, 6178), (198, 6214),

Gene: Thimann\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for Thimann\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (120, 5900), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (191, 6212), (198, 6257),

Gene: ThulaThula\_6 Start: 5313, Stop: 6269, Start Num: 28

Candidate Starts for ThulaThula\_6:

(Start: 28 @5313 has 134 MA's), (40, 5358), (46, 5397), (47, 5400), (51, 5430), (63, 5535), (75, 5622), (78, 5634), (83, 5661), (88, 5688), (90, 5700), (92, 5718), (111, 5826), (119, 5880), (123, 5898), (133,

5931), (148, 6003), (166, 6084), (171, 6108), (172, 6111), (182, 6162), (191, 6213), (193, 6219), (198, 6258),

Gene: Timinator\_9 Start: 7549, Stop: 8436, Start Num: 29

Candidate Starts for Timinator\_9:

(Start: 29 @7549 has 19 MA's), (58, 7717), (69, 7831), (76, 7867), (87, 7927), (100, 7996), (119, 8101), (128, 8137), (154, 8218), (158, 8236), (170, 8284), (187, 8359), (191, 8380),

Gene: Toast\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Toast\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (46, 5284), (61, 5413), (73, 5500), (79, 5524), (98, 5635), (101, 5650), (126, 5782), (136, 5812), (156, 5899), (157, 5905), (158, 5911), (199, 6130),

Gene: Tophat\_12 Start: 9682, Stop: 10578, Start Num: 25

Candidate Starts for Tophat\_12:

(Start: 25 @9682 has 19 MA's), (58, 9853), (61, 9907), (65, 9943), (80, 10021), (94, 10105), (114, 10204), (137, 10324), (172, 10441), (173, 10456), (191, 10528),

Gene: Tortellini\_6 Start: 5252, Stop: 6196, Start Num: 28

Candidate Starts for Tortellini\_6:

(5, 4994), (6, 5006), (8, 5102), (Start: 28 @5252 has 134 MA's), (39, 5285), (46, 5336), (51, 5369), (75, 5561), (83, 5600), (88, 5627), (90, 5639), (95, 5672), (107, 5732), (111, 5753), (119, 5807), (123, 5825), (127, 5840), (133, 5858), (141, 5903), (148, 5930), (158, 5978), (166, 6011), (171, 6035), (182, 6089), (191, 6140), (193, 6146), (198, 6185),

Gene: Troy\_6 Start: 5118, Stop: 6050, Start Num: 32

Candidate Starts for Troy\_6:

(23, 5085), (Start: 32 @5118 has 18 MA's), (64, 5355), (68, 5379), (73, 5409), (76, 5421), (83, 5457), (84, 5460), (89, 5493), (119, 5664), (126, 5691), (137, 5736), (151, 5790), (162, 5838), (176, 5910), (183, 5946), (184, 5958), (185, 5961), (189, 5982), (195, 6021), (198, 6039),

Gene: TuertoX\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for TuertoX\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Twinkle\_6 Start: 4904, Stop: 5836, Start Num: 28

Candidate Starts for Twinkle\_6:

(Start: 28 @4904 has 134 MA's), (36, 4928), (42, 4967), (43, 4970), (50, 5012), (59, 5075), (74, 5210), (79, 5228), (84, 5255), (98, 5339), (100, 5348), (110, 5411), (122, 5468), (127, 5486), (136, 5513), (139, 5537), (143, 5552), (151, 5582), (158, 5612), (167, 5651), (191, 5783), (194, 5792),

Gene: UNTPL\_16 Start: 11770, Stop: 12738, Start Num: 32

Candidate Starts for UNTPL\_16:

(Start: 32 @11770 has 18 MA's), (Start: 34 @11776 has 1 MA's), (37, 11794), (49, 11869), (52, 11887), (53, 11890), (62, 11980), (63, 11986), (68, 12034), (72, 12052), (84, 12115), (85, 12127), (86, 12130), (92, 12169), (131, 12379), (135, 12391), (139, 12418), (140, 12427), (153, 12484), (159, 12508), (188, 12643), (190, 12652),

Gene: Ubuntu\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Ubuntu\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132,



7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: UmaThurman\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for UmaThurman\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (61, 5413), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: Utz\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Utz\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: Vasanti\_6 Start: 4855, Stop: 5778, Start Num: 28

Candidate Starts for Vasanti\_6:

(Start: 28 @4855 has 134 MA's), (46, 4939), (69, 5131), (88, 5230), (90, 5242), (120, 5410), (141, 5494), (147, 5515), (151, 5527), (169, 5602), (174, 5635), (191, 5722),

Gene: Venti\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Venti\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Vibaki\_10 Start: 9201, Stop: 10082, Start Num: 27

Candidate Starts for Vibaki\_10:

(Start: 27 @9201 has 18 MA's), (61, 9414), (64, 9447), (76, 9513), (83, 9549), (100, 9642), (158, 9882), (172, 9939), (178, 9972), (191, 10026),

Gene: Vidya\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Vidya\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),

Gene: Walrus\_6 Start: 5044, Stop: 5973, Start Num: 28

Candidate Starts for Walrus\_6:

(Start: 28 @5044 has 134 MA's), (36, 5065), (43, 5107), (52, 5164), (59, 5212), (64, 5287), (69, 5317), (74, 5347), (79, 5365), (84, 5392), (85, 5404), (89, 5425), (98, 5476), (105, 5512), (122, 5605), (126, 5620), (136, 5650), (143, 5689), (155, 5734), (158, 5749), (166, 5785), (170, 5803), (191, 5920), (194, 5929),

Gene: Webster2\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Webster2\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Weirido19\_7 Start: 5454, Stop: 6380, Start Num: 35

Candidate Starts for Weirido19\_7:

(Start: 30 @5439 has 9 MA's), (35, 5454), (36, 5457), (44, 5511), (46, 5517), (50, 5541), (64, 5679), (66, 5694), (69, 5709), (79, 5757), (85, 5796), (93, 5841), (98, 5868), (121, 5997), (126, 6021), (127, 6024), (134, 6045), (135, 6048), (152, 6123), (154, 6132), (175, 6234), (192, 6324), (199, 6369),

Gene: Whack\_6 Start: 4913, Stop: 5842, Start Num: 28

Candidate Starts for Whack\_6:

(Start: 28 @4913 has 134 MA's), (42, 4973), (43, 4976), (48, 5006), (50, 5018), (59, 5081), (79, 5234), (126, 5489), (131, 5504), (136, 5519), (155, 5603), (166, 5654), (191, 5789), (194, 5798),

Gene: WheatThin\_10 Start: 6844, Stop: 7776, Start Num: 31

Candidate Starts for WheatThin\_10:

(Start: 31 @6844 has 50 MA's), (36, 6859), (45, 6916), (46, 6919), (48, 6931), (64, 7081), (69, 7111), (76, 7147), (79, 7159), (85, 7198), (100, 7279), (136, 7447), (143, 7486), (165, 7579), (192, 7720), (199, 7765),

Gene: Whiteclaw\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Whiteclaw\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: William\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for William\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (46, 5284), (61, 5413), (73, 5500), (79, 5524), (98, 5635), (101, 5650), (126, 5782), (136, 5812), (156, 5899), (158, 5911), (199, 6130),

Gene: Willsammy\_6 Start: 5284, Stop: 6228, Start Num: 28

Candidate Starts for Willsammy\_6:

(Start: 28 @5284 has 134 MA's), (40, 5329), (46, 5368), (64, 5530), (78, 5605), (83, 5632), (84, 5635), (88, 5659), (91, 5674), (92, 5689), (107, 5764), (111, 5785), (123, 5857), (133, 5890), (136, 5899), (148, 5962), (166, 6043), (172, 6070), (180, 6106), (182, 6121), (191, 6172), (193, 6178), (194, 6181), (198, 6217),

Gene: WinkNick\_7 Start: 5345, Stop: 6268, Start Num: 28

Candidate Starts for WinkNick\_7:

(Start: 28 @5345 has 134 MA's), (46, 5429), (54, 5477), (90, 5732), (92, 5750), (119, 5897), (120, 5900), (122, 5912), (141, 5984), (151, 6017), (169, 6092), (174, 6125), (187, 6191), (191, 6212), (198, 6257),

Gene: Wishmaker\_9 Start: 6586, Stop: 7542, Start Num: 28

Candidate Starts for Wishmaker\_9:

(Start: 28 @6586 has 134 MA's), (42, 6646), (49, 6688), (50, 6691), (64, 6829), (72, 6871), (76, 6895), (79, 6907), (85, 6946), (86, 6949), (87, 6955), (95, 7003), (98, 7018), (106, 7063), (127, 7180), (132, 7195), (136, 7207), (138, 7225), (146, 7255), (155, 7297), (156, 7300), (158, 7312), (168, 7354), (175, 7396), (199, 7531),

Gene: Wisp\_6 Start: 5209, Stop: 6138, Start Num: 31

Candidate Starts for Wisp\_6:

(Start: 31 @5209 has 50 MA's), (36, 5224), (41, 5248), (46, 5284), (50, 5308), (61, 5413), (64, 5446), (79, 5524), (84, 5551), (100, 5644), (101, 5650), (126, 5782), (136, 5812), (139, 5836), (143, 5851), (156, 5899), (158, 5911), (199, 6130),

Gene: Wocket\_6 Start: 5200, Stop: 6132, Start Num: 31

Candidate Starts for Wocket\_6:

(19, 5110), (Start: 31 @5200 has 50 MA's), (36, 5215), (41, 5239), (46, 5275), (50, 5299), (61, 5404), (79, 5515), (84, 5542), (98, 5626), (100, 5635), (125, 5770), (136, 5803), (139, 5827), (156, 5890), (158, 5902), (199, 6121),

Gene: Wyborn\_10 Start: 7965, Stop: 8855, Start Num: 29

Candidate Starts for Wyborn\_10:

(Start: 29 @7965 has 19 MA's), (45, 8049), (64, 8217), (69, 8247), (76, 8283), (87, 8343), (100, 8412), (116, 8481), (119, 8517), (127, 8550), (156, 8640), (170, 8700), (172, 8709), (181, 8745), (187, 8775), (191, 8796),

Gene: Xavia\_6 Start: 5296, Stop: 6240, Start Num: 28

Candidate Starts for Xavia\_6:

(Start: 28 @5296 has 134 MA's), (40, 5341), (46, 5380), (64, 5542), (78, 5617), (83, 5644), (88, 5671), (91, 5686), (92, 5701), (107, 5776), (111, 5797), (123, 5869), (133, 5902), (136, 5911), (148, 5974), (166, 6055), (167, 6058), (172, 6082), (180, 6118), (182, 6133), (191, 6184), (193, 6190), (194, 6193), (198, 6229),

Gene: Yeet412\_6 Start: 4854, Stop: 5777, Start Num: 28

Candidate Starts for Yeet412\_6:

(Start: 28 @4854 has 134 MA's), (46, 4938), (54, 4986), (69, 5130), (88, 5229), (90, 5241), (120, 5409), (141, 5493), (147, 5514), (151, 5526), (161, 5565), (169, 5601), (174, 5634), (191, 5721),

Gene: Yeezy\_6 Start: 4895, Stop: 5824, Start Num: 28

Candidate Starts for Yeezy\_6:

(Start: 28 @4895 has 134 MA's), (43, 4958), (50, 5000), (64, 5138), (74, 5198), (79, 5216), (98, 5327), (126, 5471), (136, 5501), (155, 5585), (158, 5600), (179, 5699), (191, 5771), (194, 5780),

Gene: Zaheer\_10 Start: 6791, Stop: 7720, Start Num: 27

Candidate Starts for Zaheer\_10:

(Start: 27 @6791 has 18 MA's), (63, 7013), (76, 7103), (88, 7166), (164, 7520), (169, 7544), (190, 7658),

Gene: Zarbodnamra\_6 Start: 5208, Stop: 6137, Start Num: 31

Candidate Starts for Zarbodnamra\_6:

(Start: 31 @5208 has 50 MA's), (36, 5223), (41, 5247), (46, 5283), (50, 5307), (61, 5412), (64, 5445), (79, 5523), (84, 5550), (100, 5643), (101, 5649), (126, 5781), (136, 5811), (139, 5835), (143, 5850), (156, 5898), (158, 5910), (199, 6129),

Gene: Zartrosa\_9 Start: 7577, Stop: 8464, Start Num: 29

Candidate Starts for Zartrosa\_9:

(Start: 29 @7577 has 19 MA's), (69, 7859), (83, 7931), (87, 7955), (100, 8024), (102, 8039), (116, 8093), (117, 8108), (127, 8162), (158, 8264), (170, 8312), (191, 8408),

Gene: ZiggyZoo\_6 Start: 5233, Stop: 6162, Start Num: 31

Candidate Starts for ZiggyZoo\_6:

(Start: 31 @5233 has 50 MA's), (36, 5248), (41, 5272), (46, 5308), (50, 5332), (64, 5470), (79, 5548), (84, 5575), (100, 5668), (101, 5674), (126, 5806), (136, 5836), (139, 5860), (143, 5875), (156, 5923), (158, 5935), (199, 6154),

Gene: Zilizebeth\_6 Start: 5294, Stop: 6238, Start Num: 28

Candidate Starts for Zilizebeth\_6:

(Start: 28 @5294 has 134 MA's), (40, 5339), (46, 5378), (64, 5540), (78, 5615), (83, 5642), (88, 5669), (91, 5684), (92, 5699), (107, 5774), (111, 5795), (123, 5867), (133, 5900), (136, 5909), (148, 5972), (166, 6053), (167, 6056), (172, 6080), (180, 6116), (182, 6131), (191, 6182), (193, 6188), (194, 6191), (198, 6227),