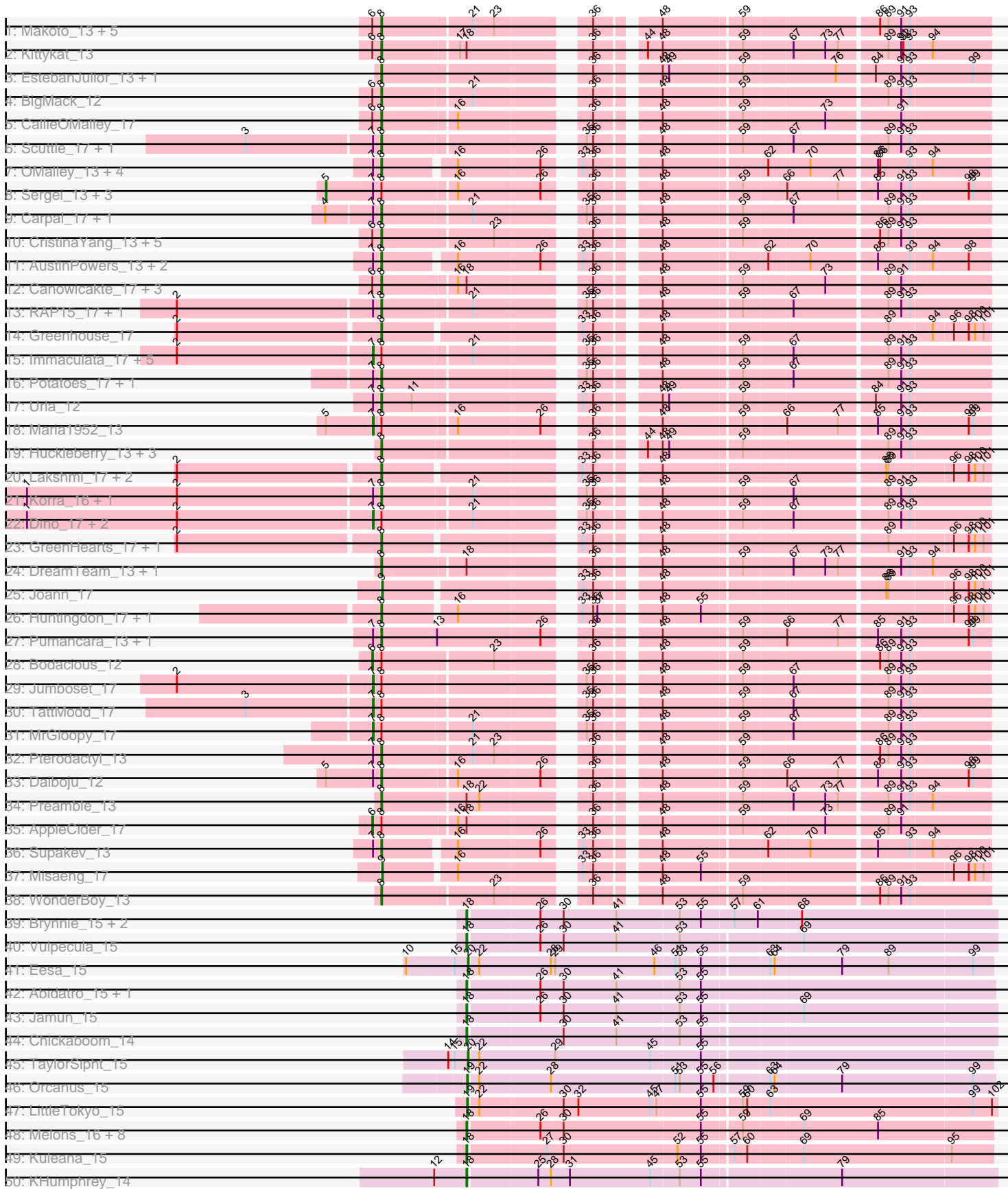
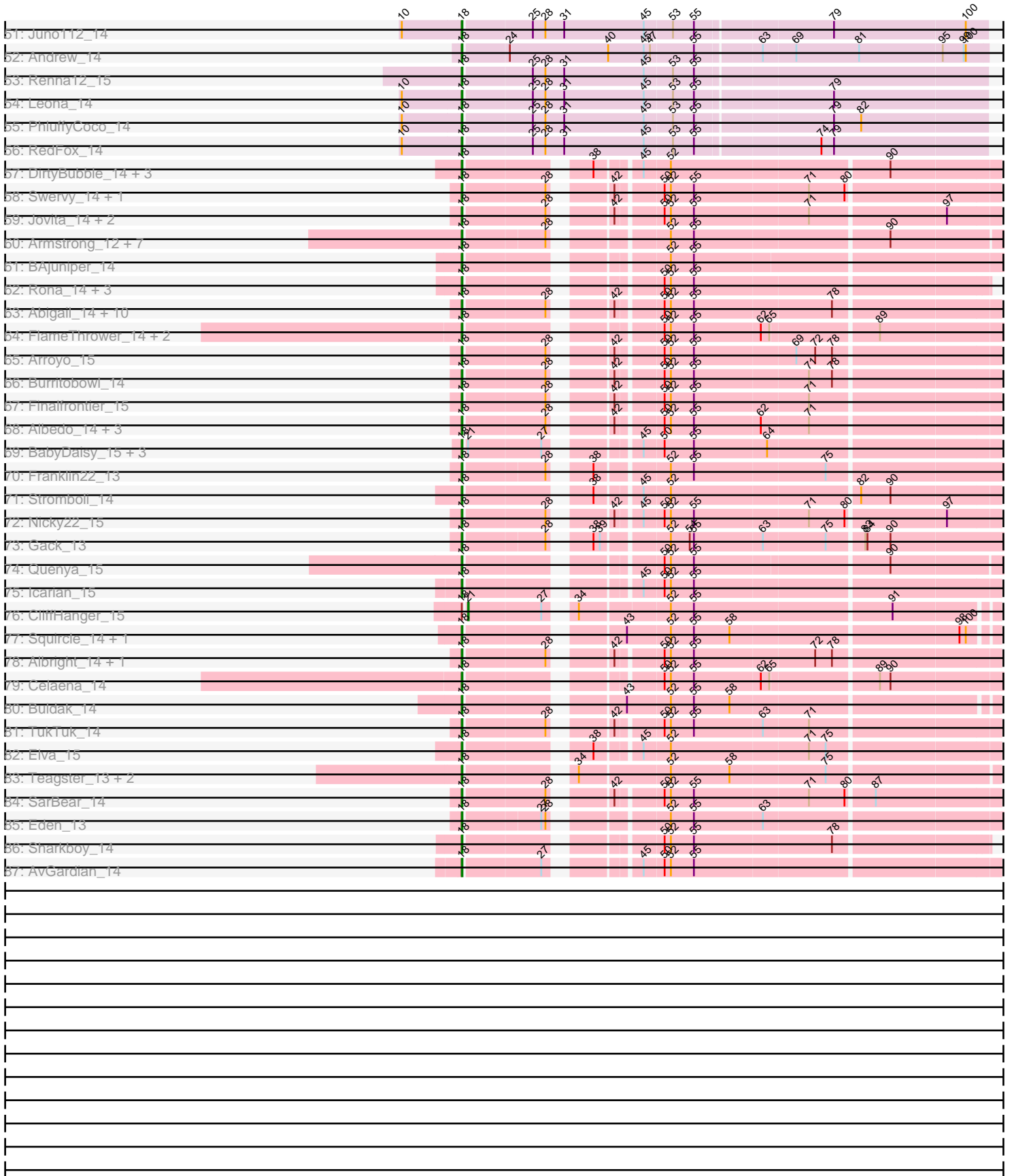


Pham 219453



Pham 219453



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 219453 Report

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

Pham number 219453 has 180 members, 0 are drafts.

Phages represented in each track:

- Track 1 : Makoto\_13, PitaDog\_13, Christian\_13, DrRobert\_13, OurGirlNessie\_13, Lucy\_13
- Track 2 : Kittykat\_13
- Track 3 : EstebanJulior\_13, MamaPearl\_13
- Track 4 : BigMack\_12
- Track 5 : CallieOMalley\_17
- Track 6 : Scuttle\_17, Riverdale\_17
- Track 7 : OMalley\_13, Eunoia\_13, Aledel\_12, Chridison\_13, Riovina\_13
- Track 8 : Sergei\_13, KingBob\_13, Herb\_13, Temper16\_13
- Track 9 : Carpal\_17, Beethoven\_17
- Track 10 : CristinaYang\_13, Lasagna\_13, LilStuart\_13, Nancia\_13, Lennox\_13, ChewChew\_13
- Track 11 : AustinPowers\_13, HunterDalle\_13, Vulture\_13
- Track 12 : Canowicakte\_17, Suppi\_17, Wayne\_16, Litotes\_17
- Track 13 : RAP15\_17, Vallejo\_17
- Track 14 : Greenhouse\_17
- Track 15 : Immaculata\_17, Glenn\_17, Rozby\_17, Savage2526\_17, MeganNoll\_16, Kalizoi\_17
- Track 16 : Potatoes\_17, Cholula\_17
- Track 17 : Urla\_12
- Track 18 : Maria1952\_13
- Track 19 : Huckleberry\_13, HeadNerd\_12, Bennie\_13, Moki\_13
- Track 20 : Lakshmi\_17, Albanese\_17, Oxynfrius\_17
- Track 21 : Korra\_16, Wawa\_17
- Track 22 : Dino\_17, BrotherBLo\_17, Zorro\_17
- Track 23 : GreenHearts\_17, Nubia\_16
- Track 24 : DreamTeam\_13, Gisselle\_13
- Track 25 : Joann\_17
- Track 26 : Huntingdon\_17, RcigaStruga\_17
- Track 27 : Pumancara\_13, PinkFriday\_13
- Track 28 : Bodacious\_12
- Track 29 : Jumboset\_17
- Track 30 : TattModd\_17
- Track 31 : MrGloopy\_17
- Track 32 : Pterodactyl\_13
- Track 33 : Daiboju\_12
- Track 34 : Preamble\_13

- Track 35 : AppleCider\_17
- Track 36 : Supakev\_13
- Track 37 : Misaeng\_17
- Track 38 : WonderBoy\_13
- Track 39 : Brynnie\_15, Ruchi\_15, Basilisk\_15
- Track 40 : Vulpecula\_15
- Track 41 : Eesa\_15
- Track 42 : Abidatro\_15, Galaxy\_15
- Track 43 : Jamun\_15
- Track 44 : Chickaboom\_14
- Track 45 : TaylorSipht\_15
- Track 46 : Orcanus\_15
- Track 47 : LittleTokyo\_15
- Track 48 : Melons\_16, Polka\_15, Amelia\_16, Cote\_16, Lunar\_15, Daob\_16, Coral\_15, Kepler\_15, HannahPhantana\_16
- Track 49 : Kuleana\_15
- Track 50 : KHumphrey\_14
- Track 51 : Juno112\_14
- Track 52 : Andrew\_14
- Track 53 : Renna12\_15
- Track 54 : Leona\_14
- Track 55 : PhluffyCoco\_14
- Track 56 : RedFox\_14
- Track 57 : DirtyBubble\_14, Stoor\_14, SanaSana\_15, BabyYoda\_14
- Track 58 : Swervy\_14, Slay\_14
- Track 59 : Jovita\_14, QMacho\_15, Eula\_14
- Track 60 : Armstrong\_12, Clayda5\_13, Rollins\_12, Coltrane\_12, Vitas\_13, Brahms\_12, Bernstein\_12, Skylord\_13
- Track 61 : BAjuniper\_14
- Track 62 : Rona\_14, Kieran\_14, ChiliPepper\_14, Dismas\_14
- Track 63 : Abigail\_14, DickRichards\_14, Avocadoman\_14, Johnathan\_14, CroZenni\_14, SansAfet\_14, BelmontSKP\_15, LimaBean\_14, Kenzers\_14, Lynlen\_14, AnnaLie\_15
- Track 64 : FlameThrower\_14, Bachaco\_14, Katzastrophic\_14
- Track 65 : Arroyo\_15
- Track 66 : Burritobowl\_14
- Track 67 : Finalfrontier\_15
- Track 68 : Albedo\_14, BubbaBear\_14, Doobus\_14, Phisb\_14
- Track 69 : BabyDaisy\_15, Didgeridoo\_15, IndyLu\_14, Lahqtemish\_14
- Track 70 : Franklin22\_13
- Track 71 : Stromboli\_14
- Track 72 : Nicky22\_15
- Track 73 : Gack\_13
- Track 74 : Quenya\_15
- Track 75 : Icarian\_15
- Track 76 : CliffHanger\_15
- Track 77 : Squircle\_14, Olliecat\_14
- Track 78 : Albright\_14, Softsoap\_14
- Track 79 : Celaena\_14
- Track 80 : Buldak\_14
- Track 81 : TukTuk\_14
- Track 82 : Elva\_15
- Track 83 : Teagster\_13, Shayna\_13, SunnyD\_13

- Track 84 : SarBear\_14
- Track 85 : Eden\_13
- Track 86 : Sharkboy\_14
- Track 87 : AvGardian\_14

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

The start number called the most often in the published annotations is 18, it was called in 93 of the 180 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abidatro\_15, Abigail\_14, Albedo\_14, Albright\_14, Amelia\_16, Andrew\_14, AnnaLie\_15, Armstrong\_12, Arroyo\_15, AvGardian\_14, Avocadoman\_14, BAjuniper\_14, BabyDaisy\_15, BabyYoda\_14, Bachaco\_14, Basilisk\_15, BelmontSKP\_15, Bernstein\_12, Brahms\_12, Brynnie\_15, BubbaBear\_14, Buldak\_14, Burritobowl\_14, Celaena\_14, Chickaboom\_14, ChiliPepper\_14, Clayda5\_13, Coltrane\_12, Coral\_15, Cote\_16, CroZenni\_14, Daob\_16, DickRichards\_14, Didgeridoo\_15, DirtyBubble\_14, Dismas\_14, Doobus\_14, Eden\_13, Elva\_15, Eula\_14, Finalfrontier\_15, FlameThrower\_14, Franklin22\_13, Gack\_13, Galaxy\_15, HannahPhantana\_16, Icarian\_15, IndyLu\_14, Jamun\_15, Johnathan\_14, Jovita\_14, Juno112\_14, KHumphrey\_14, Katzastrophic\_14, Kenzers\_14, Kepler\_15, Kieran\_14, Kuleana\_15, Lahqtemish\_14, Leona\_14, LimaBean\_14, Lunar\_15, Lynlen\_14, Melons\_16, Nicky22\_15, Olliecat\_14, Phisb\_14, PhluffyCoco\_14, Polka\_15, QMacho\_15, Quenya\_15, RedFox\_14, Renna12\_15, Rollins\_12, Rona\_14, Ruchi\_15, SanaSana\_15, SansAfet\_14, SarBear\_14, Sharkboy\_14, Shayna\_13, Skylord\_13, Slay\_14, Softsoap\_14, Squirrel\_14, Stoor\_14, Stromboli\_14, SunnyD\_13, Swervy\_14, Teagster\_13, TukTuk\_14, Vitas\_13, Vulpecula\_15,

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

- AppleCider\_17, Canowicakte\_17, CliffHanger\_15, DreamTeam\_13, Gisselle\_13, Kittykat\_13, Litotes\_17, Preamble\_13, Suppi\_17, Wayne\_16,

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

- Albanese\_17, Aledel\_12, AustinPowers\_13, Beethoven\_17, Bennie\_13, BigMack\_12, Bodacious\_12, BrotherBLo\_17, CallieOMalley\_17, Carpal\_17, ChewChew\_13, Cholula\_17, Chridison\_13, Christian\_13, CristinaYang\_13, Daiboju\_12, Dino\_17, DrRobert\_13, Eesa\_15, EstebanJulior\_13, Eunoia\_13, Glenn\_17, GreenHearts\_17, Greenhouse\_17, HeadNerd\_12, Herb\_13, Huckleberry\_13, HunterDalle\_13, Huntingdon\_17, Immaculata\_17, Joann\_17, Jumboset\_17, Kalizoi\_17, KingBob\_13, Korra\_16, Lakshmi\_17, Lasagna\_13, Lennox\_13, LilStuart\_13, LittleTokyo\_15, Lucy\_13, Makoto\_13, MamaPearl\_13, Maria1952\_13, MeganNoll\_16, Misaeng\_17, Moki\_13, MrGloopy\_17, Nancia\_13, Nubia\_16, OMalley\_13, Orcanus\_15, OurGirlNessie\_13, Oxynfrius\_17, PinkFriday\_13, PitaDog\_13, Potatoes\_17, Pterodactyl\_13, Pumancara\_13, RAP15\_17, RcigaStruga\_17, Riovina\_13, Riverdale\_17, Rozby\_17, Savage2526\_17, Scuttle\_17, Sergei\_13, Supakev\_13, TattModd\_17, TaylorSipht\_15, Temper16\_13, Urla\_12, Vallejo\_17, Vulture\_13, Wawa\_17, WonderBoy\_13, Zorro\_17,

**Summary by start number:**

Start 5:

- Found in 6 of 180 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 4 of 180
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Herb\_13 (AK), KingBob\_13 (AK), Serge\_13 (AK), Temper16\_13 (AK),

Start 6:

- Found in 21 of 180 ( 11.7% ) of genes in pham
- Manual Annotations of this start: 2 of 180
- Called 9.5% of time when present
- Phage (with cluster) where this start called: AppleCider\_17 (AK), Bodacious\_12 (AK),

Start 7:

- Found in 41 of 180 ( 22.8% ) of genes in pham
- Manual Annotations of this start: 13 of 180
- Called 31.7% of time when present
- Phage (with cluster) where this start called: BrotherBLo\_17 (AK), Dino\_17 (AK), Glenn\_17 (AK), Immaculata\_17 (AK), Jumboset\_17 (AK), Kalizoi\_17 (AK), Maria1952\_13 (AK), MeganNoll\_16 (AK), MrGloopy\_17 (AK), Rozby\_17 (AK), Savage2526\_17 (AK), TattModd\_17 (AK), Zorro\_17 (AK),

Start 8:

- Found in 80 of 180 ( 44.4% ) of genes in pham
- Manual Annotations of this start: 61 of 180
- Called 76.2% of time when present
- Phage (with cluster) where this start called: Albanese\_17 (AK), Aledel\_12 (AK), AustinPowers\_13 (AK), Beethoven\_17 (AK), Bennie\_13 (AK), BigMack\_12 (AK), CallieOMalley\_17 (AK), Canowicakte\_17 (AK), Carpal\_17 (AK), ChewChew\_13 (AK), Cholula\_17 (AK), Chridison\_13 (AK), Christian\_13 (AK), CristinaYang\_13 (AK), Daiboju\_12 (AK), DrRobert\_13 (AK), DreamTeam\_13 (AK), EstebanJulior\_13 (AK), Eunoia\_13 (AK), Gisselle\_13 (AK), GreenHearts\_17 (AK), Greenhouse\_17 (AK), HeadNerd\_12 (AK), Huckleberry\_13 (AK), HunterDalle\_13 (AK), Huntingdon\_17 (AK), Kittykat\_13 (AK), Korra\_16 (AK), Lakshmi\_17 (AK), Lasagna\_13 (AK), Lennox\_13 (AK), LilStuart\_13 (AK), Litotes\_17 (AK), Lucy\_13 (AK), Makoto\_13 (AK), MamaPearl\_13 (AK), Moki\_13 (AK), Nancia\_13 (AK), Nubia\_16 (AK), OMalley\_13 (AK), OurGirlNessie\_13 (AK), Oxynfrius\_17 (AK), PinkFriday\_13 (AK), PitaDog\_13 (AK), Potatoes\_17 (AK), Preamble\_13 (AK), Pterodactyl\_13 (AK), Pumancara\_13 (AK), RAP15\_17 (AK), RcigaStruga\_17 (AK), Riovina\_13 (AK), Riverdale\_17 (AK), Scuttle\_17 (AK), Supakev\_13 (AK), Suppi\_17 (AK), Urla\_12 (AK), Vallejo\_17 (AK), Vulture\_13 (AK), Wawa\_17 (AK), Wayne\_16 (AK), WonderBoy\_13 (AK),

Start 9:

- Found in 2 of 180 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 2 of 180
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Joann\_17 (AK), Misaeng\_17 (AK),

Start 18:

- Found in 103 of 180 ( 57.2% ) of genes in pham
- Manual Annotations of this start: 93 of 180
- Called 90.3% of time when present

- Phage (with cluster) where this start called: Abidatro\_15 (AS1), Abigail\_14 (EB), Albedo\_14 (EB), Albright\_14 (EB), Amelia\_16 (AS2), Andrew\_14 (AS3), AnnaLie\_15 (EB), Armstrong\_12 (EB), Arroyo\_15 (EB), AvGardian\_14 (EB), Avocadoman\_14 (EB), BAjuniper\_14 (EB), BabyDaisy\_15 (EB), BabyYoda\_14 (EB), Bachaco\_14 (EB), Basilisk\_15 (AS1), BelmontSKP\_15 (EB), Bernstein\_12 (EB), Brahms\_12 (EB), Brynnie\_15 (AS1), BubbaBear\_14 (EB), Buldak\_14 (EB), Burritobowl\_14 (EB), Celaena\_14 (EB), Chickaboom\_14 (AS1), ChiliPepper\_14 (EB), Clayda5\_13 (EB), Coltrane\_12 (EB), Coral\_15 (AS2), Cote\_16 (AS2), CroZenni\_14 (EB), Daob\_16 (AS2), DickRichards\_14 (EB), Didgeridoo\_15 (EB), DirtyBubble\_14 (EB), Dismas\_14 (EB), Doobus\_14 (EB), Eden\_13 (EB), Elva\_15 (EB), Eula\_14 (EB), Finalfrontier\_15 (EB), FlameThrower\_14 (EB), Franklin22\_13 (EB), Gack\_13 (EB), Galaxy\_15 (AS1), HannahPhantana\_16 (AS2), Icarian\_15 (EB), IndyLu\_14 (EB), Jamun\_15 (AS1), Johnathan\_14 (EB), Jovita\_14 (EB), Juno112\_14 (AS3), KHumphrey\_14 (AS3), Katzastrophic\_14 (EB), Kenzers\_14 (EB), Kepler\_15 (AS2), Kieran\_14 (EB), Kuleana\_15 (AS2), Lahqtemish\_14 (EB), Leona\_14 (AS3), LimaBean\_14 (EB), Lunar\_15 (AS2), Lynlen\_14 (EB), Melons\_16 (AS2), Nicky22\_15 (EB), Olliecat\_14 (EB), Phisb\_14 (EB), PhluffyCoco\_14 (AS3), Polka\_15 (AS2), QMacho\_15 (EB), Quenya\_15 (EB), RedFox\_14 (AS3), Renna12\_15 (AS3), Rollins\_12 (EB), Rona\_14 (EB), Ruchi\_15 (AS1), SanaSana\_15 (EB), SansAfet\_14 (EB), SarBear\_14 (EB), Sharkboy\_14 (EB), Shayna\_13 (EB), Skylord\_13 (EB), Slay\_14 (EB), Softsoap\_14 (EB), Squircle\_14 (EB), Stoor\_14 (EB), Stromboli\_14 (EB), SunnyD\_13 (EB), Swervy\_14 (EB), Teagster\_13 (EB), TukTuk\_14 (EB), Vitas\_13 (EB), Vulpecula\_15 (AS1),

#### Start 19:

- Found in 2 of 180 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 2 of 180
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LittleTokyo\_15 (AS2), Orcanus\_15 (AS1),

#### Start 20:

- Found in 2 of 180 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 2 of 180
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Eesa\_15 (AS1), TaylorSipht\_15 (AS1),

#### Start 21:

- Found in 29 of 180 ( 16.1% ) of genes in pham
- Manual Annotations of this start: 1 of 180
- Called 3.4% of time when present
- Phage (with cluster) where this start called: CliffHanger\_15 (EB),

### Summary by clusters:

There are 5 clusters represented in this pham: AS3, AS2, AK, AS1, EB,

Info for manual annotations of cluster AK:

- Start number 5 was manually annotated 4 times for cluster AK.
- Start number 6 was manually annotated 2 times for cluster AK.
- Start number 7 was manually annotated 13 times for cluster AK.
- Start number 8 was manually annotated 61 times for cluster AK.
- Start number 9 was manually annotated 2 times for cluster AK.

Info for manual annotations of cluster AS1:

- Start number 18 was manually annotated 8 times for cluster AS1.
- Start number 19 was manually annotated 1 time for cluster AS1.
- Start number 20 was manually annotated 2 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 18 was manually annotated 10 times for cluster AS2.
- Start number 19 was manually annotated 1 time for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 18 was manually annotated 7 times for cluster AS3.

Info for manual annotations of cluster EB:

- Start number 18 was manually annotated 68 times for cluster EB.
- Start number 21 was manually annotated 1 time for cluster EB.

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

Gene: Abidatro\_15 Start: 9744, Stop: 10471, Start Num: 18

Candidate Starts for Abidatro\_15:

(Start: 18 @9744 has 93 MA's), (26, 9840), (30, 9873), (41, 9948), (53, 10035), (55, 10065),

Gene: Abigail\_14 Start: 9362, Stop: 10053, Start Num: 18

Candidate Starts for Abigail\_14:

(Start: 18 @9362 has 93 MA's), (28, 9473), (42, 9536), (50, 9593), (52, 9602), (55, 9635), (78, 9827),

Gene: Albanese\_17 Start: 11894, Stop: 12654, Start Num: 8

Candidate Starts for Albanese\_17:

(2, 11618), (Start: 8 @11894 has 61 MA's), (33, 12131), (36, 12146), (48, 12218), (88, 12512), (89, 12515), (96, 12602), (98, 12623), (100, 12632), (101, 12644),

Gene: Albedo\_14 Start: 9208, Stop: 9899, Start Num: 18

Candidate Starts for Albedo\_14:

(Start: 18 @9208 has 93 MA's), (28, 9319), (42, 9382), (50, 9439), (52, 9448), (55, 9481), (62, 9574), (71, 9640),

Gene: Albright\_14 Start: 9243, Stop: 9934, Start Num: 18

Candidate Starts for Albright\_14:

(Start: 18 @9243 has 93 MA's), (28, 9354), (42, 9417), (50, 9474), (52, 9483), (55, 9516), (72, 9684), (78, 9708),

Gene: Aledel\_12 Start: 8974, Stop: 9731, Start Num: 8

Candidate Starts for Aledel\_12:

(Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9067), (26, 9181), (33, 9208), (36, 9223), (48, 9295), (62, 9433), (70, 9487), (85, 9574), (86, 9577), (93, 9619), (94, 9649),

Gene: Amelia\_16 Start: 9644, Stop: 10362, Start Num: 18

Candidate Starts for Amelia\_16:

(Start: 18 @9644 has 93 MA's), (26, 9740), (30, 9773), (55, 9965), (59, 10016), (69, 10097), (85, 10202),



Gene: Andrew\_14 Start: 9438, Stop: 10162, Start Num: 18

Candidate Starts for Andrew\_14:

(Start: 18 @9438 has 93 MA's), (24, 9498), (40, 9639), (45, 9690), (47, 9699), (55, 9759), (63, 9846), (69, 9891), (81, 9981), (95, 10098), (99, 10128), (100, 10131),

Gene: AnnaLie\_15 Start: 9652, Stop: 10343, Start Num: 18

Candidate Starts for AnnaLie\_15:

(Start: 18 @9652 has 93 MA's), (28, 9763), (42, 9826), (50, 9883), (52, 9892), (55, 9925), (78, 10117),

Gene: AppleCider\_17 Start: 11828, Stop: 12606, Start Num: 6

Candidate Starts for AppleCider\_17:

(Start: 6 @11828 has 2 MA's), (Start: 8 @11840 has 61 MA's), (16, 11939), (Start: 18 @11951 has 93 MA's), (36, 12095), (48, 12167), (59, 12272), (73, 12383), (89, 12464), (91, 12482),

Gene: Armstrong\_12 Start: 8785, Stop: 9494, Start Num: 18

Candidate Starts for Armstrong\_12:

(Start: 18 @8785 has 93 MA's), (28, 8893), (52, 9025), (55, 9058), (90, 9325),

Gene: Arroyo\_15 Start: 9713, Stop: 10404, Start Num: 18

Candidate Starts for Arroyo\_15:

(Start: 18 @9713 has 93 MA's), (28, 9824), (42, 9887), (50, 9944), (52, 9953), (55, 9986), (69, 10127), (72, 10154), (78, 10178),

Gene: AustinPowers\_13 Start: 8975, Stop: 9732, Start Num: 8

Candidate Starts for AustinPowers\_13:

(Start: 7 @8966 has 13 MA's), (Start: 8 @8975 has 61 MA's), (16, 9068), (26, 9182), (33, 9209), (36, 9224), (48, 9296), (62, 9434), (70, 9488), (85, 9575), (93, 9620), (94, 9650), (98, 9701),

Gene: AvGardian\_14 Start: 9267, Stop: 9958, Start Num: 18

Candidate Starts for AvGardian\_14:

(Start: 18 @9267 has 93 MA's), (27, 9372), (45, 9471), (50, 9498), (52, 9507), (55, 9540),

Gene: Avocadoman\_14 Start: 9305, Stop: 9996, Start Num: 18

Candidate Starts for Avocadoman\_14:

(Start: 18 @9305 has 93 MA's), (28, 9416), (42, 9479), (50, 9536), (52, 9545), (55, 9578), (78, 9770),

Gene: BAjuniper\_14 Start: 8933, Stop: 9645, Start Num: 18

Candidate Starts for BAjuniper\_14:

(Start: 18 @8933 has 93 MA's), (52, 9173), (55, 9206),

Gene: BabyDaisy\_15 Start: 9464, Stop: 10155, Start Num: 18

Candidate Starts for BabyDaisy\_15:

(Start: 18 @9464 has 93 MA's), (Start: 21 @9467 has 1 MA's), (27, 9569), (45, 9668), (50, 9695), (55, 9737), (64, 9839),

Gene: BabyYoda\_14 Start: 9464, Stop: 10155, Start Num: 18

Candidate Starts for BabyYoda\_14:

(Start: 18 @9464 has 93 MA's), (38, 9614), (45, 9668), (52, 9704), (90, 10004),

Gene: Bachaco\_14 Start: 9138, Stop: 9847, Start Num: 18

Candidate Starts for Bachaco\_14:

(Start: 18 @9138 has 93 MA's), (50, 9369), (52, 9378), (55, 9411), (62, 9504), (65, 9516), (89, 9660),

Gene: Basilisk\_15 Start: 10064, Stop: 10794, Start Num: 18

Candidate Starts for Basilisk\_15:

(Start: 18 @10064 has 93 MA's), (26, 10160), (30, 10193), (41, 10268), (53, 10355), (55, 10385), (57, 10430), (61, 10463), (68, 10520),

Gene: Beethoven\_17 Start: 11795, Stop: 12561, Start Num: 8

Candidate Starts for Beethoven\_17:

(4, 11723), (Start: 7 @11786 has 13 MA's), (Start: 8 @11795 has 61 MA's), (Start: 21 @11915 has 1 MA's), (35, 12041), (36, 12050), (48, 12122), (59, 12227), (67, 12293), (89, 12419), (91, 12437), (93, 12449),

Gene: BelmontSKP\_15 Start: 9652, Stop: 10343, Start Num: 18

Candidate Starts for BelmontSKP\_15:

(Start: 18 @9652 has 93 MA's), (28, 9763), (42, 9826), (50, 9883), (52, 9892), (55, 9925), (78, 10117),

Gene: Bennie\_13 Start: 8948, Stop: 9714, Start Num: 8

Candidate Starts for Bennie\_13:

(Start: 8 @8948 has 61 MA's), (36, 9203), (44, 9254), (48, 9275), (49, 9284), (59, 9380), (89, 9572), (91, 9590), (93, 9602),

Gene: Bernstein\_12 Start: 8845, Stop: 9554, Start Num: 18

Candidate Starts for Bernstein\_12:

(Start: 18 @8845 has 93 MA's), (28, 8953), (52, 9085), (55, 9118), (90, 9385),

Gene: BigMack\_12 Start: 8944, Stop: 9710, Start Num: 8

Candidate Starts for BigMack\_12:

(Start: 6 @8932 has 2 MA's), (Start: 8 @8944 has 61 MA's), (Start: 21 @9064 has 1 MA's), (36, 9199), (48, 9271), (59, 9376), (89, 9568), (91, 9586), (93, 9598),

Gene: Bodacious\_12 Start: 8930, Stop: 9711, Start Num: 6

Candidate Starts for Bodacious\_12:

(Start: 6 @8930 has 2 MA's), (Start: 8 @8942 has 61 MA's), (23, 9095), (36, 9200), (48, 9272), (59, 9377), (86, 9557), (89, 9569), (91, 9587), (93, 9599),

Gene: Brahms\_12 Start: 8785, Stop: 9494, Start Num: 18

Candidate Starts for Brahms\_12:

(Start: 18 @8785 has 93 MA's), (28, 8893), (52, 9025), (55, 9058), (90, 9325),

Gene: BrotherBLo\_17 Start: 11792, Stop: 12567, Start Num: 7

Candidate Starts for BrotherBLo\_17:

(1, 11306), (2, 11519), (Start: 7 @11792 has 13 MA's), (Start: 8 @11801 has 61 MA's), (Start: 21 @11921 has 1 MA's), (35, 12047), (36, 12056), (48, 12128), (59, 12233), (67, 12299), (89, 12425), (91, 12443), (93, 12455),

Gene: Brynnie\_15 Start: 9876, Stop: 10606, Start Num: 18

Candidate Starts for Brynnie\_15:

(Start: 18 @9876 has 93 MA's), (26, 9972), (30, 10005), (41, 10080), (53, 10167), (55, 10197), (57, 10242), (61, 10275), (68, 10332),

Gene: BubbaBear\_14 Start: 9208, Stop: 9899, Start Num: 18

Candidate Starts for BubbaBear\_14:

(Start: 18 @9208 has 93 MA's), (28, 9319), (42, 9382), (50, 9439), (52, 9448), (55, 9481), (62, 9574), (71, 9640),

Gene: Buldak\_14 Start: 9315, Stop: 10006, Start Num: 18

Candidate Starts for Buldak\_14:

(Start: 18 @9315 has 93 MA's), (43, 9507), (52, 9567), (55, 9600), (58, 9651),

Gene: Burritobowl\_14 Start: 9270, Stop: 9961, Start Num: 18

Candidate Starts for Burritobowl\_14:

(Start: 18 @9270 has 93 MA's), (28, 9381), (42, 9444), (50, 9501), (52, 9510), (55, 9543), (71, 9702), (78, 9735),

Gene: CallieOMalley\_17 Start: 11840, Stop: 12606, Start Num: 8

Candidate Starts for CallieOMalley\_17:

(Start: 6 @11828 has 2 MA's), (Start: 8 @11840 has 61 MA's), (16, 11939), (36, 12095), (48, 12167), (59, 12272), (73, 12383), (91, 12482),

Gene: Canowicakte\_17 Start: 11875, Stop: 12641, Start Num: 8

Candidate Starts for Canowicakte\_17:

(Start: 6 @11863 has 2 MA's), (Start: 8 @11875 has 61 MA's), (16, 11974), (Start: 18 @11986 has 93 MA's), (36, 12130), (48, 12202), (59, 12307), (73, 12418), (89, 12499), (91, 12517),

Gene: Carpal\_17 Start: 11802, Stop: 12568, Start Num: 8

Candidate Starts for Carpal\_17:

(4, 11730), (Start: 7 @11793 has 13 MA's), (Start: 8 @11802 has 61 MA's), (Start: 21 @11922 has 1 MA's), (35, 12048), (36, 12057), (48, 12129), (59, 12234), (67, 12300), (89, 12426), (91, 12444), (93, 12456),

Gene: Celaena\_14 Start: 9074, Stop: 9783, Start Num: 18

Candidate Starts for Celaena\_14:

(Start: 18 @9074 has 93 MA's), (50, 9305), (52, 9314), (55, 9347), (62, 9440), (65, 9452), (89, 9596), (90, 9611),

Gene: ChewChew\_13 Start: 8941, Stop: 9710, Start Num: 8

Candidate Starts for ChewChew\_13:

(Start: 6 @8929 has 2 MA's), (Start: 8 @8941 has 61 MA's), (23, 9094), (36, 9199), (48, 9271), (59, 9376), (86, 9556), (89, 9568), (91, 9586), (93, 9598),

Gene: Chickaboom\_14 Start: 9421, Stop: 10145, Start Num: 18

Candidate Starts for Chickaboom\_14:

(Start: 18 @9421 has 93 MA's), (30, 9550), (41, 9625), (53, 9712), (55, 9742),

Gene: ChiliPepper\_14 Start: 9439, Stop: 10115, Start Num: 18

Candidate Starts for ChiliPepper\_14:

(Start: 18 @9439 has 93 MA's), (50, 9670), (52, 9679), (55, 9712),

Gene: Cholula\_17 Start: 11847, Stop: 12613, Start Num: 8

Candidate Starts for Cholula\_17:

(Start: 7 @11838 has 13 MA's), (Start: 8 @11847 has 61 MA's), (35, 12093), (36, 12102), (48, 12174), (59, 12279), (67, 12345), (89, 12471), (91, 12489), (93, 12501),

Gene: Chridison\_13 Start: 8975, Stop: 9732, Start Num: 8

Candidate Starts for Chridison\_13:

(Start: 7 @8966 has 13 MA's), (Start: 8 @8975 has 61 MA's), (16, 9068), (26, 9182), (33, 9209), (36, 9224), (48, 9296), (62, 9434), (70, 9488), (85, 9575), (86, 9578), (93, 9620), (94, 9650),

Gene: Christian\_13 Start: 8942, Stop: 9711, Start Num: 8

Candidate Starts for Christian\_13:

(Start: 6 @8930 has 2 MA's), (Start: 8 @8942 has 61 MA's), (Start: 21 @9065 has 1 MA's), (23, 9095), (36, 9200), (48, 9272), (59, 9377), (86, 9557), (89, 9569), (91, 9587), (93, 9599),

Gene: Clayda5\_13 Start: 8785, Stop: 9494, Start Num: 18

Candidate Starts for Clayda5\_13:

(Start: 18 @8785 has 93 MA's), (28, 8893), (52, 9025), (55, 9058), (90, 9325),

Gene: CliffHanger\_15 Start: 8971, Stop: 9659, Start Num: 21

Candidate Starts for CliffHanger\_15:

(Start: 18 @8968 has 93 MA's), (Start: 21 @8971 has 1 MA's), (27, 9073), (34, 9097), (52, 9217), (55, 9250), (91, 9523),

Gene: Coltrane\_12 Start: 8785, Stop: 9494, Start Num: 18

Candidate Starts for Coltrane\_12:

(Start: 18 @8785 has 93 MA's), (28, 8893), (52, 9025), (55, 9058), (90, 9325),

Gene: Coral\_15 Start: 9483, Stop: 10201, Start Num: 18

Candidate Starts for Coral\_15:

(Start: 18 @9483 has 93 MA's), (26, 9579), (30, 9612), (55, 9804), (59, 9855), (69, 9936), (85, 10041),

Gene: Cote\_16 Start: 9644, Stop: 10362, Start Num: 18

Candidate Starts for Cote\_16:

(Start: 18 @9644 has 93 MA's), (26, 9740), (30, 9773), (55, 9965), (59, 10016), (69, 10097), (85, 10202),

Gene: CristinaYang\_13 Start: 8942, Stop: 9711, Start Num: 8

Candidate Starts for CristinaYang\_13:

(Start: 6 @8930 has 2 MA's), (Start: 8 @8942 has 61 MA's), (23, 9095), (36, 9200), (48, 9272), (59, 9377), (86, 9557), (89, 9569), (91, 9587), (93, 9599),

Gene: CroZenni\_14 Start: 9243, Stop: 9934, Start Num: 18

Candidate Starts for CroZenni\_14:

(Start: 18 @9243 has 93 MA's), (28, 9354), (42, 9417), (50, 9474), (52, 9483), (55, 9516), (78, 9708),

Gene: Daiboju\_12 Start: 8974, Stop: 9737, Start Num: 8

Candidate Starts for Daiboju\_12:

(Start: 5 @8899 has 4 MA's), (Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9073), (26, 9187), (36, 9229), (48, 9301), (59, 9406), (66, 9460), (77, 9532), (85, 9580), (91, 9613), (93, 9625), (98, 9706), (99, 9712),

Gene: Daob\_16 Start: 9647, Stop: 10365, Start Num: 18

Candidate Starts for Daob\_16:

(Start: 18 @9647 has 93 MA's), (26, 9743), (30, 9776), (55, 9968), (59, 10019), (69, 10100), (85, 10205),

Gene: DickRichards\_14 Start: 9737, Stop: 10428, Start Num: 18

Candidate Starts for DickRichards\_14:

(Start: 18 @9737 has 93 MA's), (28, 9848), (42, 9911), (50, 9968), (52, 9977), (55, 10010), (78, 10202),

Gene: Didgeridoo\_15 Start: 9466, Stop: 10157, Start Num: 18

Candidate Starts for Didgeridoo\_15:

(Start: 18 @9466 has 93 MA's), (Start: 21 @9469 has 1 MA's), (27, 9571), (45, 9670), (50, 9697), (55, 9739), (64, 9841),

Gene: Dino\_17 Start: 11791, Stop: 12566, Start Num: 7

Candidate Starts for Dino\_17:

(1, 11305), (2, 11518), (Start: 7 @11791 has 13 MA's), (Start: 8 @11800 has 61 MA's), (Start: 21 @11920 has 1 MA's), (35, 12046), (36, 12055), (48, 12127), (59, 12232), (67, 12298), (89, 12424), (91, 12442), (93, 12454),

Gene: DirtyBubble\_14 Start: 9472, Stop: 10163, Start Num: 18

Candidate Starts for DirtyBubble\_14:

(Start: 18 @9472 has 93 MA's), (38, 9622), (45, 9676), (52, 9712), (90, 10012),

Gene: Dismas\_14 Start: 9439, Stop: 10115, Start Num: 18

Candidate Starts for Dismas\_14:

(Start: 18 @9439 has 93 MA's), (50, 9670), (52, 9679), (55, 9712),

Gene: Doobus\_14 Start: 9474, Stop: 10165, Start Num: 18

Candidate Starts for Doobus\_14:

(Start: 18 @9474 has 93 MA's), (28, 9585), (42, 9648), (50, 9705), (52, 9714), (55, 9747), (62, 9840), (71, 9906),

Gene: DrRobert\_13 Start: 8942, Stop: 9711, Start Num: 8

Candidate Starts for DrRobert\_13:

(Start: 6 @8930 has 2 MA's), (Start: 8 @8942 has 61 MA's), (Start: 21 @9065 has 1 MA's), (23, 9095), (36, 9200), (48, 9272), (59, 9377), (86, 9557), (89, 9569), (91, 9587), (93, 9599),

Gene: DreamTeam\_13 Start: 9012, Stop: 9778, Start Num: 8

Candidate Starts for DreamTeam\_13:

(Start: 8 @9012 has 61 MA's), (Start: 18 @9123 has 93 MA's), (36, 9267), (48, 9339), (59, 9444), (67, 9510), (73, 9555), (77, 9573), (91, 9654), (93, 9666), (94, 9696),

Gene: Eden\_13 Start: 8899, Stop: 9614, Start Num: 18

Candidate Starts for Eden\_13:

(Start: 18 @8899 has 93 MA's), (27, 9001), (28, 9007), (52, 9139), (55, 9172), (63, 9268),

Gene: Eesa\_15 Start: 9662, Stop: 10383, Start Num: 20

Candidate Starts for Eesa\_15:

(10, 9584), (15, 9647), (Start: 20 @9662 has 2 MA's), (22, 9674), (28, 9776), (29, 9782), (46, 9923), (51, 9950), (53, 9956), (55, 9986), (63, 10073), (64, 10079), (79, 10172), (89, 10238), (99, 10355),

Gene: Elva\_15 Start: 9524, Stop: 10215, Start Num: 18

Candidate Starts for Elva\_15:

(Start: 18 @9524 has 93 MA's), (38, 9674), (45, 9728), (52, 9764), (71, 9956), (75, 9980),

Gene: EstebanJulior\_13 Start: 8981, Stop: 9747, Start Num: 8

Candidate Starts for EstebanJulior\_13:

(Start: 8 @8981 has 61 MA's), (36, 9236), (48, 9308), (49, 9317), (59, 9413), (76, 9539), (84, 9587), (91, 9623), (93, 9635), (99, 9722),

Gene: Eula\_14 Start: 9244, Stop: 9935, Start Num: 18

Candidate Starts for Eula\_14:

(Start: 18 @9244 has 93 MA's), (28, 9355), (42, 9418), (50, 9475), (52, 9484), (55, 9517), (71, 9676), (97, 9862),

Gene: Eunoia\_13 Start: 8974, Stop: 9731, Start Num: 8

Candidate Starts for Eunoia\_13:

(Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9067), (26, 9181), (33, 9208), (36, 9223), (48, 9295), (62, 9433), (70, 9487), (85, 9574), (86, 9577), (93, 9619), (94, 9649),

Gene: Finalfrontier\_15 Start: 9756, Stop: 10447, Start Num: 18

Candidate Starts for Finalfrontier\_15:

(Start: 18 @9756 has 93 MA's), (28, 9867), (42, 9930), (50, 9987), (52, 9996), (55, 10029), (71, 10188),

Gene: FlameThrower\_14 Start: 8962, Stop: 9671, Start Num: 18

Candidate Starts for FlameThrower\_14:

(Start: 18 @8962 has 93 MA's), (50, 9193), (52, 9202), (55, 9235), (62, 9328), (65, 9340), (89, 9484),

Gene: Franklin22\_13 Start: 8878, Stop: 9596, Start Num: 18

Candidate Starts for Franklin22\_13:

(Start: 18 @8878 has 93 MA's), (28, 8986), (38, 9025), (52, 9118), (55, 9151), (75, 9334),

Gene: Gack\_13 Start: 8940, Stop: 9655, Start Num: 18

Candidate Starts for Gack\_13:

(Start: 18 @8940 has 93 MA's), (28, 9048), (38, 9087), (39, 9096), (52, 9180), (54, 9207), (55, 9213), (63, 9309), (75, 9396), (83, 9444), (84, 9447), (90, 9480),

Gene: Galaxy\_15 Start: 9750, Stop: 10477, Start Num: 18

Candidate Starts for Galaxy\_15:

(Start: 18 @9750 has 93 MA's), (26, 9846), (30, 9879), (41, 9954), (53, 10041), (55, 10071),

Gene: Gisselle\_13 Start: 9012, Stop: 9778, Start Num: 8

Candidate Starts for Gisselle\_13:

(Start: 8 @9012 has 61 MA's), (Start: 18 @9123 has 93 MA's), (36, 9267), (48, 9339), (59, 9444), (67, 9510), (73, 9555), (77, 9573), (91, 9654), (93, 9666), (94, 9696),

Gene: Glenn\_17 Start: 11843, Stop: 12618, Start Num: 7

Candidate Starts for Glenn\_17:

(2, 11570), (Start: 7 @11843 has 13 MA's), (Start: 8 @11852 has 61 MA's), (Start: 21 @11972 has 1 MA's), (35, 12098), (36, 12107), (48, 12179), (59, 12284), (67, 12350), (89, 12476), (91, 12494), (93, 12506),

Gene: GreenHearts\_17 Start: 11941, Stop: 12701, Start Num: 8

Candidate Starts for GreenHearts\_17:

(2, 11665), (Start: 8 @11941 has 61 MA's), (33, 12178), (36, 12193), (48, 12265), (89, 12562), (96, 12649), (98, 12670), (100, 12679), (101, 12691),

Gene: Greenhouse\_17 Start: 11865, Stop: 12625, Start Num: 8

Candidate Starts for Greenhouse\_17:

(2, 11589), (Start: 8 @11865 has 61 MA's), (33, 12102), (36, 12117), (48, 12189), (89, 12486), (94, 12546), (96, 12573), (98, 12594), (100, 12603), (101, 12615),

Gene: HannahPhantana\_16 Start: 9647, Stop: 10365, Start Num: 18

Candidate Starts for HannahPhantana\_16:

(Start: 18 @9647 has 93 MA's), (26, 9743), (30, 9776), (55, 9968), (59, 10019), (69, 10100), (85, 10205),

Gene: HeadNerd\_12 Start: 8948, Stop: 9714, Start Num: 8

Candidate Starts for HeadNerd\_12:

(Start: 8 @8948 has 61 MA's), (36, 9203), (44, 9254), (48, 9275), (49, 9284), (59, 9380), (89, 9572), (91, 9590), (93, 9602),

Gene: Herb\_13 Start: 8899, Stop: 9737, Start Num: 5

Candidate Starts for Herb\_13:

(Start: 5 @8899 has 4 MA's), (Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9073), (26, 9187), (36, 9229), (48, 9301), (59, 9406), (66, 9460), (77, 9532), (85, 9580), (91, 9613), (93, 9625), (98, 9706), (99, 9712),

Gene: Huckleberry\_13 Start: 8948, Stop: 9714, Start Num: 8

Candidate Starts for Huckleberry\_13:

(Start: 8 @8948 has 61 MA's), (36, 9203), (44, 9254), (48, 9275), (49, 9284), (59, 9380), (89, 9572), (91, 9590), (93, 9602),

Gene: HunterDalle\_13 Start: 8974, Stop: 9731, Start Num: 8

Candidate Starts for HunterDalle\_13:

(Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9067), (26, 9181), (33, 9208), (36, 9223), (48, 9295), (62, 9433), (70, 9487), (85, 9574), (93, 9619), (94, 9649), (98, 9700),

Gene: Huntingdon\_17 Start: 11851, Stop: 12611, Start Num: 8

Candidate Starts for Huntingdon\_17:

(Start: 8 @11851 has 61 MA's), (16, 11947), (33, 12088), (36, 12103), (37, 12109), (48, 12175), (55, 12229), (96, 12559), (98, 12580), (100, 12589), (101, 12601),

Gene: Icarian\_15 Start: 9446, Stop: 10137, Start Num: 18

Candidate Starts for Icarian\_15:

(Start: 18 @9446 has 93 MA's), (45, 9650), (50, 9677), (52, 9686), (55, 9719),

Gene: Immaculata\_17 Start: 11837, Stop: 12612, Start Num: 7

Candidate Starts for Immaculata\_17:

(2, 11564), (Start: 7 @11837 has 13 MA's), (Start: 8 @11846 has 61 MA's), (Start: 21 @11966 has 1 MA's), (35, 12092), (36, 12101), (48, 12173), (59, 12278), (67, 12344), (89, 12470), (91, 12488), (93, 12500),

Gene: IndyLu\_14 Start: 9288, Stop: 9979, Start Num: 18

Candidate Starts for IndyLu\_14:

(Start: 18 @9288 has 93 MA's), (Start: 21 @9291 has 1 MA's), (27, 9393), (45, 9492), (50, 9519), (55, 9561), (64, 9663),

Gene: Jamun\_15 Start: 10088, Stop: 10812, Start Num: 18

Candidate Starts for Jamun\_15:

(Start: 18 @10088 has 93 MA's), (26, 10184), (30, 10217), (41, 10292), (53, 10379), (55, 10409), (69, 10541),

Gene: Joann\_17 Start: 11845, Stop: 12605, Start Num: 9

Candidate Starts for Joann\_17:

(Start: 9 @11845 has 2 MA's), (33, 12082), (36, 12097), (48, 12169), (88, 12463), (89, 12466), (96, 12553), (98, 12574), (100, 12583), (101, 12595),

Gene: Johnathan\_14 Start: 9243, Stop: 9934, Start Num: 18

Candidate Starts for Johnathan\_14:

(Start: 18 @9243 has 93 MA's), (28, 9354), (42, 9417), (50, 9474), (52, 9483), (55, 9516), (78, 9708),

Gene: Jovita\_14 Start: 9345, Stop: 10036, Start Num: 18

Candidate Starts for Jovita\_14:

(Start: 18 @9345 has 93 MA's), (28, 9456), (42, 9519), (50, 9576), (52, 9585), (55, 9618), (71, 9777), (97, 9963),

Gene: Jumboset\_17 Start: 11786, Stop: 12561, Start Num: 7

Candidate Starts for Jumboset\_17:

(2, 11513), (Start: 7 @11786 has 13 MA's), (Start: 8 @11795 has 61 MA's), (35, 12041), (36, 12050), (48, 12122), (59, 12227), (67, 12293), (89, 12419), (91, 12437), (93, 12449),

Gene: Juno112\_14 Start: 9061, Stop: 9785, Start Num: 18

Candidate Starts for Juno112\_14:

(10, 8977), (Start: 18 @9061 has 93 MA's), (25, 9154), (28, 9172), (31, 9199), (45, 9313), (53, 9352), (55, 9382), (79, 9568), (100, 9754),

Gene: KHumphrey\_14 Start: 9058, Stop: 9782, Start Num: 18

Candidate Starts for KHumphrey\_14:

(12, 9016), (Start: 18 @9058 has 93 MA's), (25, 9151), (28, 9169), (31, 9196), (45, 9310), (53, 9349), (55, 9379), (79, 9565),

Gene: Kalizoi\_17 Start: 11785, Stop: 12560, Start Num: 7

Candidate Starts for Kalizoi\_17:

(2, 11512), (Start: 7 @11785 has 13 MA's), (Start: 8 @11794 has 61 MA's), (Start: 21 @11914 has 1 MA's), (35, 12040), (36, 12049), (48, 12121), (59, 12226), (67, 12292), (89, 12418), (91, 12436), (93, 12448),

Gene: Katzastrophic\_14 Start: 9137, Stop: 9846, Start Num: 18

Candidate Starts for Katzastrophic\_14:

(Start: 18 @9137 has 93 MA's), (50, 9368), (52, 9377), (55, 9410), (62, 9503), (65, 9515), (89, 9659),

Gene: Kenzers\_14 Start: 9260, Stop: 9951, Start Num: 18

Candidate Starts for Kenzers\_14:

(Start: 18 @9260 has 93 MA's), (28, 9371), (42, 9434), (50, 9491), (52, 9500), (55, 9533), (78, 9725),

Gene: Kepler\_15 Start: 9482, Stop: 10200, Start Num: 18

Candidate Starts for Kepler\_15:

(Start: 18 @9482 has 93 MA's), (26, 9578), (30, 9611), (55, 9803), (59, 9854), (69, 9935), (85, 10040),

Gene: Kieran\_14 Start: 9442, Stop: 10118, Start Num: 18

Candidate Starts for Kieran\_14:

(Start: 18 @9442 has 93 MA's), (50, 9673), (52, 9682), (55, 9715),

Gene: KingBob\_13 Start: 8899, Stop: 9737, Start Num: 5

Candidate Starts for KingBob\_13:

(Start: 5 @8899 has 4 MA's), (Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9073), (26, 9187), (36, 9229), (48, 9301), (59, 9406), (66, 9460), (77, 9532), (85, 9580), (91, 9613), (93, 9625),



(98, 9706), (99, 9712),

Gene: Kittykat\_13 Start: 8984, Stop: 9750, Start Num: 8

Candidate Starts for Kittykat\_13:

(Start: 6 @8972 has 2 MA's), (Start: 8 @8984 has 61 MA's), (17, 9086), (Start: 18 @9095 has 93 MA's), (36, 9239), (44, 9290), (48, 9311), (59, 9416), (67, 9482), (73, 9527), (77, 9545), (89, 9608), (91, 9626), (92, 9629), (93, 9638), (94, 9668),

Gene: Korra\_16 Start: 11800, Stop: 12566, Start Num: 8

Candidate Starts for Korra\_16:

(1, 11305), (2, 11518), (Start: 7 @11791 has 13 MA's), (Start: 8 @11800 has 61 MA's), (Start: 21 @11920 has 1 MA's), (35, 12046), (36, 12055), (48, 12127), (59, 12232), (67, 12298), (89, 12424), (91, 12442), (93, 12454),

Gene: Kuleana\_15 Start: 9441, Stop: 10159, Start Num: 18

Candidate Starts for Kuleana\_15:

(Start: 18 @9441 has 93 MA's), (27, 9546), (30, 9570), (52, 9729), (55, 9762), (57, 9801), (60, 9819), (69, 9894), (95, 10101),

Gene: Lahqtemish\_14 Start: 9360, Stop: 10051, Start Num: 18

Candidate Starts for Lahqtemish\_14:

(Start: 18 @9360 has 93 MA's), (Start: 21 @9363 has 1 MA's), (27, 9465), (45, 9564), (50, 9591), (55, 9633), (64, 9735),

Gene: Lakshmi\_17 Start: 11870, Stop: 12630, Start Num: 8

Candidate Starts for Lakshmi\_17:

(2, 11594), (Start: 8 @11870 has 61 MA's), (33, 12107), (36, 12122), (48, 12194), (88, 12488), (89, 12491), (96, 12578), (98, 12599), (100, 12608), (101, 12620),

Gene: Lasagna\_13 Start: 8942, Stop: 9711, Start Num: 8

Candidate Starts for Lasagna\_13:

(Start: 6 @8930 has 2 MA's), (Start: 8 @8942 has 61 MA's), (23, 9095), (36, 9200), (48, 9272), (59, 9377), (86, 9557), (89, 9569), (91, 9587), (93, 9599),

Gene: Lennox\_13 Start: 8942, Stop: 9711, Start Num: 8

Candidate Starts for Lennox\_13:

(Start: 6 @8930 has 2 MA's), (Start: 8 @8942 has 61 MA's), (23, 9095), (36, 9200), (48, 9272), (59, 9377), (86, 9557), (89, 9569), (91, 9587), (93, 9599),

Gene: Leona\_14 Start: 9111, Stop: 9835, Start Num: 18

Candidate Starts for Leona\_14:

(10, 9027), (Start: 18 @9111 has 93 MA's), (25, 9204), (28, 9222), (31, 9249), (45, 9363), (53, 9402), (55, 9432), (79, 9618),

Gene: LilStuart\_13 Start: 8942, Stop: 9711, Start Num: 8

Candidate Starts for LilStuart\_13:

(Start: 6 @8930 has 2 MA's), (Start: 8 @8942 has 61 MA's), (23, 9095), (36, 9200), (48, 9272), (59, 9377), (86, 9557), (89, 9569), (91, 9587), (93, 9599),

Gene: LimaBean\_14 Start: 9243, Stop: 9934, Start Num: 18

Candidate Starts for LimaBean\_14:

(Start: 18 @9243 has 93 MA's), (28, 9354), (42, 9417), (50, 9474), (52, 9483), (55, 9516), (78, 9708),

Gene: Litotes\_17 Start: 11825, Stop: 12591, Start Num: 8

Candidate Starts for Litotes\_17:

(Start: 6 @11813 has 2 MA's), (Start: 8 @11825 has 61 MA's), (16, 11924), (Start: 18 @11936 has 93 MA's), (36, 12080), (48, 12152), (59, 12257), (73, 12368), (89, 12449), (91, 12467),

Gene: LittleTokyo\_15 Start: 9395, Stop: 10119, Start Num: 19

Candidate Starts for LittleTokyo\_15:

(Start: 19 @9395 has 2 MA's), (22, 9407), (30, 9524), (32, 9545), (45, 9647), (47, 9656), (55, 9716), (59, 9767), (60, 9773), (63, 9803), (99, 10085), (102, 10112),

Gene: Lucy\_13 Start: 8934, Stop: 9703, Start Num: 8

Candidate Starts for Lucy\_13:

(Start: 6 @8922 has 2 MA's), (Start: 8 @8934 has 61 MA's), (Start: 21 @9057 has 1 MA's), (23, 9087), (36, 9192), (48, 9264), (59, 9369), (86, 9549), (89, 9561), (91, 9579), (93, 9591),

Gene: Lunar\_15 Start: 9644, Stop: 10362, Start Num: 18

Candidate Starts for Lunar\_15:

(Start: 18 @9644 has 93 MA's), (26, 9740), (30, 9773), (55, 9965), (59, 10016), (69, 10097), (85, 10202),

Gene: Lynlen\_14 Start: 9260, Stop: 9951, Start Num: 18

Candidate Starts for Lynlen\_14:

(Start: 18 @9260 has 93 MA's), (28, 9371), (42, 9434), (50, 9491), (52, 9500), (55, 9533), (78, 9725),

Gene: Makoto\_13 Start: 8943, Stop: 9712, Start Num: 8

Candidate Starts for Makoto\_13:

(Start: 6 @8931 has 2 MA's), (Start: 8 @8943 has 61 MA's), (Start: 21 @9066 has 1 MA's), (23, 9096), (36, 9201), (48, 9273), (59, 9378), (86, 9558), (89, 9570), (91, 9588), (93, 9600),

Gene: MamaPearl\_13 Start: 8981, Stop: 9747, Start Num: 8

Candidate Starts for MamaPearl\_13:

(Start: 8 @8981 has 61 MA's), (36, 9236), (48, 9308), (49, 9317), (59, 9413), (76, 9539), (84, 9587), (91, 9623), (93, 9635), (99, 9722),

Gene: Maria1952\_13 Start: 8965, Stop: 9737, Start Num: 7

Candidate Starts for Maria1952\_13:

(Start: 5 @8899 has 4 MA's), (Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9073), (26, 9187), (36, 9229), (48, 9301), (59, 9406), (66, 9460), (77, 9532), (85, 9580), (91, 9613), (93, 9625), (98, 9706), (99, 9712),

Gene: MeganNoll\_16 Start: 11843, Stop: 12618, Start Num: 7

Candidate Starts for MeganNoll\_16:

(2, 11570), (Start: 7 @11843 has 13 MA's), (Start: 8 @11852 has 61 MA's), (Start: 21 @11972 has 1 MA's), (35, 12098), (36, 12107), (48, 12179), (59, 12284), (67, 12350), (89, 12476), (91, 12494), (93, 12506),

Gene: Melons\_16 Start: 9644, Stop: 10362, Start Num: 18

Candidate Starts for Melons\_16:

(Start: 18 @9644 has 93 MA's), (26, 9740), (30, 9773), (55, 9965), (59, 10016), (69, 10097), (85, 10202),

Gene: Misaeng\_17 Start: 11918, Stop: 12678, Start Num: 9

Candidate Starts for Misaeng\_17:

(Start: 9 @11918 has 2 MA's), (16, 12014), (33, 12155), (36, 12170), (48, 12242), (55, 12296), (96, 12626), (98, 12647), (100, 12656), (101, 12668),

Gene: Moki\_13 Start: 8948, Stop: 9714, Start Num: 8

Candidate Starts for Moki\_13:

(Start: 8 @8948 has 61 MA's), (36, 9203), (44, 9254), (48, 9275), (49, 9284), (59, 9380), (89, 9572), (91, 9590), (93, 9602),

Gene: MrGloopy\_17 Start: 11777, Stop: 12552, Start Num: 7

Candidate Starts for MrGloopy\_17:

(Start: 7 @11777 has 13 MA's), (Start: 8 @11786 has 61 MA's), (Start: 21 @11906 has 1 MA's), (35, 12032), (36, 12041), (48, 12113), (59, 12218), (67, 12284), (89, 12410), (91, 12428), (93, 12440),

Gene: Nancia\_13 Start: 8942, Stop: 9711, Start Num: 8

Candidate Starts for Nancia\_13:

(Start: 6 @8930 has 2 MA's), (Start: 8 @8942 has 61 MA's), (23, 9095), (36, 9200), (48, 9272), (59, 9377), (86, 9557), (89, 9569), (91, 9587), (93, 9599),

Gene: Nicky22\_15 Start: 9691, Stop: 10382, Start Num: 18

Candidate Starts for Nicky22\_15:

(Start: 18 @9691 has 93 MA's), (28, 9802), (42, 9865), (45, 9895), (50, 9922), (52, 9931), (55, 9964), (71, 10123), (80, 10174), (97, 10309),

Gene: Nubia\_16 Start: 11830, Stop: 12590, Start Num: 8

Candidate Starts for Nubia\_16:

(2, 11554), (Start: 8 @11830 has 61 MA's), (33, 12067), (36, 12082), (48, 12154), (89, 12451), (96, 12538), (98, 12559), (100, 12568), (101, 12580),

Gene: OMalley\_13 Start: 8974, Stop: 9731, Start Num: 8

Candidate Starts for OMalley\_13:

(Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9067), (26, 9181), (33, 9208), (36, 9223), (48, 9295), (62, 9433), (70, 9487), (85, 9574), (86, 9577), (93, 9619), (94, 9649),

Gene: Olliecat\_14 Start: 9271, Stop: 9962, Start Num: 18

Candidate Starts for Olliecat\_14:

(Start: 18 @9271 has 93 MA's), (43, 9463), (52, 9523), (55, 9556), (58, 9607), (98, 9919), (100, 9928),

Gene: Orcanus\_15 Start: 9449, Stop: 10170, Start Num: 19

Candidate Starts for Orcanus\_15:

(Start: 19 @9449 has 2 MA's), (22, 9461), (28, 9560), (51, 9734), (53, 9740), (55, 9770), (56, 9788), (63, 9857), (64, 9863), (79, 9956), (99, 10139),

Gene: OurGirlNessie\_13 Start: 8934, Stop: 9703, Start Num: 8

Candidate Starts for OurGirlNessie\_13:

(Start: 6 @8922 has 2 MA's), (Start: 8 @8934 has 61 MA's), (Start: 21 @9057 has 1 MA's), (23, 9087), (36, 9192), (48, 9264), (59, 9369), (86, 9549), (89, 9561), (91, 9579), (93, 9591),

Gene: Oxynfrius\_17 Start: 11843, Stop: 12603, Start Num: 8

Candidate Starts for Oxynfrius\_17:

(2, 11567), (Start: 8 @11843 has 61 MA's), (33, 12080), (36, 12095), (48, 12167), (88, 12461), (89, 12464), (96, 12551), (98, 12572), (100, 12581), (101, 12593),

Gene: Phisb\_14 Start: 9208, Stop: 9899, Start Num: 18

Candidate Starts for Phisb\_14:

(Start: 18 @9208 has 93 MA's), (28, 9319), (42, 9382), (50, 9439), (52, 9448), (55, 9481), (62, 9574), (71, 9640),

Gene: PhluffyCoco\_14 Start: 9060, Stop: 9784, Start Num: 18

Candidate Starts for PhluffyCoco\_14:

(10, 8976), (Start: 18 @9060 has 93 MA's), (25, 9153), (28, 9171), (31, 9198), (45, 9312), (53, 9351), (55, 9381), (79, 9567), (82, 9606),

Gene: PinkFriday\_13 Start: 8971, Stop: 9743, Start Num: 8

Candidate Starts for PinkFriday\_13:

(Start: 7 @8962 has 13 MA's), (Start: 8 @8971 has 61 MA's), (13, 9049), (26, 9193), (36, 9235), (48, 9307), (59, 9412), (66, 9466), (77, 9538), (85, 9586), (91, 9619), (93, 9631), (98, 9712), (99, 9718),

Gene: PitaDog\_13 Start: 8933, Stop: 9702, Start Num: 8

Candidate Starts for PitaDog\_13:

(Start: 6 @8921 has 2 MA's), (Start: 8 @8933 has 61 MA's), (Start: 21 @9056 has 1 MA's), (23, 9086), (36, 9191), (48, 9263), (59, 9368), (86, 9548), (89, 9560), (91, 9578), (93, 9590),

Gene: Polka\_15 Start: 9483, Stop: 10201, Start Num: 18

Candidate Starts for Polka\_15:

(Start: 18 @9483 has 93 MA's), (26, 9579), (30, 9612), (55, 9804), (59, 9855), (69, 9936), (85, 10041),

Gene: Potatoes\_17 Start: 11847, Stop: 12613, Start Num: 8

Candidate Starts for Potatoes\_17:

(Start: 7 @11838 has 13 MA's), (Start: 8 @11847 has 61 MA's), (35, 12093), (36, 12102), (48, 12174), (59, 12279), (67, 12345), (89, 12471), (91, 12489), (93, 12501),

Gene: Preamble\_13 Start: 8946, Stop: 9715, Start Num: 8

Candidate Starts for Preamble\_13:

(Start: 8 @8946 has 61 MA's), (Start: 18 @9060 has 93 MA's), (22, 9078), (36, 9204), (48, 9276), (59, 9381), (67, 9447), (73, 9492), (77, 9510), (89, 9573), (91, 9591), (93, 9603), (94, 9633),

Gene: Pterodactyl\_13 Start: 8935, Stop: 9704, Start Num: 8

Candidate Starts for Pterodactyl\_13:

(Start: 7 @8923 has 13 MA's), (Start: 8 @8935 has 61 MA's), (Start: 21 @9058 has 1 MA's), (23, 9088), (36, 9193), (48, 9265), (59, 9370), (86, 9550), (89, 9562), (91, 9580), (93, 9592),

Gene: Pumancara\_13 Start: 8970, Stop: 9742, Start Num: 8

Candidate Starts for Pumancara\_13:

(Start: 7 @8961 has 13 MA's), (Start: 8 @8970 has 61 MA's), (13, 9048), (26, 9192), (36, 9234), (48, 9306), (59, 9411), (66, 9465), (77, 9537), (85, 9585), (91, 9618), (93, 9630), (98, 9711), (99, 9717),

Gene: QMacho\_15 Start: 9727, Stop: 10418, Start Num: 18

Candidate Starts for QMacho\_15:

(Start: 18 @9727 has 93 MA's), (28, 9838), (42, 9901), (50, 9958), (52, 9967), (55, 10000), (71, 10159), (97, 10345),

Gene: Quenya\_15 Start: 9138, Stop: 9844, Start Num: 18

Candidate Starts for Quenya\_15:

(Start: 18 @9138 has 93 MA's), (50, 9369), (52, 9378), (55, 9411), (90, 9675),

Gene: RAP15\_17 Start: 11852, Stop: 12618, Start Num: 8

Candidate Starts for RAP15\_17:

(2, 11570), (Start: 7 @11843 has 13 MA's), (Start: 8 @11852 has 61 MA's), (Start: 21 @11972 has 1 MA's), (35, 12098), (36, 12107), (48, 12179), (59, 12284), (67, 12350), (89, 12476), (91, 12494), (93, 12506),

Gene: RcigaStruga\_17 Start: 11851, Stop: 12611, Start Num: 8

Candidate Starts for RcigaStruga\_17:

(Start: 8 @11851 has 61 MA's), (16, 11947), (33, 12088), (36, 12103), (37, 12109), (48, 12175), (55, 12229), (96, 12559), (98, 12580), (100, 12589), (101, 12601),

Gene: RedFox\_14 Start: 9060, Stop: 9784, Start Num: 18

Candidate Starts for RedFox\_14:

(10, 8976), (Start: 18 @9060 has 93 MA's), (25, 9153), (28, 9171), (31, 9198), (45, 9312), (53, 9351), (55, 9381), (74, 9549), (79, 9567),

Gene: Renna12\_15 Start: 9269, Stop: 9993, Start Num: 18

Candidate Starts for Renna12\_15:

(Start: 18 @9269 has 93 MA's), (25, 9362), (28, 9380), (31, 9407), (45, 9521), (53, 9560), (55, 9590),

Gene: Riovina\_13 Start: 8974, Stop: 9731, Start Num: 8

Candidate Starts for Riovina\_13:

(Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9067), (26, 9181), (33, 9208), (36, 9223), (48, 9295), (62, 9433), (70, 9487), (85, 9574), (86, 9577), (93, 9619), (94, 9649),

Gene: Riverdale\_17 Start: 11782, Stop: 12548, Start Num: 8

Candidate Starts for Riverdale\_17:

(3, 11599), (Start: 7 @11773 has 13 MA's), (Start: 8 @11782 has 61 MA's), (35, 12028), (36, 12037), (48, 12109), (59, 12214), (67, 12280), (89, 12406), (91, 12424), (93, 12436),

Gene: Rollins\_12 Start: 8845, Stop: 9554, Start Num: 18

Candidate Starts for Rollins\_12:

(Start: 18 @8845 has 93 MA's), (28, 8953), (52, 9085), (55, 9118), (90, 9385),

Gene: Rona\_14 Start: 9439, Stop: 10115, Start Num: 18

Candidate Starts for Rona\_14:

(Start: 18 @9439 has 93 MA's), (50, 9670), (52, 9679), (55, 9712),

Gene: Rozby\_17 Start: 11774, Stop: 12549, Start Num: 7

Candidate Starts for Rozby\_17:

(2, 11501), (Start: 7 @11774 has 13 MA's), (Start: 8 @11783 has 61 MA's), (Start: 21 @11903 has 1 MA's), (35, 12029), (36, 12038), (48, 12110), (59, 12215), (67, 12281), (89, 12407), (91, 12425), (93, 12437),

Gene: Ruchi\_15 Start: 10010, Stop: 10740, Start Num: 18

Candidate Starts for Ruchi\_15:

(Start: 18 @10010 has 93 MA's), (26, 10106), (30, 10139), (41, 10214), (53, 10301), (55, 10331), (57, 10376), (61, 10409), (68, 10466),

Gene: SanaSana\_15 Start: 9463, Stop: 10154, Start Num: 18

Candidate Starts for SanaSana\_15:

(Start: 18 @9463 has 93 MA's), (38, 9613), (45, 9667), (52, 9703), (90, 10003),

Gene: SansAfet\_14 Start: 9254, Stop: 9945, Start Num: 18

Candidate Starts for SansAfet\_14:

(Start: 18 @9254 has 93 MA's), (28, 9365), (42, 9428), (50, 9485), (52, 9494), (55, 9527), (78, 9719),

Gene: SarBear\_14 Start: 9220, Stop: 9911, Start Num: 18

Candidate Starts for SarBear\_14:

(Start: 18 @9220 has 93 MA's), (28, 9331), (42, 9394), (50, 9451), (52, 9460), (55, 9493), (71, 9652), (80, 9703), (87, 9739),

Gene: Savage2526\_17 Start: 11837, Stop: 12612, Start Num: 7

Candidate Starts for Savage2526\_17:

(2, 11564), (Start: 7 @11837 has 13 MA's), (Start: 8 @11846 has 61 MA's), (Start: 21 @11966 has 1 MA's), (35, 12092), (36, 12101), (48, 12173), (59, 12278), (67, 12344), (89, 12470), (91, 12488), (93, 12500),

Gene: Scuttle\_17 Start: 11851, Stop: 12617, Start Num: 8

Candidate Starts for Scuttle\_17:

(3, 11668), (Start: 7 @11842 has 13 MA's), (Start: 8 @11851 has 61 MA's), (35, 12097), (36, 12106), (48, 12178), (59, 12283), (67, 12349), (89, 12475), (91, 12493), (93, 12505),

Gene: Sergei\_13 Start: 8899, Stop: 9737, Start Num: 5

Candidate Starts for Sergei\_13:

(Start: 5 @8899 has 4 MA's), (Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9073), (26, 9187), (36, 9229), (48, 9301), (59, 9406), (66, 9460), (77, 9532), (85, 9580), (91, 9613), (93, 9625), (98, 9706), (99, 9712),

Gene: Sharkboy\_14 Start: 9438, Stop: 10114, Start Num: 18

Candidate Starts for Sharkboy\_14:

(Start: 18 @9438 has 93 MA's), (50, 9669), (52, 9678), (55, 9711), (78, 9903),

Gene: Shayna\_13 Start: 8829, Stop: 9529, Start Num: 18

Candidate Starts for Shayna\_13:

(Start: 18 @8829 has 93 MA's), (34, 8958), (52, 9081), (58, 9165), (75, 9297),

Gene: Skylord\_13 Start: 8785, Stop: 9494, Start Num: 18

Candidate Starts for Skylord\_13:

(Start: 18 @8785 has 93 MA's), (28, 8893), (52, 9025), (55, 9058), (90, 9325),

Gene: Slay\_14 Start: 9696, Stop: 10387, Start Num: 18

Candidate Starts for Slay\_14:

(Start: 18 @9696 has 93 MA's), (28, 9807), (42, 9870), (50, 9927), (52, 9936), (55, 9969), (71, 10128), (80, 10179),

Gene: Softsoap\_14 Start: 9243, Stop: 9934, Start Num: 18

Candidate Starts for Softsoap\_14:

(Start: 18 @9243 has 93 MA's), (28, 9354), (42, 9417), (50, 9474), (52, 9483), (55, 9516), (72, 9684), (78, 9708),

Gene: Squircle\_14 Start: 9270, Stop: 9961, Start Num: 18

Candidate Starts for Squircle\_14:

(Start: 18 @9270 has 93 MA's), (43, 9462), (52, 9522), (55, 9555), (58, 9606), (98, 9918), (100, 9927),

Gene: Stoor\_14 Start: 9460, Stop: 10151, Start Num: 18

Candidate Starts for Stoor\_14:

(Start: 18 @9460 has 93 MA's), (38, 9610), (45, 9664), (52, 9700), (90, 10000),

Gene: Stromboli\_14 Start: 9463, Stop: 10154, Start Num: 18

Candidate Starts for Stromboli\_14:

(Start: 18 @9463 has 93 MA's), (38, 9613), (45, 9667), (52, 9703), (82, 9961), (90, 10003),

Gene: SunnyD\_13 Start: 8829, Stop: 9529, Start Num: 18

Candidate Starts for SunnyD\_13:

(Start: 18 @8829 has 93 MA's), (34, 8958), (52, 9081), (58, 9165), (75, 9297),

Gene: Supakev\_13 Start: 8976, Stop: 9733, Start Num: 8

Candidate Starts for Supakev\_13:

(Start: 7 @8967 has 13 MA's), (Start: 8 @8976 has 61 MA's), (16, 9069), (26, 9183), (33, 9210), (36, 9225), (48, 9297), (62, 9435), (70, 9489), (85, 9576), (93, 9621), (94, 9651),

Gene: Suppi\_17 Start: 11875, Stop: 12641, Start Num: 8

Candidate Starts for Suppi\_17:

(Start: 6 @11863 has 2 MA's), (Start: 8 @11875 has 61 MA's), (16, 11974), (Start: 18 @11986 has 93 MA's), (36, 12130), (48, 12202), (59, 12307), (73, 12418), (89, 12499), (91, 12517),

Gene: Swervy\_14 Start: 9220, Stop: 9911, Start Num: 18

Candidate Starts for Swervy\_14:

(Start: 18 @9220 has 93 MA's), (28, 9331), (42, 9394), (50, 9451), (52, 9460), (55, 9493), (71, 9652), (80, 9703),

Gene: TattModd\_17 Start: 11836, Stop: 12611, Start Num: 7

Candidate Starts for TattModd\_17:

(3, 11662), (Start: 7 @11836 has 13 MA's), (Start: 8 @11845 has 61 MA's), (35, 12091), (36, 12100), (48, 12172), (59, 12277), (67, 12343), (89, 12469), (91, 12487), (93, 12499),

Gene: TaylorSipht\_15 Start: 9540, Stop: 10261, Start Num: 20

Candidate Starts for TaylorSipht\_15:

(14, 9516), (15, 9522), (Start: 20 @9540 has 2 MA's), (22, 9552), (29, 9660), (45, 9795), (55, 9864),

Gene: Teagster\_13 Start: 8829, Stop: 9529, Start Num: 18

Candidate Starts for Teagster\_13:

(Start: 18 @8829 has 93 MA's), (34, 8958), (52, 9081), (58, 9165), (75, 9297),

Gene: Temper16\_13 Start: 8899, Stop: 9737, Start Num: 5

Candidate Starts for Temper16\_13:

(Start: 5 @8899 has 4 MA's), (Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9073), (26, 9187), (36, 9229), (48, 9301), (59, 9406), (66, 9460), (77, 9532), (85, 9580), (91, 9613), (93, 9625), (98, 9706), (99, 9712),

Gene: TukTuk\_14 Start: 9280, Stop: 9971, Start Num: 18

Candidate Starts for TukTuk\_14:

(Start: 18 @9280 has 93 MA's), (28, 9391), (42, 9454), (50, 9511), (52, 9520), (55, 9553), (63, 9649), (71, 9712),

Gene: Urla\_12 Start: 8980, Stop: 9749, Start Num: 8

Candidate Starts for Urla\_12:

(Start: 7 @8971 has 13 MA's), (Start: 8 @8980 has 61 MA's), (11, 9022), (33, 9223), (36, 9238), (48, 9310), (49, 9319), (59, 9415), (84, 9589), (91, 9625), (93, 9637),

Gene: Vallejo\_17 Start: 11784, Stop: 12550, Start Num: 8

Candidate Starts for Vallejo\_17:

(2, 11502), (Start: 7 @11775 has 13 MA's), (Start: 8 @11784 has 61 MA's), (Start: 21 @11904 has 1 MA's), (35, 12030), (36, 12039), (48, 12111), (59, 12216), (67, 12282), (89, 12408), (91, 12426), (93, 12438),

Gene: Vitas\_13 Start: 8785, Stop: 9494, Start Num: 18

Candidate Starts for Vitas\_13:

(Start: 18 @8785 has 93 MA's), (28, 8893), (52, 9025), (55, 9058), (90, 9325),

Gene: Vulpecula\_15 Start: 10086, Stop: 10810, Start Num: 18

Candidate Starts for Vulpecula\_15:

(Start: 18 @10086 has 93 MA's), (26, 10182), (30, 10215), (41, 10290), (53, 10377), (69, 10539),

Gene: Vulture\_13 Start: 8974, Stop: 9731, Start Num: 8

Candidate Starts for Vulture\_13:

(Start: 7 @8965 has 13 MA's), (Start: 8 @8974 has 61 MA's), (16, 9067), (26, 9181), (33, 9208), (36, 9223), (48, 9295), (62, 9433), (70, 9487), (85, 9574), (93, 9619), (94, 9649), (98, 9700),

Gene: Wawa\_17 Start: 11821, Stop: 12587, Start Num: 8

Candidate Starts for Wawa\_17:

(1, 11326), (2, 11539), (Start: 7 @11812 has 13 MA's), (Start: 8 @11821 has 61 MA's), (Start: 21 @11941 has 1 MA's), (35, 12067), (36, 12076), (48, 12148), (59, 12253), (67, 12319), (89, 12445), (91, 12463), (93, 12475),

Gene: Wayne\_16 Start: 11921, Stop: 12687, Start Num: 8

Candidate Starts for Wayne\_16:

(Start: 6 @11909 has 2 MA's), (Start: 8 @11921 has 61 MA's), (16, 12020), (Start: 18 @12032 has 93 MA's), (36, 12176), (48, 12248), (59, 12353), (73, 12464), (89, 12545), (91, 12563),

Gene: WonderBoy\_13 Start: 8935, Stop: 9704, Start Num: 8

Candidate Starts for WonderBoy\_13:

(Start: 8 @8935 has 61 MA's), (23, 9088), (36, 9193), (48, 9265), (59, 9370), (86, 9550), (89, 9562), (91, 9580), (93, 9592),

Gene: Zorro\_17 Start: 11791, Stop: 12566, Start Num: 7

Candidate Starts for Zorro\_17:

(1, 11305), (2, 11518), (Start: 7 @11791 has 13 MA's), (Start: 8 @11800 has 61 MA's), (Start: 21 @11920 has 1 MA's), (35, 12046), (36, 12055), (48, 12127), (59, 12232), (67, 12298), (89, 12424), (91, 12442), (93, 12454),