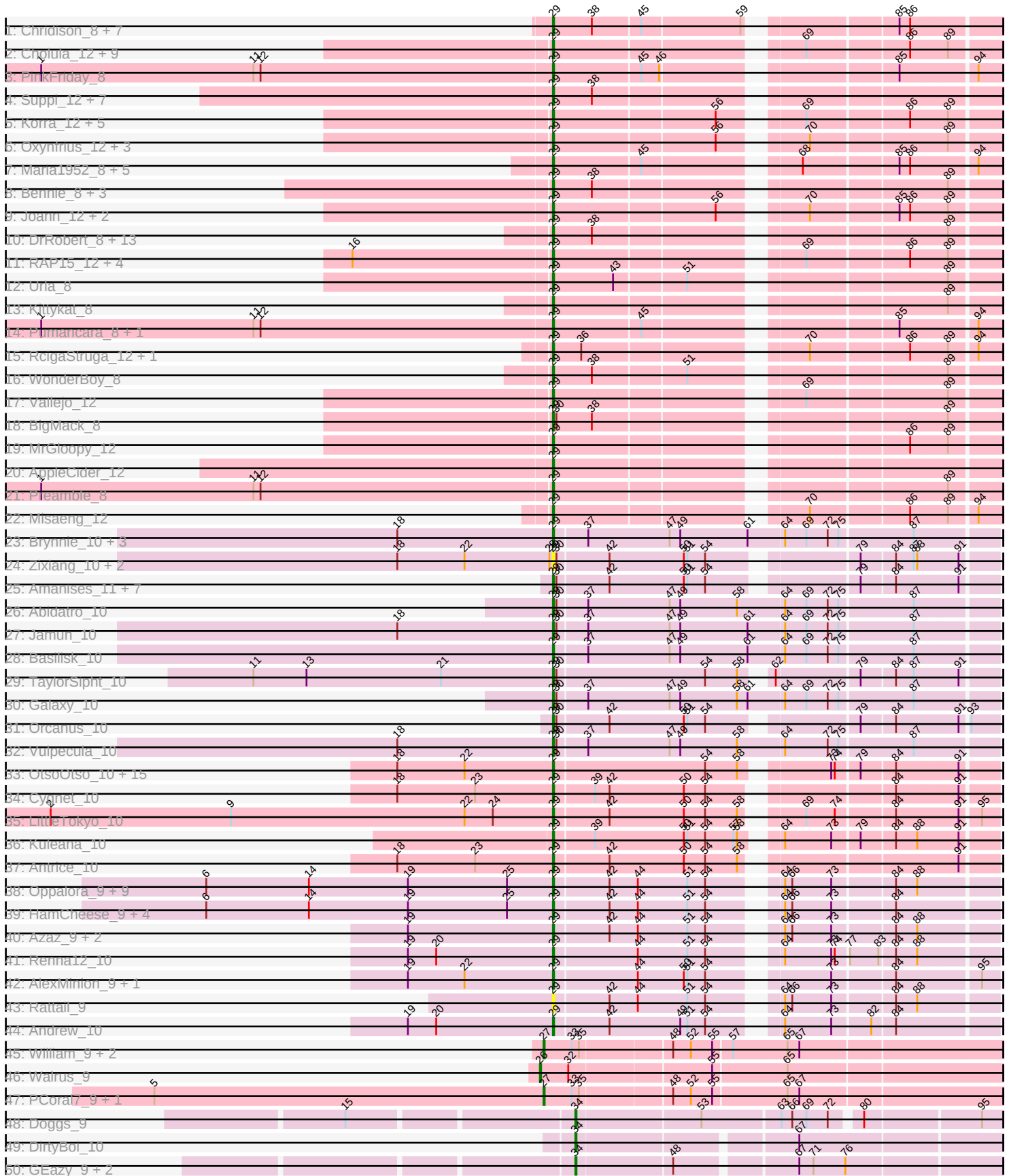
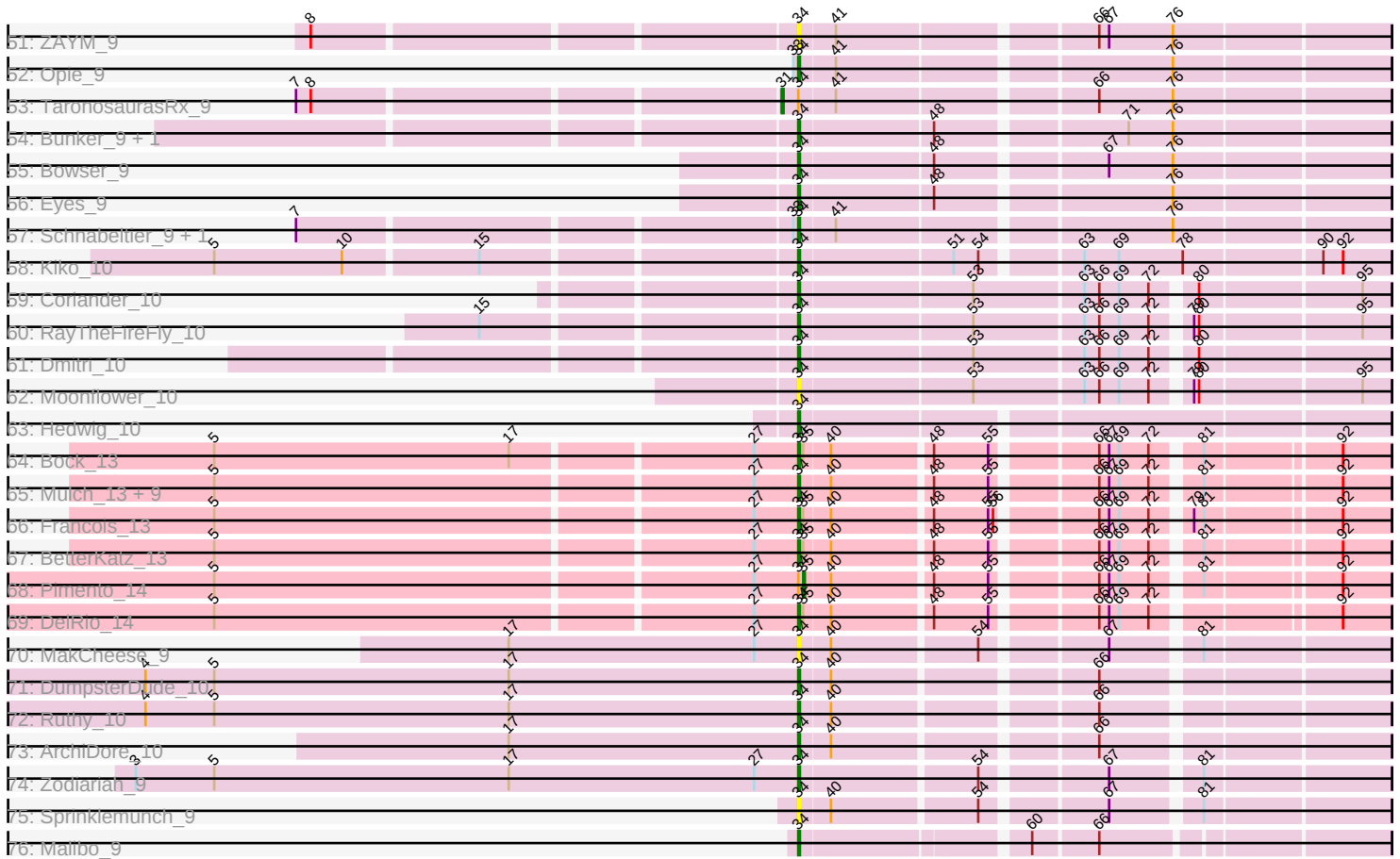


# Pham 280107





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 280107 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280107 has 195 members, 31 are drafts.

Phages represented in each track:

- Track 1 : Chridison\_8, Riovina\_8, Vulture\_8, HunterDalle\_8, Eunoia\_8, Aledel\_8, OMalley\_8, AustinPowers\_8
- Track 2 : Cholula\_12, Carpal\_12, Fluke\_12, Potatoes\_12, TattModd\_12, Rozby\_12, Riverdale\_12, Immaculata\_12, Glenn\_12, Beethoven\_12
- Track 3 : PinkFriday\_8
- Track 4 : Suppi\_12, Canowicakte\_12, Wayne\_12, Litotes\_12, PartyCup\_12, Graynor\_12, MrBoss\_12, CallieOMalley\_12
- Track 5 : Korra\_12, Dino\_12, Wawa\_12, Kalizoi\_12, BrotherBLo\_12, Zorro\_12
- Track 6 : Oxyntfrius\_12, Lakshmi\_12, Albanese\_12, GreenHearts\_12
- Track 7 : Maria1952\_8, Sergei\_8, KingBob\_8, Daiboju\_8, Herb\_8, Temper16\_8
- Track 8 : Bennie\_8, HeadNerd\_8, Moki\_8, Huckleberry\_8
- Track 9 : Joann\_12, Greenhouse\_12, Nubia\_12
- Track 10 : DrRobert\_8, Nancia\_8, Makoto\_8, CristinaYang\_8, Christian\_8, Lucy\_8, Lennox\_8, Bodacious\_8, PitaDog\_8, Pterodactyl\_8, LilStuart\_8, Lasagna\_8, ChewChew\_8, OurGirlNessie\_8
- Track 11 : RAP15\_12, Savage2526\_12, Jumboset\_12, MeganNoll\_12, Scuttle\_12
- Track 12 : Urla\_8
- Track 13 : Kittykat\_8
- Track 14 : Pumancara\_8, Supakev\_8
- Track 15 : RcigaStruga\_12, Huntingdon\_12
- Track 16 : WonderBoy\_8
- Track 17 : Vallejo\_12
- Track 18 : BigMack\_8
- Track 19 : MrGloopy\_12
- Track 20 : AppleCider\_12
- Track 21 : Preamble\_8
- Track 22 : Misaeng\_12
- Track 23 : Brynnie\_10, Chickaboom\_9, WileyE\_9, Ruchi\_10
- Track 24 : Zixiang\_10, Niblet\_10, Chicken\_10
- Track 25 : Amanises\_11, Eesa\_10, Pelletreau\_11, Gravel\_11, Toad24\_11, Shen\_11, Westrich\_11, KendraB23\_11
- Track 26 : Abidatro\_10
- Track 27 : Jamun\_10
- Track 28 : Basilisk\_10
- Track 29 : TaylorSipht\_10
- Track 30 : Galaxy\_10
- Track 31 : Orcanus\_10

- Track 32 : Vulpecula\_10
- Track 33 : OtsoOtso\_10, Melons\_11, Pineda\_11, Bibble12\_11, Polka\_10, Cote\_11, Bedetta\_11, PhirstandPhine\_11, Lunar\_11, Daob\_11, Coral\_10, Colusalem\_10, Kepler\_10, Jerole\_11, HannahPhantana\_11, Amelia\_11
- Track 34 : Cygnet\_10
- Track 35 : LittleTokyo\_10
- Track 36 : Kuleana\_10
- Track 37 : Antrice\_10
- Track 38 : Oppalora\_9, AmiCi24\_9, DanHam62\_9, Juno112\_9, Fingolfin\_9, KHumphrey\_9, AdoptaAdorbs\_9, Glotell\_9, RedFox\_9, Atlantica\_9
- Track 39 : HamCheese\_9, Camara\_9, PhluffyCoco\_9, Amphitrite\_9, Laphuphu24k\_9
- Track 40 : Azaz\_9, Leona\_9, Babushka\_9
- Track 41 : Renna12\_10
- Track 42 : AlexMinion\_9, StuartMinion\_9
- Track 43 : Rattail\_9
- Track 44 : Andrew\_10
- Track 45 : William\_9, Fairfaxidum\_9, PrincePatrick\_9
- Track 46 : Walrus\_9
- Track 47 : PCoral7\_9, Toast\_9
- Track 48 : Doggs\_9
- Track 49 : DirtyBoi\_10
- Track 50 : GEazy\_9, HannahD\_9, BackstagePass\_9
- Track 51 : ZAYM\_9
- Track 52 : Opie\_9
- Track 53 : TaronosaurusRx\_9
- Track 54 : Bunker\_9, BBQValindra\_9
- Track 55 : Bowser\_9
- Track 56 : Eyes\_9
- Track 57 : Schnabeltier\_9, MagicMan\_9
- Track 58 : Kiko\_10
- Track 59 : Coriander\_10
- Track 60 : RayTheFireFly\_10
- Track 61 : Dmitri\_10
- Track 62 : Moonflower\_10
- Track 63 : Hedwig\_10
- Track 64 : Bock\_13
- Track 65 : Mulch\_13, WheatThin\_13, Nadeem\_13, Brylie\_13, Parada\_13, Ayotoya\_13, GrandSlam\_13, Chop\_13, Hamood\_13, NancyRae\_13
- Track 66 : Francois\_13
- Track 67 : BetterKatz\_13
- Track 68 : Pimento\_14
- Track 69 : DelRio\_14
- Track 70 : MakCheese\_9
- Track 71 : DumpsterDude\_10
- Track 72 : Ruthy\_10
- Track 73 : ArchiDore\_10
- Track 74 : Zodiariah\_9
- Track 75 : Sprinklemunch\_9
- Track 76 : Malibo\_9

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

The start number called the most often in the published annotations is 29, it was called in 121 of the 164 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abidatro\_10, AdoptaAdorbs\_9, Albanese\_12, Aledel\_8, AlexMinion\_9, Amanises\_11, Amelia\_11, AmiCi24\_9, Amphitrite\_9, Andrew\_10, Antrice\_10, AppleCider\_12, Atlantica\_9, AustinPowers\_8, Azaz\_9, Babushka\_9, Basilisk\_10, Bedetta\_11, Beethoven\_12, Bennie\_8, Bibble12\_11, BigMack\_8, Bodacious\_8, BrotherBLo\_12, Brynnie\_10, CallieOMalley\_12, Camara\_9, Canowicakte\_12, Carpal\_12, ChewChew\_8, Chickaboom\_9, Chicken\_10, Cholula\_12, Chridison\_8, Christian\_8, Colusalem\_10, Coral\_10, Cote\_11, CristinaYang\_8, Cygnet\_10, Daiboju\_8, DanHam62\_9, Daob\_11, Dino\_12, DrRobert\_8, Eesa\_10, Eunoia\_8, Fingolfin\_9, Fluke\_12, Galaxy\_10, Glenn\_12, Glotell\_9, Gravel\_11, Graynor\_12, GreenHearts\_12, Greenhouse\_12, HamCheese\_9, HannahPhantana\_11, HeadNerd\_8, Herb\_8, Huckleberry\_8, HunterDalle\_8, Huntingdon\_12, Immaculata\_12, Jamun\_10, Jerole\_11, Joann\_12, Jumboset\_12, Juno112\_9, KHumphrey\_9, Kalizoi\_12, KendraB23\_11, Kepler\_10, KingBob\_8, Kittykat\_8, Korra\_12, Kuleana\_10, Lakshmi\_12, Laphuphu24k\_9, Lasagna\_8, Lennox\_8, Leona\_9, LilStuart\_8, Litotes\_12, LittleTokyo\_10, Lucy\_8, Lunar\_11, Makoto\_8, Maria1952\_8, MeganNoll\_12, Melons\_11, Misaeng\_12, Moki\_8, MrBoss\_12, MrGloopy\_12, Nancia\_8, Niblet\_10, Nubia\_12, OMalley\_8, Oppalora\_9, Orcanus\_10, OtsoOtso\_10, OurGirlNessie\_8, Oxynfrius\_12, PartyCup\_12, Pelletreau\_11, PhirstandPhine\_11, PhluffyCoco\_9, Pineda\_11, PinkFriday\_8, PitaDog\_8, Polka\_10, Potatoes\_12, Preamble\_8, Pterodactyl\_8, Pumancara\_8, RAP15\_12, Rattail\_9, RcigaStruga\_12, RedFox\_9, Renna12\_10, Riovina\_8, Riverdale\_12, Rozby\_12, Ruchi\_10, Savage2526\_12, Scuttle\_12, Sergei\_8, Shen\_11, StuartMinion\_9, Supakev\_8, Suppi\_12, TattModd\_12, TaylorSipht\_10, Temper16\_8, Toad24\_11, Urla\_8, Vallejo\_12, Vulpecula\_10, Vulture\_8, Wawa\_12, Wayne\_12, Westrich\_11, WileyE\_9, WonderBoy\_8, Zixiang\_10, Zorro\_12,

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

- 

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

- ArchiDore\_10, Ayotoya\_13, BBQValindra\_9, BackstagePass\_9, BetterKatz\_13, Bock\_13, Bowser\_9, Brylie\_13, Bunker\_9, Chop\_13, Coriander\_10, DelRio\_14, DirtyBoi\_10, Dmitri\_10, Doggs\_9, DumpsterDude\_10, Eyes\_9, Fairfaxidum\_9, Francois\_13, GEazy\_9, GrandSlam\_13, Hamood\_13, HannahD\_9, Hedwig\_10, Kiko\_10, MagicMan\_9, MakCheese\_9, Malibo\_9, Moonflower\_10, Mulch\_13, Nadeem\_13, NancyRae\_13, Opie\_9, PCoral7\_9, Parada\_13, Pimento\_14, PrincePatrick\_9, RayTheFireFly\_10, Ruthy\_10, Schnabeltier\_9, Sprinklemunch\_9, TaronosaurusRx\_9, Toast\_9, Walrus\_9, WheatThin\_13, William\_9, ZAYM\_9, Zodiariah\_9,

### **Summary by start number:**

Start 26:

- Found in 1 of 195 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 164
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Walrus\_9 (CV),

#### Start 27:

- Found in 22 of 195 ( 11.3% ) of genes in pham
- Manual Annotations of this start: 5 of 164
- Called 22.7% of time when present
- Phage (with cluster) where this start called: Fairfaxidum\_9 (CV), PCoral7\_9 (CV), PrincePatrick\_9 (CV), Toast\_9 (CV), William\_9 (CV),

#### Start 29:

- Found in 147 of 195 ( 75.4% ) of genes in pham
- Manual Annotations of this start: 121 of 164
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro\_10 (AS1), AdoptaAdorbs\_9 (AS3), Albanese\_12 (AK), Aledel\_8 (AK), AlexMinion\_9 (AS3), Amanises\_11 (AS1), Amelia\_11 (AS2), AmiCi24\_9 (AS3), Amphitrite\_9 (AS3), Andrew\_10 (AS3), Antrice\_10 (AS2), AppleCider\_12 (AK), Atlantica\_9 (AS3), AustinPowers\_8 (AK), Azaz\_9 (AS3), Babushka\_9 (AS3), Basilisk\_10 (AS1), Bedetta\_11 (AS2), Beethoven\_12 (AK), Bennie\_8 (AK), Bibble12\_11 (AS2), BigMack\_8 (AK), Bodacious\_8 (AK), BrotherBLo\_12 (AK), Brynnie\_10 (AS1), CallieOMalley\_12 (AK), Camara\_9 (AS3), Canowicakte\_12 (AK), Carpal\_12 (AK), ChewChew\_8 (AK), Chickaboom\_9 (AS1), Chicken\_10 (AS1), Cholula\_12 (AK), Chridison\_8 (AK), Christian\_8 (AK), Colusalem\_10 (AS2), Coral\_10 (AS2), Cote\_11 (AS2), CristinaYang\_8 (AK), Cygnet\_10 (AS2), Daiboju\_8 (AK), DanHam62\_9 (AS3), Daob\_11 (AS2), Dino\_12 (AK), DrRobert\_8 (AK), Eesa\_10 (AS1), Eunoia\_8 (AK), Fingofin\_9 (AS3), Fluke\_12 (AK), Galaxy\_10 (AS1), Glenn\_12 (AK), Glotell\_9 (AS3), Gravel\_11 (AS1), Graynor\_12 (AK), GreenHearts\_12 (AK), Greenhouse\_12 (AK), HamCheese\_9 (AS3), HannahPhantana\_11 (AS2), HeadNerd\_8 (AK), Herb\_8 (AK), Huckleberry\_8 (AK), HunterDalle\_8 (AK), Huntingdon\_12 (AK), Immaculata\_12 (AK), Jamun\_10 (AS1), Jerole\_11 (AS2), Joann\_12 (AK), Jumboset\_12 (AK), Juno112\_9 (AS3), KHumphrey\_9 (AS3), Kalizoi\_12 (AK), KendraB23\_11 (AS1), Kepler\_10 (AS2), KingBob\_8 (AK), Kittykat\_8 (AK), Korra\_12 (AK), Kuleana\_10 (AS2), Lakshmi\_12 (AK), Laphuphu24k\_9 (AS3), Lasagna\_8 (AK), Lennox\_8 (AK), Leona\_9 (AS3), LilStuart\_8 (AK), Litotes\_12 (AK), LittleTokyo\_10 (AS2), Lucy\_8 (AK), Lunar\_11 (AS2), Makoto\_8 (AK), Maria1952\_8 (AK), MeganNoll\_12 (AK), Melons\_11 (AS2), Misaeng\_12 (AK), Moki\_8 (AK), MrBoss\_12 (AK), MrGloopy\_12 (AK), Nancia\_8 (AK), Niblet\_10 (AS1), Nubia\_12 (AK), OMalley\_8 (AK), Oppalora\_9 (AS3), Orcanus\_10 (AS1), OtsoOtso\_10 (AS2), OurGirlNessie\_8 (AK), Oxyfrieus\_12 (AK), PartyCup\_12 (AK), Pelletreau\_11 (AS1), PhirstandPhine\_11 (AS2), PhluffyCoco\_9 (AS3), Pineda\_11 (AS2), PinkFriday\_8 (AK), PitaDog\_8 (AK), Polka\_10 (AS2), Potatoes\_12 (AK), Preamble\_8 (AK), Pterodactyl\_8 (AK), Pumancara\_8 (AK), RAP15\_12 (AK), Rattail\_9 (AS3), RcigaStruga\_12 (AK), RedFox\_9 (AS3), Renna12\_10 (AS3), Rivovina\_8 (AK), Riverdale\_12 (AK), Rozby\_12 (AK), Ruchi\_10 (AS1), Savage2526\_12 (AK), Scuttle\_12 (AK), Sergei\_8 (AK), Shen\_11 (AS1), StuartMinion\_9 (AS3), Supakev\_8 (AK), Suppi\_12 (AK), TattModd\_12 (AK), TaylorSipht\_10 (AS1), Temper16\_8 (AK), Toad24\_11 (AS1), Urla\_8 (AK), Vallejo\_12 (AK), Vulpecula\_10 (AS1), Vulture\_8 (AK), Wawa\_12 (AK), Wayne\_12 (AK), Westrich\_11 (AS1), WileyE\_9 (AS1), WonderBoy\_8 (AK), Zixiang\_10 (AS1), Zorro\_12 (AK),

#### Start 31:

- Found in 1 of 195 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 164

- Called 100.0% of time when present
- Phage (with cluster) where this start called: TaronosaurusRx\_9 (DB),

Start 34:

- Found in 42 of 195 ( 21.5% ) of genes in pham
- Manual Annotations of this start: 35 of 164
- Called 95.2% of time when present
- Phage (with cluster) where this start called: ArchiDore\_10 (DW), Ayotoya\_13 (DI), BBQValindra\_9 (DB), BackstagePass\_9 (DB), BetterKatz\_13 (DI), Bock\_13 (DI), Bowser\_9 (DB), Brylie\_13 (DI), Bunker\_9 (DB), Chop\_13 (DI), Coriander\_10 (DB), DelRio\_14 (DI), DirtyBoi\_10 (DB), Dmitri\_10 (DB), Doggs\_9 (DB), DumpsterDude\_10 (DW), Eyes\_9 (DB), Francois\_13 (DI), GEazy\_9 (DB), GrandSlam\_13 (DI), Hamood\_13 (DI), HannahD\_9 (DB), Hedwig\_10 (DB), Kiko\_10 (DB), MagicMan\_9 (DB), MakCheese\_9 (DW), Malibo\_9 (DW), Moonflower\_10 (DB), Mulch\_13 (DI), Nadeem\_13 (DI), NancyRae\_13 (DI), Opie\_9 (DB), Parada\_13 (DI), RayTheFireFly\_10 (DB), Ruthy\_10 (DW), Schnabeltier\_9 (DB), Sprinklemunch\_9 (DW), WheatThin\_13 (DI), ZAYM\_9 (DB), Zodiariah\_9 (DW),

Start 35:

- Found in 10 of 195 ( 5.1% ) of genes in pham
- Manual Annotations of this start: 1 of 164
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Pimento\_14 (DI),

### Summary by clusters:

There are 8 clusters represented in this pham: AS3, AS2, AS1, DI, AK, DB, DW, CV,

Info for manual annotations of cluster AK:

- Start number 29 was manually annotated 80 times for cluster AK.

Info for manual annotations of cluster AS1:

- Start number 29 was manually annotated 12 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 29 was manually annotated 16 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 29 was manually annotated 13 times for cluster AS3.

Info for manual annotations of cluster CV:

- Start number 26 was manually annotated 1 time for cluster CV.
- Start number 27 was manually annotated 5 times for cluster CV.

Info for manual annotations of cluster DB:

- Start number 31 was manually annotated 1 time for cluster DB.
- Start number 34 was manually annotated 16 times for cluster DB.

Info for manual annotations of cluster DI:

- Start number 34 was manually annotated 14 times for cluster DI.
- Start number 35 was manually annotated 1 time for cluster DI.

Info for manual annotations of cluster DW:

- Start number 34 was manually annotated 5 times for cluster DW.

### **Gene Information:**

Gene: Abidatro\_10 Start: 7704, Stop: 8066, Start Num: 29

Candidate Starts for Abidatro\_10:

(Start: 29 @7704 has 121 MA's), (30, 7707), (37, 7731), (47, 7800), (49, 7809), (58, 7857), (64, 7896), (69, 7914), (72, 7932), (75, 7941), (87, 8001),

Gene: AdoptaAdorbs\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for AdoptaAdorbs\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570), (88, 7588),

Gene: Albanese\_12 Start: 9846, Stop: 10184, Start Num: 29

Candidate Starts for Albanese\_12:

(Start: 29 @9846 has 121 MA's), (56, 9978), (70, 10035), (89, 10143),

Gene: Aledel\_8 Start: 6923, Stop: 7261, Start Num: 29

Candidate Starts for Aledel\_8:

(Start: 29 @6923 has 121 MA's), (38, 6956), (45, 6995), (59, 7076), (85, 7181), (86, 7190),

Gene: AlexMinion\_9 Start: 7338, Stop: 7676, Start Num: 29

Candidate Starts for AlexMinion\_9:

(19, 7215), (22, 7263), (Start: 29 @7338 has 121 MA's), (44, 7407), (50, 7446), (51, 7449), (54, 7464), (73, 7548), (84, 7596), (95, 7662),

Gene: Amanises\_11 Start: 7899, Stop: 8240, Start Num: 29

Candidate Starts for Amanises\_11:

(Start: 29 @7899 has 121 MA's), (30, 7902), (42, 7944), (50, 8007), (51, 8010), (54, 8025), (79, 8133), (84, 8160), (91, 8211),

Gene: Amelia\_11 Start: 7903, Stop: 8244, Start Num: 29

Candidate Starts for Amelia\_11:

(18, 7771), (22, 7828), (Start: 29 @7903 has 121 MA's), (54, 8029), (58, 8056), (73, 8116), (74, 8119), (79, 8137), (84, 8164), (91, 8215),

Gene: AmiCi24\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for AmiCi24\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570), (88, 7588),

Gene: Amphitrite\_9 Start: 7310, Stop: 7648, Start Num: 29

Candidate Starts for Amphitrite\_9:

(6, 7016), (14, 7103), (19, 7187), (25, 7271), (Start: 29 @7310 has 121 MA's), (42, 7355), (44, 7379), (51, 7421), (54, 7436), (64, 7481), (66, 7487), (73, 7520), (84, 7568),

Gene: Andrew\_10 Start: 7691, Stop: 8029, Start Num: 29

Candidate Starts for Andrew\_10:

(19, 7568), (20, 7592), (Start: 29 @7691 has 121 MA's), (42, 7736), (49, 7796), (51, 7802), (54, 7817), (64, 7862), (73, 7901), (82, 7931), (84, 7949),

Gene: Antrice\_10 Start: 7647, Stop: 7985, Start Num: 29

Candidate Starts for Antrice\_10:

(18, 7515), (23, 7581), (Start: 29 @7647 has 121 MA's), (42, 7692), (50, 7755), (54, 7773), (58, 7800), (91, 7956),

Gene: AppleCider\_12 Start: 9802, Stop: 10140, Start Num: 29

Candidate Starts for AppleCider\_12:

(Start: 29 @9802 has 121 MA's),

Gene: ArchiDore\_10 Start: 7354, Stop: 7677, Start Num: 34

Candidate Starts for ArchiDore\_10:

(17, 7177), (Start: 34 @7354 has 35 MA's), (40, 7372), (66, 7516),

Gene: Atlantica\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for Atlantica\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570), (88, 7588),

Gene: AustinPowers\_8 Start: 6924, Stop: 7262, Start Num: 29

Candidate Starts for AustinPowers\_8:

(Start: 29 @6924 has 121 MA's), (38, 6957), (45, 6996), (59, 7077), (85, 7182), (86, 7191),

Gene: Ayotoya\_13 Start: 8911, Stop: 9231, Start Num: 34

Candidate Starts for Ayotoya\_13:

(5, 8566), (Start: 27 @8884 has 5 MA's), (Start: 34 @8911 has 35 MA's), (40, 8929), (48, 8986), (55, 9019), (66, 9073), (67, 9079), (69, 9085), (72, 9103), (81, 9127), (92, 9202),

Gene: Azaz\_9 Start: 7363, Stop: 7701, Start Num: 29

Candidate Starts for Azaz\_9:

(19, 7240), (Start: 29 @7363 has 121 MA's), (42, 7408), (44, 7432), (51, 7474), (54, 7489), (64, 7534), (66, 7540), (73, 7573), (84, 7621), (88, 7639),

Gene: BBQValindra\_9 Start: 6868, Stop: 7203, Start Num: 34

Candidate Starts for BBQValindra\_9:

(Start: 34 @6868 has 35 MA's), (48, 6946), (71, 7051), (76, 7078),

Gene: Babushka\_9 Start: 7360, Stop: 7698, Start Num: 29

Candidate Starts for Babushka\_9:

(19, 7237), (Start: 29 @7360 has 121 MA's), (42, 7405), (44, 7429), (51, 7471), (54, 7486), (64, 7531), (66, 7537), (73, 7570), (84, 7618), (88, 7636),

Gene: BackstagePass\_9 Start: 6845, Stop: 7180, Start Num: 34

Candidate Starts for BackstagePass\_9:

(Start: 34 @6845 has 35 MA's), (48, 6923), (67, 7016), (71, 7028), (76, 7055),

Gene: Basilisk\_10 Start: 8028, Stop: 8390, Start Num: 29

Candidate Starts for Basilisk\_10:

(Start: 29 @8028 has 121 MA's), (37, 8055), (47, 8124), (49, 8133), (61, 8190), (64, 8220), (69, 8238), (72, 8256), (75, 8265), (87, 8325),

Gene: Bedetta\_11 Start: 7903, Stop: 8244, Start Num: 29

Candidate Starts for Bedetta\_11:

(18, 7771), (22, 7828), (Start: 29 @7903 has 121 MA's), (54, 8029), (58, 8056), (73, 8116), (74, 8119), (79, 8137), (84, 8164), (91, 8215),

Gene: Beethoven\_12 Start: 9762, Stop: 10100, Start Num: 29

Candidate Starts for Beethoven\_12:

(Start: 29 @9762 has 121 MA's), (69, 9948), (86, 10029), (89, 10059),

Gene: Bennie\_8 Start: 6907, Stop: 7245, Start Num: 29

Candidate Starts for Bennie\_8:

(Start: 29 @6907 has 121 MA's), (38, 6940), (89, 7204),

Gene: BetterKatz\_13 Start: 8879, Stop: 9199, Start Num: 34

Candidate Starts for BetterKatz\_13:

(5, 8534), (Start: 27 @8852 has 5 MA's), (Start: 34 @8879 has 35 MA's), (Start: 35 @8882 has 1 MA's), (40, 8897), (48, 8954), (55, 8987), (66, 9041), (67, 9047), (69, 9053), (72, 9071), (81, 9095), (92, 9170),

Gene: Bibble12\_11 Start: 7906, Stop: 8247, Start Num: 29

Candidate Starts for Bibble12\_11:

(18, 7774), (22, 7831), (Start: 29 @7906 has 121 MA's), (54, 8032), (58, 8059), (73, 8119), (74, 8122), (79, 8140), (84, 8167), (91, 8218),

Gene: BigMack\_8 Start: 6907, Stop: 7245, Start Num: 29

Candidate Starts for BigMack\_8:

(Start: 29 @6907 has 121 MA's), (30, 6910), (38, 6940), (89, 7204),

Gene: Bock\_13 Start: 8629, Stop: 8949, Start Num: 34

Candidate Starts for Bock\_13:

(5, 8284), (17, 8464), (Start: 27 @8602 has 5 MA's), (Start: 34 @8629 has 35 MA's), (Start: 35 @8632 has 1 MA's), (40, 8647), (48, 8704), (55, 8737), (66, 8791), (67, 8797), (69, 8803), (72, 8821), (81, 8845), (92, 8920),

Gene: Bodacious\_8 Start: 6905, Stop: 7243, Start Num: 29

Candidate Starts for Bodacious\_8:

(Start: 29 @6905 has 121 MA's), (38, 6938), (89, 7202),

Gene: Bowser\_9 Start: 6866, Stop: 7201, Start Num: 34

Candidate Starts for Bowser\_9:

(Start: 34 @6866 has 35 MA's), (48, 6944), (67, 7037), (76, 7076),

Gene: BrotherBLo\_12 Start: 9769, Stop: 10107, Start Num: 29

Candidate Starts for BrotherBLo\_12:

(Start: 29 @9769 has 121 MA's), (56, 9901), (69, 9955), (86, 10036), (89, 10066),

Gene: Brylie\_13 Start: 8626, Stop: 8946, Start Num: 34

Candidate Starts for Brylie\_13:

(5, 8281), (Start: 27 @8599 has 5 MA's), (Start: 34 @8626 has 35 MA's), (40, 8644), (48, 8701), (55, 8734), (66, 8788), (67, 8794), (69, 8800), (72, 8818), (81, 8842), (92, 8917),

Gene: Brynnie\_10 Start: 7840, Stop: 8202, Start Num: 29

Candidate Starts for Brynnie\_10:

(18, 7708), (Start: 29 @7840 has 121 MA's), (37, 7867), (47, 7936), (49, 7945), (61, 8002), (64, 8032), (69, 8050), (72, 8068), (75, 8077), (87, 8137),

Gene: Bunker\_9 Start: 6868, Stop: 7203, Start Num: 34  
Candidate Starts for Bunker\_9:  
(Start: 34 @6868 has 35 MA's), (48, 6946), (71, 7051), (76, 7078),

Gene: CallieOMalley\_12 Start: 9802, Stop: 10140, Start Num: 29  
Candidate Starts for CallieOMalley\_12:  
(Start: 29 @9802 has 121 MA's), (38, 9835),

Gene: Camara\_9 Start: 7313, Stop: 7651, Start Num: 29  
Candidate Starts for Camara\_9:  
(6, 7019), (14, 7106), (19, 7190), (25, 7274), (Start: 29 @7313 has 121 MA's), (42, 7358), (44, 7382),  
(51, 7424), (54, 7439), (64, 7484), (66, 7490), (73, 7523), (84, 7571),

Gene: Canowicakte\_12 Start: 9837, Stop: 10175, Start Num: 29  
Candidate Starts for Canowicakte\_12:  
(Start: 29 @9837 has 121 MA's), (38, 9870),

Gene: Carpal\_12 Start: 9769, Stop: 10107, Start Num: 29  
Candidate Starts for Carpal\_12:  
(Start: 29 @9769 has 121 MA's), (69, 9955), (86, 10036), (89, 10066),

Gene: ChewChew\_8 Start: 6904, Stop: 7242, Start Num: 29  
Candidate Starts for ChewChew\_8:  
(Start: 29 @6904 has 121 MA's), (38, 6937), (89, 7201),

Gene: Chickaboom\_9 Start: 7385, Stop: 7747, Start Num: 29  
Candidate Starts for Chickaboom\_9:  
(18, 7253), (Start: 29 @7385 has 121 MA's), (37, 7412), (47, 7481), (49, 7490), (61, 7547), (64, 7577),  
(69, 7595), (72, 7613), (75, 7622), (87, 7682),

Gene: Chicken\_10 Start: 7688, Stop: 8029, Start Num: 29  
Candidate Starts for Chicken\_10:  
(18, 7556), (22, 7613), (28, 7685), (Start: 29 @7688 has 121 MA's), (30, 7691), (42, 7733), (50, 7796),  
(51, 7799), (54, 7814), (79, 7922), (84, 7949), (87, 7964), (88, 7967), (91, 8000),

Gene: Cholula\_12 Start: 9814, Stop: 10152, Start Num: 29  
Candidate Starts for Cholula\_12:  
(Start: 29 @9814 has 121 MA's), (69, 10000), (86, 10081), (89, 10111),

Gene: Chop\_13 Start: 8659, Stop: 8979, Start Num: 34  
Candidate Starts for Chop\_13:  
(5, 8314), (Start: 27 @8632 has 5 MA's), (Start: 34 @8659 has 35 MA's), (40, 8677), (48, 8734), (55, 8767),  
(66, 8821), (67, 8827), (69, 8833), (72, 8851), (81, 8875), (92, 8950),

Gene: Chridison\_8 Start: 6924, Stop: 7262, Start Num: 29  
Candidate Starts for Chridison\_8:  
(Start: 29 @6924 has 121 MA's), (38, 6957), (45, 6996), (59, 7077), (85, 7182), (86, 7191),

Gene: Christian\_8 Start: 6905, Stop: 7243, Start Num: 29  
Candidate Starts for Christian\_8:  
(Start: 29 @6905 has 121 MA's), (38, 6938), (89, 7202),

Gene: Colusalem\_10 Start: 7742, Stop: 8083, Start Num: 29

Candidate Starts for Colusalem\_10:

(18, 7610), (22, 7667), (Start: 29 @7742 has 121 MA's), (54, 7868), (58, 7895), (73, 7955), (74, 7958), (79, 7976), (84, 8003), (91, 8054),

Gene: Coral\_10 Start: 7742, Stop: 8083, Start Num: 29

Candidate Starts for Coral\_10:

(18, 7610), (22, 7667), (Start: 29 @7742 has 121 MA's), (54, 7868), (58, 7895), (73, 7955), (74, 7958), (79, 7976), (84, 8003), (91, 8054),

Gene: Coriander\_10 Start: 7265, Stop: 7600, Start Num: 34

Candidate Starts for Coriander\_10:

(Start: 34 @7265 has 35 MA's), (53, 7367), (63, 7430), (66, 7439), (69, 7451), (72, 7469), (80, 7490), (95, 7583),

Gene: Cote\_11 Start: 7903, Stop: 8244, Start Num: 29

Candidate Starts for Cote\_11:

(18, 7771), (22, 7828), (Start: 29 @7903 has 121 MA's), (54, 8029), (58, 8056), (73, 8116), (74, 8119), (79, 8137), (84, 8164), (91, 8215),

Gene: CristinaYang\_8 Start: 6905, Stop: 7243, Start Num: 29

Candidate Starts for CristinaYang\_8:

(Start: 29 @6905 has 121 MA's), (38, 6938), (89, 7202),

Gene: Cygnet\_10 Start: 7689, Stop: 8027, Start Num: 29

Candidate Starts for Cygnet\_10:

(18, 7557), (23, 7623), (Start: 29 @7689 has 121 MA's), (39, 7722), (42, 7734), (50, 7797), (54, 7815), (84, 7947), (91, 7998),

Gene: Daiboju\_8 Start: 6925, Stop: 7263, Start Num: 29

Candidate Starts for Daiboju\_8:

(Start: 29 @6925 has 121 MA's), (45, 6997), (68, 7108), (85, 7183), (86, 7192), (94, 7243),

Gene: DanHam62\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for DanHam62\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570), (88, 7588),

Gene: Daob\_11 Start: 7906, Stop: 8247, Start Num: 29

Candidate Starts for Daob\_11:

(18, 7774), (22, 7831), (Start: 29 @7906 has 121 MA's), (54, 8032), (58, 8059), (73, 8119), (74, 8122), (79, 8140), (84, 8167), (91, 8218),

Gene: DelRio\_14 Start: 9136, Stop: 9456, Start Num: 34

Candidate Starts for DelRio\_14:

(5, 8791), (Start: 27 @9109 has 5 MA's), (Start: 34 @9136 has 35 MA's), (Start: 35 @9139 has 1 MA's), (40, 9154), (48, 9211), (55, 9244), (66, 9298), (67, 9304), (69, 9310), (72, 9328), (92, 9427),

Gene: Dino\_12 Start: 9768, Stop: 10106, Start Num: 29

Candidate Starts for Dino\_12:

(Start: 29 @9768 has 121 MA's), (56, 9900), (69, 9954), (86, 10035), (89, 10065),

Gene: DirtyBoi\_10 Start: 7238, Stop: 7573, Start Num: 34

Candidate Starts for DirtyBoi\_10:

(Start: 34 @7238 has 35 MA's), (67, 7409),

Gene: Dmitri\_10 Start: 7247, Stop: 7582, Start Num: 34

Candidate Starts for Dmitri\_10:

(Start: 34 @7247 has 35 MA's), (53, 7349), (63, 7412), (66, 7421), (69, 7433), (72, 7451), (80, 7472),

Gene: Doggs\_9 Start: 6962, Stop: 7297, Start Num: 34

Candidate Starts for Doggs\_9:

(15, 6782), (Start: 34 @6962 has 35 MA's), (53, 7064), (63, 7127), (66, 7136), (69, 7148), (72, 7166), (80, 7187), (95, 7280),

Gene: DrRobert\_8 Start: 6905, Stop: 7243, Start Num: 29

Candidate Starts for DrRobert\_8:

(Start: 29 @6905 has 121 MA's), (38, 6938), (89, 7202),

Gene: DumpsterDude\_10 Start: 7367, Stop: 7690, Start Num: 34

Candidate Starts for DumpsterDude\_10:

(4, 6968), (5, 7010), (17, 7190), (Start: 34 @7367 has 35 MA's), (40, 7385), (66, 7529),

Gene: Eesa\_10 Start: 7902, Stop: 8243, Start Num: 29

Candidate Starts for Eesa\_10:

(Start: 29 @7902 has 121 MA's), (30, 7905), (42, 7947), (50, 8010), (51, 8013), (54, 8028), (79, 8136), (84, 8163), (91, 8214),

Gene: Eunoia\_8 Start: 6923, Stop: 7261, Start Num: 29

Candidate Starts for Eunoia\_8:

(Start: 29 @6923 has 121 MA's), (38, 6956), (45, 6995), (59, 7076), (85, 7181), (86, 7190),

Gene: Eyes\_9 Start: 6875, Stop: 7210, Start Num: 34

Candidate Starts for Eyes\_9:

(Start: 34 @6875 has 35 MA's), (48, 6953), (76, 7085),

Gene: Fairfaxidum\_9 Start: 6937, Stop: 7305, Start Num: 27

Candidate Starts for Fairfaxidum\_9:

(Start: 27 @6937 has 5 MA's), (33, 6961), (Start: 35 @6967 has 1 MA's), (48, 7039), (52, 7054), (55, 7072), (57, 7087), (65, 7132), (67, 7141),

Gene: Fingolfin\_9 Start: 7313, Stop: 7651, Start Num: 29

Candidate Starts for Fingolfin\_9:

(6, 7019), (14, 7106), (19, 7190), (25, 7274), (Start: 29 @7313 has 121 MA's), (42, 7358), (44, 7382), (51, 7424), (54, 7439), (64, 7484), (66, 7490), (73, 7523), (84, 7571), (88, 7589),

Gene: Fluke\_12 Start: 9810, Stop: 10148, Start Num: 29

Candidate Starts for Fluke\_12:

(Start: 29 @9810 has 121 MA's), (69, 9996), (86, 10077), (89, 10107),

Gene: Francois\_13 Start: 8640, Stop: 8960, Start Num: 34

Candidate Starts for Francois\_13:

(5, 8295), (Start: 27 @8613 has 5 MA's), (Start: 34 @8640 has 35 MA's), (Start: 35 @8643 has 1 MA's), (40, 8658), (48, 8715), (55, 8748), (56, 8751), (66, 8802), (67, 8808), (69, 8814), (72, 8832), (79, 8850), (81, 8856), (92, 8931),

Gene: GEazy\_9 Start: 6877, Stop: 7212, Start Num: 34

Candidate Starts for GEazy\_9:

(Start: 34 @6877 has 35 MA's), (48, 6955), (67, 7048), (71, 7060), (76, 7087),

Gene: Galaxy\_10 Start: 7711, Stop: 8073, Start Num: 29

Candidate Starts for Galaxy\_10:

(Start: 29 @7711 has 121 MA's), (30, 7714), (37, 7738), (47, 7807), (49, 7816), (58, 7864), (61, 7873), (64, 7903), (69, 7921), (72, 7939), (75, 7948), (87, 8008),

Gene: Glenn\_12 Start: 9820, Stop: 10158, Start Num: 29

Candidate Starts for Glenn\_12:

(Start: 29 @9820 has 121 MA's), (69, 10006), (86, 10087), (89, 10117),

Gene: Glotell\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for Glotell\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570), (88, 7588),

Gene: GrandSlam\_13 Start: 8659, Stop: 8979, Start Num: 34

Candidate Starts for GrandSlam\_13:

(5, 8314), (Start: 27 @8632 has 5 MA's), (Start: 34 @8659 has 35 MA's), (40, 8677), (48, 8734), (55, 8767), (66, 8821), (67, 8827), (69, 8833), (72, 8851), (81, 8875), (92, 8950),

Gene: Gravel\_11 Start: 7898, Stop: 8239, Start Num: 29

Candidate Starts for Gravel\_11:

(Start: 29 @7898 has 121 MA's), (30, 7901), (42, 7943), (50, 8006), (51, 8009), (54, 8024), (79, 8132), (84, 8159), (91, 8210),

Gene: Graynor\_12 Start: 9826, Stop: 10164, Start Num: 29

Candidate Starts for Graynor\_12:

(Start: 29 @9826 has 121 MA's), (38, 9859),

Gene: GreenHearts\_12 Start: 9892, Stop: 10230, Start Num: 29

Candidate Starts for GreenHearts\_12:

(Start: 29 @9892 has 121 MA's), (56, 10024), (70, 10081), (89, 10189),

Gene: Greenhouse\_12 Start: 9817, Stop: 10155, Start Num: 29

Candidate Starts for Greenhouse\_12:

(Start: 29 @9817 has 121 MA's), (56, 9949), (70, 10006), (85, 10075), (86, 10084), (89, 10114),

Gene: HamCheese\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for HamCheese\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570),

Gene: Hamood\_13 Start: 8659, Stop: 8979, Start Num: 34

Candidate Starts for Hamood\_13:

(5, 8314), (Start: 27 @8632 has 5 MA's), (Start: 34 @8659 has 35 MA's), (40, 8677), (48, 8734), (55, 8767), (66, 8821), (67, 8827), (69, 8833), (72, 8851), (81, 8875), (92, 8950),

Gene: HannahD\_9 Start: 6877, Stop: 7212, Start Num: 34

Candidate Starts for HannahD\_9:

(Start: 34 @6877 has 35 MA's), (48, 6955), (67, 7048), (71, 7060), (76, 7087),

Gene: HannahPhantana\_11 Start: 7906, Stop: 8247, Start Num: 29

Candidate Starts for HannahPhantana\_11:

(18, 7774), (22, 7831), (Start: 29 @7906 has 121 MA's), (54, 8032), (58, 8059), (73, 8119), (74, 8122), (79, 8140), (84, 8167), (91, 8218),

Gene: HeadNerd\_8 Start: 6907, Stop: 7245, Start Num: 29

Candidate Starts for HeadNerd\_8:

(Start: 29 @6907 has 121 MA's), (38, 6940), (89, 7204),

Gene: Hedwig\_10 Start: 7238, Stop: 7573, Start Num: 34

Candidate Starts for Hedwig\_10:

(Start: 34 @7238 has 35 MA's),

Gene: Herb\_8 Start: 6925, Stop: 7263, Start Num: 29

Candidate Starts for Herb\_8:

(Start: 29 @6925 has 121 MA's), (45, 6997), (68, 7108), (85, 7183), (86, 7192), (94, 7243),

Gene: Huckleberry\_8 Start: 6907, Stop: 7245, Start Num: 29

Candidate Starts for Huckleberry\_8:

(Start: 29 @6907 has 121 MA's), (38, 6940), (89, 7204),

Gene: HunterDalle\_8 Start: 6923, Stop: 7261, Start Num: 29

Candidate Starts for HunterDalle\_8:

(Start: 29 @6923 has 121 MA's), (38, 6956), (45, 6995), (59, 7076), (85, 7181), (86, 7190),

Gene: Huntingdon\_12 Start: 9803, Stop: 10141, Start Num: 29

Candidate Starts for Huntingdon\_12:

(Start: 29 @9803 has 121 MA's), (36, 9827), (70, 9992), (86, 10070), (89, 10100), (94, 10121),

Gene: Immaculata\_12 Start: 9814, Stop: 10152, Start Num: 29

Candidate Starts for Immaculata\_12:

(Start: 29 @9814 has 121 MA's), (69, 10000), (86, 10081), (89, 10111),

Gene: Jamun\_10 Start: 8052, Stop: 8414, Start Num: 29

Candidate Starts for Jamun\_10:

(18, 7920), (Start: 29 @8052 has 121 MA's), (30, 8055), (37, 8079), (47, 8148), (49, 8157), (61, 8214), (64, 8244), (69, 8262), (72, 8280), (75, 8289), (87, 8349),

Gene: Jerole\_11 Start: 7903, Stop: 8244, Start Num: 29

Candidate Starts for Jerole\_11:

(18, 7771), (22, 7828), (Start: 29 @7903 has 121 MA's), (54, 8029), (58, 8056), (73, 8116), (74, 8119), (79, 8137), (84, 8164), (91, 8215),

Gene: Joann\_12 Start: 9795, Stop: 10133, Start Num: 29

Candidate Starts for Joann\_12:

(Start: 29 @9795 has 121 MA's), (56, 9927), (70, 9984), (85, 10053), (86, 10062), (89, 10092),

Gene: Jumboset\_12 Start: 9763, Stop: 10101, Start Num: 29

Candidate Starts for Jumboset\_12:

(16, 9598), (Start: 29 @9763 has 121 MA's), (69, 9949), (86, 10030), (89, 10060),

Gene: Juno112\_9 Start: 7313, Stop: 7651, Start Num: 29

Candidate Starts for Juno112\_9:

(6, 7019), (14, 7106), (19, 7190), (25, 7274), (Start: 29 @7313 has 121 MA's), (42, 7358), (44, 7382), (51, 7424), (54, 7439), (64, 7484), (66, 7490), (73, 7523), (84, 7571), (88, 7589),

Gene: KHumphrey\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for KHumphrey\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570), (88, 7588),

Gene: Kalizoi\_12 Start: 9762, Stop: 10100, Start Num: 29

Candidate Starts for Kalizoi\_12:

(Start: 29 @9762 has 121 MA's), (56, 9894), (69, 9948), (86, 10029), (89, 10059),

Gene: KendraB23\_11 Start: 7899, Stop: 8240, Start Num: 29

Candidate Starts for KendraB23\_11:

(Start: 29 @7899 has 121 MA's), (30, 7902), (42, 7944), (50, 8007), (51, 8010), (54, 8025), (79, 8133), (84, 8160), (91, 8211),

Gene: Kepler\_10 Start: 7741, Stop: 8082, Start Num: 29

Candidate Starts for Kepler\_10:

(18, 7609), (22, 7666), (Start: 29 @7741 has 121 MA's), (54, 7867), (58, 7894), (73, 7954), (74, 7957), (79, 7975), (84, 8002), (91, 8053),

Gene: Kiko\_10 Start: 7078, Stop: 7413, Start Num: 34

Candidate Starts for Kiko\_10:

(5, 6742), (10, 6820), (15, 6898), (Start: 34 @7078 has 35 MA's), (51, 7168), (54, 7183), (63, 7234), (69, 7255), (78, 7294), (90, 7372), (92, 7384),

Gene: KingBob\_8 Start: 6925, Stop: 7263, Start Num: 29

Candidate Starts for KingBob\_8:

(Start: 29 @6925 has 121 MA's), (45, 6997), (68, 7108), (85, 7183), (86, 7192), (94, 7243),

Gene: Kittykat\_8 Start: 6948, Stop: 7286, Start Num: 29

Candidate Starts for Kittykat\_8:

(Start: 29 @6948 has 121 MA's), (89, 7245),

Gene: Korra\_12 Start: 9768, Stop: 10106, Start Num: 29

Candidate Starts for Korra\_12:

(Start: 29 @9768 has 121 MA's), (56, 9900), (69, 9954), (86, 10035), (89, 10065),

Gene: Kuleana\_10 Start: 7701, Stop: 8042, Start Num: 29

Candidate Starts for Kuleana\_10:

(Start: 29 @7701 has 121 MA's), (39, 7734), (50, 7809), (51, 7812), (54, 7827), (57, 7851), (58, 7854), (64, 7875), (73, 7914), (79, 7935), (84, 7962), (88, 7980), (91, 8013),

Gene: Lakshmi\_12 Start: 9822, Stop: 10160, Start Num: 29

Candidate Starts for Lakshmi\_12:

(Start: 29 @9822 has 121 MA's), (56, 9954), (70, 10011), (89, 10119),

Gene: Laphuphu24k\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for Laphuphu24k\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570),

Gene: Lasagna\_8 Start: 6905, Stop: 7243, Start Num: 29

Candidate Starts for Lasagna\_8:

(Start: 29 @6905 has 121 MA's), (38, 6938), (89, 7202),

Gene: Lennox\_8 Start: 6905, Stop: 7243, Start Num: 29

Candidate Starts for Lennox\_8:

(Start: 29 @6905 has 121 MA's), (38, 6938), (89, 7202),

Gene: Leona\_9 Start: 7363, Stop: 7701, Start Num: 29

Candidate Starts for Leona\_9:

(19, 7240), (Start: 29 @7363 has 121 MA's), (42, 7408), (44, 7432), (51, 7474), (54, 7489), (64, 7534), (66, 7540), (73, 7573), (84, 7621), (88, 7639),

Gene: LilStuart\_8 Start: 6905, Stop: 7243, Start Num: 29

Candidate Starts for LilStuart\_8:

(Start: 29 @6905 has 121 MA's), (38, 6938), (89, 7202),

Gene: Litotes\_12 Start: 9790, Stop: 10128, Start Num: 29

Candidate Starts for Litotes\_12:

(Start: 29 @9790 has 121 MA's), (38, 9823),

Gene: LittleTokyo\_10 Start: 7645, Stop: 7983, Start Num: 29

Candidate Starts for LittleTokyo\_10:

(2, 7219), (9, 7372), (22, 7570), (24, 7594), (Start: 29 @7645 has 121 MA's), (42, 7690), (50, 7753), (54, 7771), (58, 7798), (69, 7834), (74, 7858), (84, 7903), (91, 7954), (95, 7969),

Gene: Lucy\_8 Start: 6896, Stop: 7234, Start Num: 29

Candidate Starts for Lucy\_8:

(Start: 29 @6896 has 121 MA's), (38, 6929), (89, 7193),

Gene: Lunar\_11 Start: 7903, Stop: 8244, Start Num: 29

Candidate Starts for Lunar\_11:

(18, 7771), (22, 7828), (Start: 29 @7903 has 121 MA's), (54, 8029), (58, 8056), (73, 8116), (74, 8119), (79, 8137), (84, 8164), (91, 8215),

Gene: MagicMan\_9 Start: 7205, Stop: 7540, Start Num: 34

Candidate Starts for MagicMan\_9:

(7, 6920), (33, 7202), (Start: 34 @7205 has 35 MA's), (41, 7226), (76, 7415),

Gene: MakCheese\_9 Start: 7174, Stop: 7497, Start Num: 34

Candidate Starts for MakCheese\_9:

(17, 6997), (Start: 27 @7147 has 5 MA's), (Start: 34 @7174 has 35 MA's), (40, 7192), (54, 7276), (67, 7342), (81, 7390),

Gene: Makoto\_8 Start: 6905, Stop: 7243, Start Num: 29

Candidate Starts for Makoto\_8:

(Start: 29 @6905 has 121 MA's), (38, 6938), (89, 7202),

Gene: Malibo\_9 Start: 7157, Stop: 7480, Start Num: 34

Candidate Starts for Malibo\_9:

(Start: 34 @7157 has 35 MA's), (60, 7283), (66, 7319),

Gene: Maria1952\_8 Start: 6925, Stop: 7263, Start Num: 29

Candidate Starts for Maria1952\_8:

(Start: 29 @6925 has 121 MA's), (45, 6997), (68, 7108), (85, 7183), (86, 7192), (94, 7243),

Gene: MeganNoll\_12 Start: 9820, Stop: 10158, Start Num: 29

Candidate Starts for MeganNoll\_12:

(16, 9655), (Start: 29 @9820 has 121 MA's), (69, 10006), (86, 10087), (89, 10117),

Gene: Melons\_11 Start: 7903, Stop: 8244, Start Num: 29

Candidate Starts for Melons\_11:

(18, 7771), (22, 7828), (Start: 29 @7903 has 121 MA's), (54, 8029), (58, 8056), (73, 8116), (74, 8119), (79, 8137), (84, 8164), (91, 8215),

Gene: Misaeng\_12 Start: 9868, Stop: 10206, Start Num: 29

Candidate Starts for Misaeng\_12:

(Start: 29 @9868 has 121 MA's), (70, 10057), (86, 10135), (89, 10165), (94, 10186),

Gene: Moki\_8 Start: 6907, Stop: 7245, Start Num: 29

Candidate Starts for Moki\_8:

(Start: 29 @6907 has 121 MA's), (38, 6940), (89, 7204),

Gene: Moonflower\_10 Start: 7270, Stop: 7605, Start Num: 34

Candidate Starts for Moonflower\_10:

(Start: 34 @7270 has 35 MA's), (53, 7372), (63, 7435), (66, 7444), (69, 7456), (72, 7474), (79, 7492), (80, 7495), (95, 7588),

Gene: MrBoss\_12 Start: 9790, Stop: 10128, Start Num: 29

Candidate Starts for MrBoss\_12:

(Start: 29 @9790 has 121 MA's), (38, 9823),

Gene: MrGloopy\_12 Start: 9753, Stop: 10091, Start Num: 29

Candidate Starts for MrGloopy\_12:

(Start: 29 @9753 has 121 MA's), (86, 10020), (89, 10050),

Gene: Mulch\_13 Start: 8626, Stop: 8946, Start Num: 34

Candidate Starts for Mulch\_13:

(5, 8281), (Start: 27 @8599 has 5 MA's), (Start: 34 @8626 has 35 MA's), (40, 8644), (48, 8701), (55, 8734), (66, 8788), (67, 8794), (69, 8800), (72, 8818), (81, 8842), (92, 8917),

Gene: Nadeem\_13 Start: 8626, Stop: 8946, Start Num: 34

Candidate Starts for Nadeem\_13:

(5, 8281), (Start: 27 @8599 has 5 MA's), (Start: 34 @8626 has 35 MA's), (40, 8644), (48, 8701), (55, 8734), (66, 8788), (67, 8794), (69, 8800), (72, 8818), (81, 8842), (92, 8917),

Gene: Nancia\_8 Start: 6905, Stop: 7243, Start Num: 29

Candidate Starts for Nancia\_8:

(Start: 29 @6905 has 121 MA's), (38, 6938), (89, 7202),

Gene: NancyRae\_13 Start: 8626, Stop: 8946, Start Num: 34

Candidate Starts for NancyRae\_13:

(5, 8281), (Start: 27 @8599 has 5 MA's), (Start: 34 @8626 has 35 MA's), (40, 8644), (48, 8701), (55, 8734), (66, 8788), (67, 8794), (69, 8800), (72, 8818), (81, 8842), (92, 8917),

Gene: Niblet\_10 Start: 7688, Stop: 8029, Start Num: 29

Candidate Starts for Niblet\_10:

(18, 7556), (22, 7613), (28, 7685), (Start: 29 @7688 has 121 MA's), (30, 7691), (42, 7733), (50, 7796), (51, 7799), (54, 7814), (79, 7922), (84, 7949), (87, 7964), (88, 7967), (91, 8000),

Gene: Nubia\_12 Start: 9782, Stop: 10120, Start Num: 29

Candidate Starts for Nubia\_12:

(Start: 29 @9782 has 121 MA's), (56, 9914), (70, 9971), (85, 10040), (86, 10049), (89, 10079),

Gene: OMalley\_8 Start: 6923, Stop: 7261, Start Num: 29

Candidate Starts for OMalley\_8:

(Start: 29 @6923 has 121 MA's), (38, 6956), (45, 6995), (59, 7076), (85, 7181), (86, 7190),

Gene: Opie\_9 Start: 7220, Stop: 7555, Start Num: 34

Candidate Starts for Opie\_9:

(33, 7217), (Start: 34 @7220 has 35 MA's), (41, 7241), (76, 7430),

Gene: Oppalora\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for Oppalora\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570), (88, 7588),

Gene: Orcanus\_10 Start: 7692, Stop: 8033, Start Num: 29

Candidate Starts for Orcanus\_10:

(Start: 29 @7692 has 121 MA's), (30, 7695), (42, 7737), (50, 7800), (51, 7803), (54, 7818), (79, 7926), (84, 7953), (91, 8004), (93, 8010),

Gene: OtsoOtso\_10 Start: 7742, Stop: 8083, Start Num: 29

Candidate Starts for OtsoOtso\_10:

(18, 7610), (22, 7667), (Start: 29 @7742 has 121 MA's), (54, 7868), (58, 7895), (73, 7955), (74, 7958), (79, 7976), (84, 8003), (91, 8054),

Gene: OurGirlNessie\_8 Start: 6896, Stop: 7234, Start Num: 29

Candidate Starts for OurGirlNessie\_8:

(Start: 29 @6896 has 121 MA's), (38, 6929), (89, 7193),

Gene: Oxynfrius\_12 Start: 9795, Stop: 10133, Start Num: 29

Candidate Starts for Oxynfrius\_12:

(Start: 29 @9795 has 121 MA's), (56, 9927), (70, 9984), (89, 10092),

Gene: PCoral7\_9 Start: 6937, Stop: 7305, Start Num: 27

Candidate Starts for PCoral7\_9:

(5, 6607), (Start: 27 @6937 has 5 MA's), (33, 6961), (Start: 35 @6967 has 1 MA's), (48, 7039), (52, 7054), (55, 7072), (65, 7132), (67, 7141),

Gene: Parada\_13 Start: 8626, Stop: 8946, Start Num: 34

Candidate Starts for Parada\_13:

(5, 8281), (Start: 27 @8599 has 5 MA's), (Start: 34 @8626 has 35 MA's), (40, 8644), (48, 8701), (55, 8734), (66, 8788), (67, 8794), (69, 8800), (72, 8818), (81, 8842), (92, 8917),

Gene: PartyCup\_12 Start: 9837, Stop: 10175, Start Num: 29

Candidate Starts for PartyCup\_12:

(Start: 29 @9837 has 121 MA's), (38, 9870),

Gene: Pelletreau\_11 Start: 7898, Stop: 8239, Start Num: 29

Candidate Starts for Pelletreau\_11:

(Start: 29 @7898 has 121 MA's), (30, 7901), (42, 7943), (50, 8006), (51, 8009), (54, 8024), (79, 8132), (84, 8159), (91, 8210),

Gene: PhirstandPhine\_11 Start: 7903, Stop: 8244, Start Num: 29

Candidate Starts for PhirstandPhine\_11:

(18, 7771), (22, 7828), (Start: 29 @7903 has 121 MA's), (54, 8029), (58, 8056), (73, 8116), (74, 8119), (79, 8137), (84, 8164), (91, 8215),

Gene: PhluffyCoco\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for PhluffyCoco\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570),

Gene: Pimento\_14 Start: 8833, Stop: 9150, Start Num: 35

Candidate Starts for Pimento\_14:

(5, 8485), (Start: 27 @8803 has 5 MA's), (Start: 34 @8830 has 35 MA's), (Start: 35 @8833 has 1 MA's), (40, 8848), (48, 8905), (55, 8938), (66, 8992), (67, 8998), (69, 9004), (72, 9022), (81, 9046), (92, 9121),

Gene: Pineda\_11 Start: 7903, Stop: 8244, Start Num: 29

Candidate Starts for Pineda\_11:

(18, 7771), (22, 7828), (Start: 29 @7903 has 121 MA's), (54, 8029), (58, 8056), (73, 8116), (74, 8119), (79, 8137), (84, 8164), (91, 8215),

Gene: PinkFriday\_8 Start: 6926, Stop: 7264, Start Num: 29

Candidate Starts for PinkFriday\_8:

(1, 6494), (11, 6674), (12, 6680), (Start: 29 @6926 has 121 MA's), (45, 6998), (46, 7013), (85, 7184), (94, 7244),

Gene: PitaDog\_8 Start: 6896, Stop: 7234, Start Num: 29

Candidate Starts for PitaDog\_8:

(Start: 29 @6896 has 121 MA's), (38, 6929), (89, 7193),

Gene: Polka\_10 Start: 7742, Stop: 8083, Start Num: 29

Candidate Starts for Polka\_10:

(18, 7610), (22, 7667), (Start: 29 @7742 has 121 MA's), (54, 7868), (58, 7895), (73, 7955), (74, 7958), (79, 7976), (84, 8003), (91, 8054),

Gene: Potatoes\_12 Start: 9814, Stop: 10152, Start Num: 29

Candidate Starts for Potatoes\_12:

(Start: 29 @9814 has 121 MA's), (69, 10000), (86, 10081), (89, 10111),

Gene: Preamble\_8 Start: 6906, Stop: 7244, Start Num: 29

Candidate Starts for Preamble\_8:

(1, 6477), (11, 6657), (12, 6663), (Start: 29 @6906 has 121 MA's), (89, 7203),

Gene: PrincePatrick\_9 Start: 6938, Stop: 7306, Start Num: 27

Candidate Starts for PrincePatrick\_9:

(Start: 27 @6938 has 5 MA's), (33, 6962), (Start: 35 @6968 has 1 MA's), (48, 7040), (52, 7055), (55, 7073), (57, 7088), (65, 7133), (67, 7142),

Gene: Pterodactyl\_8 Start: 6897, Stop: 7235, Start Num: 29

Candidate Starts for Pterodactyl\_8:

(Start: 29 @6897 has 121 MA's), (38, 6930), (89, 7194),

Gene: Pumancara\_8 Start: 6925, Stop: 7263, Start Num: 29

Candidate Starts for Pumancara\_8:

(1, 6493), (11, 6673), (12, 6679), (Start: 29 @6925 has 121 MA's), (45, 6997), (85, 7183), (94, 7243),

Gene: RAP15\_12 Start: 9820, Stop: 10158, Start Num: 29

Candidate Starts for RAP15\_12:

(16, 9655), (Start: 29 @9820 has 121 MA's), (69, 10006), (86, 10087), (89, 10117),

Gene: Rattail\_9 Start: 7363, Stop: 7701, Start Num: 29

Candidate Starts for Rattail\_9:

(Start: 29 @7363 has 121 MA's), (42, 7408), (44, 7432), (51, 7474), (54, 7489), (64, 7534), (66, 7540), (73, 7573), (84, 7621), (88, 7639),

Gene: RayTheFireFly\_10 Start: 7271, Stop: 7606, Start Num: 34

Candidate Starts for RayTheFireFly\_10:

(15, 7091), (Start: 34 @7271 has 35 MA's), (53, 7373), (63, 7436), (66, 7445), (69, 7457), (72, 7475), (79, 7493), (80, 7496), (95, 7589),

Gene: RcigaStruga\_12 Start: 9803, Stop: 10141, Start Num: 29

Candidate Starts for RcigaStruga\_12:

(Start: 29 @9803 has 121 MA's), (36, 9827), (70, 9992), (86, 10070), (89, 10100), (94, 10121),

Gene: RedFox\_9 Start: 7312, Stop: 7650, Start Num: 29

Candidate Starts for RedFox\_9:

(6, 7018), (14, 7105), (19, 7189), (25, 7273), (Start: 29 @7312 has 121 MA's), (42, 7357), (44, 7381), (51, 7423), (54, 7438), (64, 7483), (66, 7489), (73, 7522), (84, 7570), (88, 7588),

Gene: Renna12\_10 Start: 7512, Stop: 7850, Start Num: 29

Candidate Starts for Renna12\_10:

(19, 7389), (20, 7413), (Start: 29 @7512 has 121 MA's), (44, 7581), (51, 7623), (54, 7638), (64, 7683), (73, 7722), (74, 7725), (77, 7734), (83, 7758), (84, 7770), (88, 7788),

Gene: Riovina\_8 Start: 6923, Stop: 7261, Start Num: 29

Candidate Starts for Riovina\_8:

(Start: 29 @6923 has 121 MA's), (38, 6956), (45, 6995), (59, 7076), (85, 7181), (86, 7190),

Gene: Riverdale\_12 Start: 9751, Stop: 10089, Start Num: 29

Candidate Starts for Riverdale\_12:

(Start: 29 @9751 has 121 MA's), (69, 9937), (86, 10018), (89, 10048),

Gene: Rozby\_12 Start: 9751, Stop: 10089, Start Num: 29

Candidate Starts for Rozby\_12:

(Start: 29 @9751 has 121 MA's), (69, 9937), (86, 10018), (89, 10048),

Gene: Ruchi\_10 Start: 7974, Stop: 8336, Start Num: 29

Candidate Starts for Ruchi\_10:

(18, 7842), (Start: 29 @7974 has 121 MA's), (37, 8001), (47, 8070), (49, 8079), (61, 8136), (64, 8166), (69, 8184), (72, 8202), (75, 8211), (87, 8271),

Gene: Ruthy\_10 Start: 7438, Stop: 7761, Start Num: 34

Candidate Starts for Ruthy\_10:

(4, 7039), (5, 7081), (17, 7261), (Start: 34 @7438 has 35 MA's), (40, 7456), (66, 7600),

Gene: Savage2526\_12 Start: 9814, Stop: 10152, Start Num: 29

Candidate Starts for Savage2526\_12:

(16, 9649), (Start: 29 @9814 has 121 MA's), (69, 10000), (86, 10081), (89, 10111),

Gene: Schnabeltier\_9 Start: 7206, Stop: 7541, Start Num: 34

Candidate Starts for Schnabeltier\_9:

(7, 6921), (33, 7203), (Start: 34 @7206 has 35 MA's), (41, 7227), (76, 7416),

Gene: Scuttle\_12 Start: 9820, Stop: 10158, Start Num: 29

Candidate Starts for Scuttle\_12:

(16, 9655), (Start: 29 @9820 has 121 MA's), (69, 10006), (86, 10087), (89, 10117),

Gene: Sergei\_8 Start: 6925, Stop: 7263, Start Num: 29

Candidate Starts for Sergei\_8:

(Start: 29 @6925 has 121 MA's), (45, 6997), (68, 7108), (85, 7183), (86, 7192), (94, 7243),

Gene: Shen\_11 Start: 7899, Stop: 8240, Start Num: 29

Candidate Starts for Shen\_11:

(Start: 29 @7899 has 121 MA's), (30, 7902), (42, 7944), (50, 8007), (51, 8010), (54, 8025), (79, 8133), (84, 8160), (91, 8211),

Gene: Sprinklemunch\_9 Start: 7214, Stop: 7537, Start Num: 34

Candidate Starts for Sprinklemunch\_9:

(Start: 34 @7214 has 35 MA's), (40, 7232), (54, 7316), (67, 7382), (81, 7430),

Gene: StuartMinion\_9 Start: 7338, Stop: 7676, Start Num: 29

Candidate Starts for StuartMinion\_9:

(19, 7215), (22, 7263), (Start: 29 @7338 has 121 MA's), (44, 7407), (50, 7446), (51, 7449), (54, 7464), (73, 7548), (84, 7596), (95, 7662),

Gene: Supakev\_8 Start: 6925, Stop: 7263, Start Num: 29

Candidate Starts for Supakev\_8:

(1, 6493), (11, 6673), (12, 6679), (Start: 29 @6925 has 121 MA's), (45, 6997), (85, 7183), (94, 7243),

Gene: Suppi\_12 Start: 9837, Stop: 10175, Start Num: 29

Candidate Starts for Suppi\_12:

(Start: 29 @9837 has 121 MA's), (38, 9870),

Gene: TaronosaurusRx\_9 Start: 7210, Stop: 7554, Start Num: 31

Candidate Starts for TaronosaurusRx\_9:

(7, 6934), (8, 6943), (Start: 31 @7210 has 1 MA's), (Start: 34 @7219 has 35 MA's), (41, 7240), (66, 7384), (76, 7429),

Gene: TattModd\_12 Start: 9814, Stop: 10152, Start Num: 29

Candidate Starts for TattModd\_12:

(Start: 29 @9814 has 121 MA's), (69, 10000), (86, 10081), (89, 10111),

Gene: TaylorSipht\_10 Start: 7777, Stop: 8118, Start Num: 29

Candidate Starts for TaylorSipht\_10:

(11, 7525), (13, 7570), (21, 7684), (Start: 29 @7777 has 121 MA's), (30, 7780), (54, 7903), (58, 7930), (62, 7945), (79, 8011), (84, 8038), (87, 8053), (91, 8089),

Gene: Temper16\_8 Start: 6925, Stop: 7263, Start Num: 29

Candidate Starts for Temper16\_8:

(Start: 29 @6925 has 121 MA's), (45, 6997), (68, 7108), (85, 7183), (86, 7192), (94, 7243),

Gene: Toad24\_11 Start: 7899, Stop: 8240, Start Num: 29

Candidate Starts for Toad24\_11:

(Start: 29 @7899 has 121 MA's), (30, 7902), (42, 7944), (50, 8007), (51, 8010), (54, 8025), (79, 8133), (84, 8160), (91, 8211),

Gene: Toast\_9 Start: 6937, Stop: 7305, Start Num: 27

Candidate Starts for Toast\_9:

(5, 6607), (Start: 27 @6937 has 5 MA's), (33, 6961), (Start: 35 @6967 has 1 MA's), (48, 7039), (52, 7054), (55, 7072), (65, 7132), (67, 7141),

Gene: Urla\_8 Start: 6952, Stop: 7290, Start Num: 29

Candidate Starts for Urla\_8:

(Start: 29 @6952 has 121 MA's), (43, 7003), (51, 7060), (89, 7249),

Gene: Vallejo\_12 Start: 9752, Stop: 10090, Start Num: 29

Candidate Starts for Vallejo\_12:

(Start: 29 @9752 has 121 MA's), (69, 9938), (89, 10049),

Gene: Vulpecula\_10 Start: 8050, Stop: 8412, Start Num: 29

Candidate Starts for Vulpecula\_10:

(18, 7918), (Start: 29 @8050 has 121 MA's), (30, 8053), (37, 8077), (47, 8146), (49, 8155), (58, 8203), (64, 8242), (72, 8278), (75, 8287), (87, 8347),

Gene: Vulture\_8 Start: 6923, Stop: 7261, Start Num: 29

Candidate Starts for Vulture\_8:

(Start: 29 @6923 has 121 MA's), (38, 6956), (45, 6995), (59, 7076), (85, 7181), (86, 7190),

Gene: Walrus\_9 Start: 6871, Stop: 7242, Start Num: 26

Candidate Starts for Walrus\_9:

(Start: 26 @6871 has 1 MA's), (32, 6895), (55, 7009), (65, 7069),

Gene: Wawa\_12 Start: 9789, Stop: 10127, Start Num: 29

Candidate Starts for Wawa\_12:

(Start: 29 @9789 has 121 MA's), (56, 9921), (69, 9975), (86, 10056), (89, 10086),

Gene: Wayne\_12 Start: 9883, Stop: 10221, Start Num: 29

Candidate Starts for Wayne\_12:

(Start: 29 @9883 has 121 MA's), (38, 9916),

Gene: Westrich\_11 Start: 7887, Stop: 8228, Start Num: 29

Candidate Starts for Westrich\_11:

(Start: 29 @7887 has 121 MA's), (30, 7890), (42, 7932), (50, 7995), (51, 7998), (54, 8013), (79, 8121), (84, 8148), (91, 8199),

Gene: WheatThin\_13 Start: 8626, Stop: 8946, Start Num: 34

Candidate Starts for WheatThin\_13:

(5, 8281), (Start: 27 @8599 has 5 MA's), (Start: 34 @8626 has 35 MA's), (40, 8644), (48, 8701), (55, 8734), (66, 8788), (67, 8794), (69, 8800), (72, 8818), (81, 8842), (92, 8917),

Gene: WileyE\_9 Start: 7385, Stop: 7747, Start Num: 29

Candidate Starts for WileyE\_9:

(18, 7253), (Start: 29 @7385 has 121 MA's), (37, 7412), (47, 7481), (49, 7490), (61, 7547), (64, 7577), (69, 7595), (72, 7613), (75, 7622), (87, 7682),

Gene: William\_9 Start: 6952, Stop: 7320, Start Num: 27

Candidate Starts for William\_9:

(Start: 27 @6952 has 5 MA's), (33, 6976), (Start: 35 @6982 has 1 MA's), (48, 7054), (52, 7069), (55, 7087), (57, 7102), (65, 7147), (67, 7156),

Gene: WonderBoy\_8 Start: 6905, Stop: 7243, Start Num: 29

Candidate Starts for WonderBoy\_8:

(Start: 29 @6905 has 121 MA's), (38, 6938), (51, 7013), (89, 7202),

Gene: ZAYM\_9 Start: 7212, Stop: 7547, Start Num: 34

Candidate Starts for ZAYM\_9:

(8, 6936), (Start: 34 @7212 has 35 MA's), (41, 7233), (66, 7377), (67, 7383), (76, 7422),

Gene: Zixiang\_10 Start: 7688, Stop: 8029, Start Num: 29

Candidate Starts for Zixiang\_10:

(18, 7556), (22, 7613), (28, 7685), (Start: 29 @7688 has 121 MA's), (30, 7691), (42, 7733), (50, 7796), (51, 7799), (54, 7814), (79, 7922), (84, 7949), (87, 7964), (88, 7967), (91, 8000),

Gene: Zodiariah\_9 Start: 7164, Stop: 7487, Start Num: 34

Candidate Starts for Zodiariah\_9:

(3, 6759), (5, 6807), (17, 6987), (Start: 27 @7137 has 5 MA's), (Start: 34 @7164 has 35 MA's), (54, 7266), (67, 7332), (81, 7380),

Gene: Zorro\_12 Start: 9768, Stop: 10106, Start Num: 29

Candidate Starts for Zorro\_12:

(Start: 29 @9768 has 121 MA's), (56, 9900), (69, 9954), (86, 10035), (89, 10065),