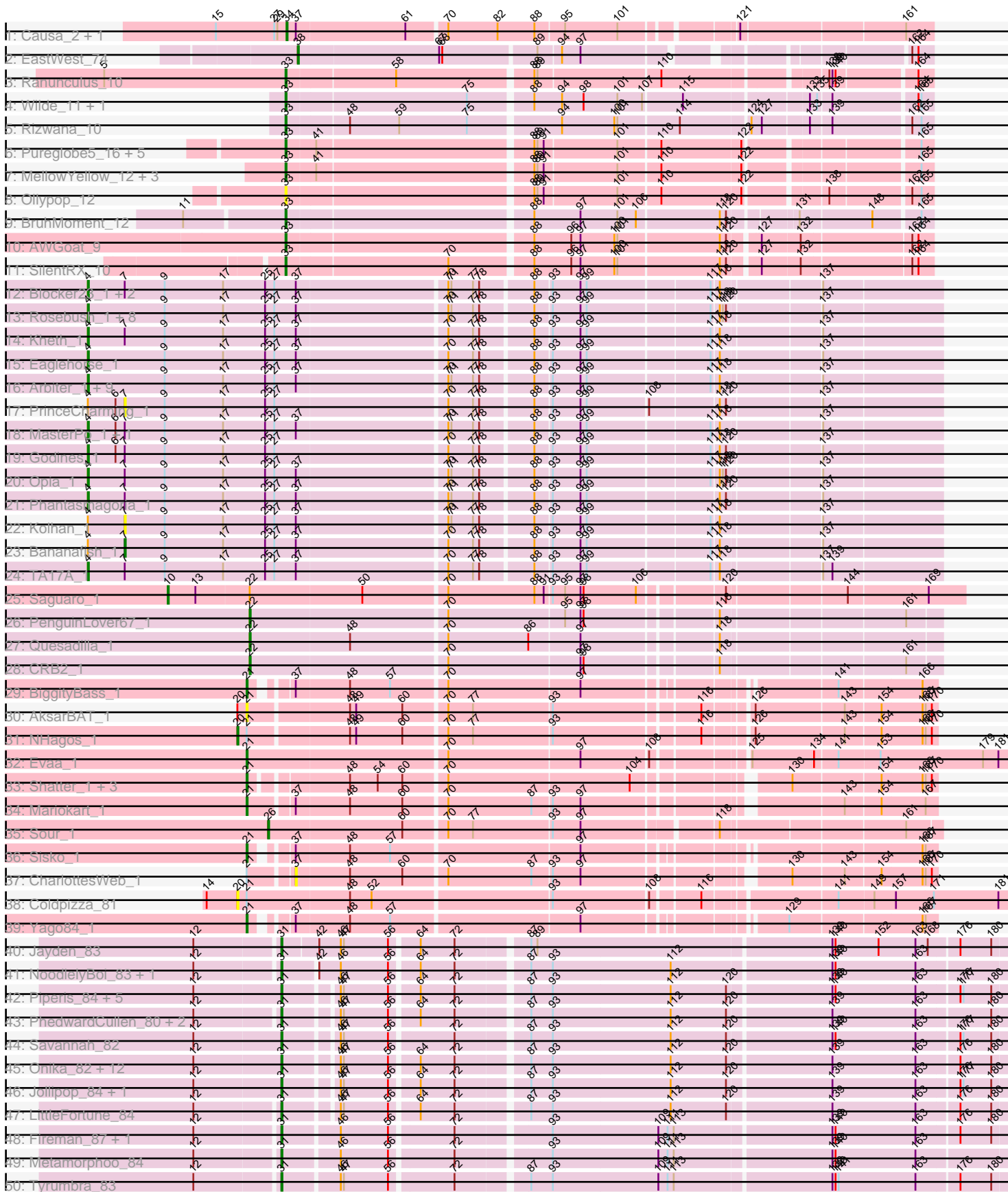
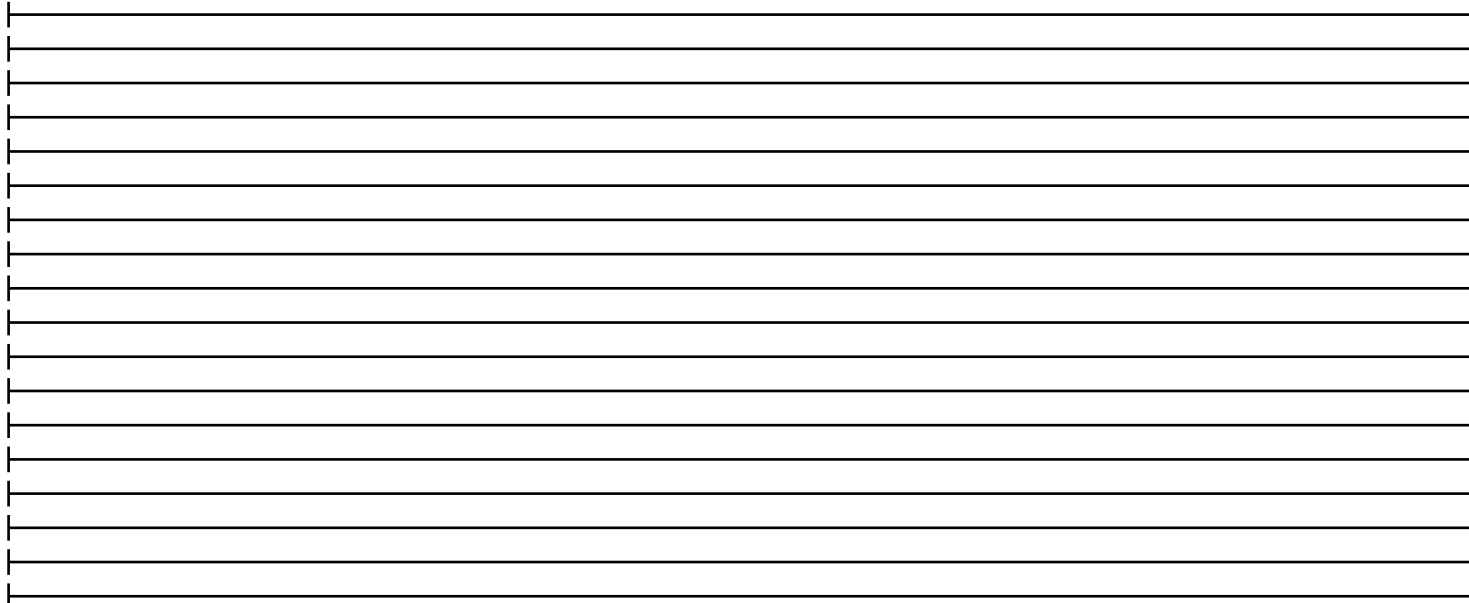
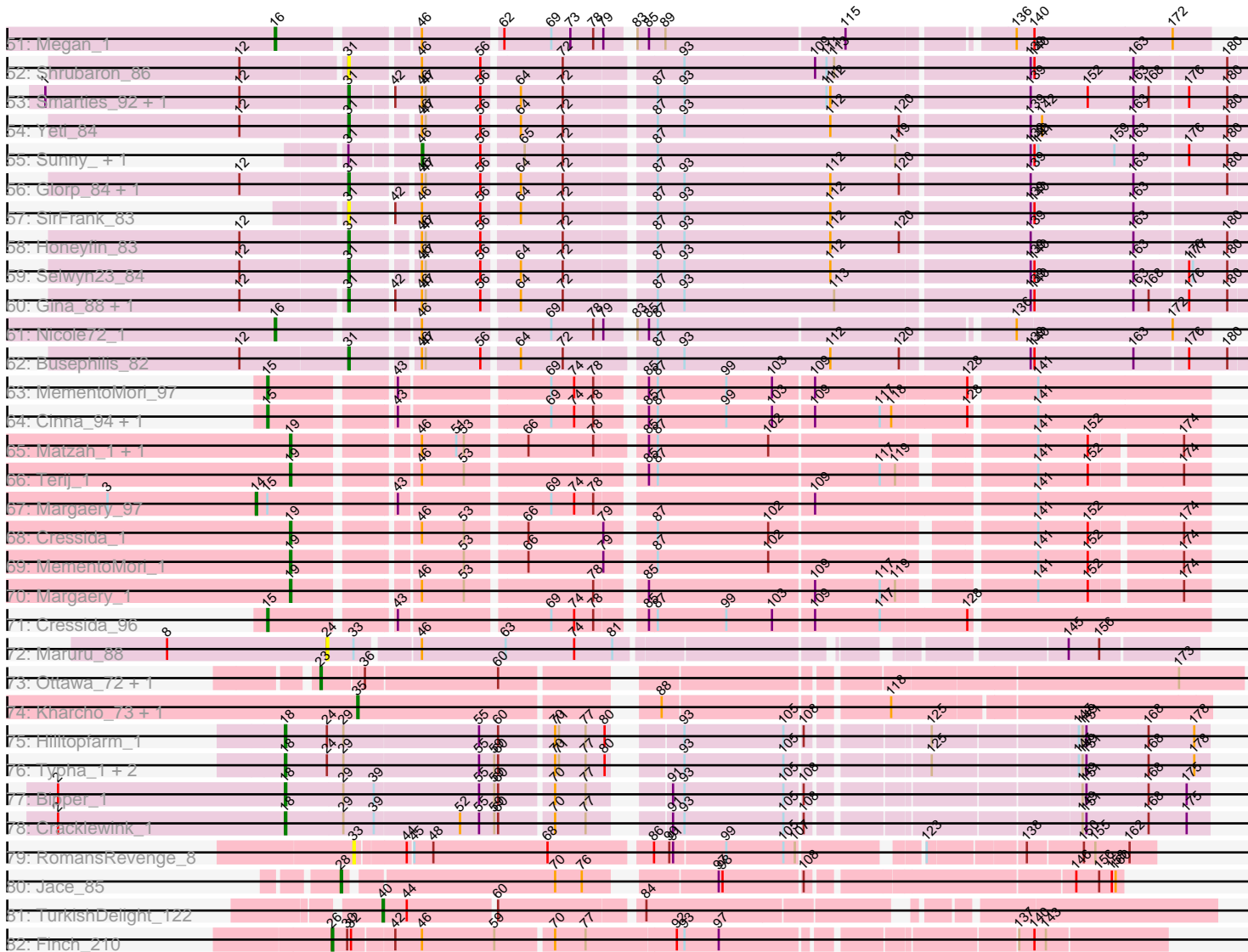


Pham 224363



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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 224363 Report

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

Pham number 224363 has 147 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Causa\_2, StAugustine\_2
- Track 2 : EastWest\_74
- Track 3 : Ranunculus\_10
- Track 4 : Wilde\_11, Tank\_11
- Track 5 : Rizwana\_10
- Track 6 : Pureglobe5\_16, Kubulix\_14, Odyssey395\_16, DogYard\_13, Beagle\_15, Pointis\_14
- Track 7 : MellowYellow\_12, NyleyClemson\_12, Forrestell\_11, RazzB\_10
- Track 8 : Ollypop\_12
- Track 9 : BruhMoment\_12
- Track 10 : AWGoat\_9
- Track 11 : SilentRX\_10
- Track 12 : Blocker23\_1, Laurie\_1, Tres\_1
- Track 13 : Rosebush\_1, Hedgerow\_1, Boyle\_1, Faze9\_1, Brownie5\_1, Coffee\_1, FrenchFry\_1, Tinciduntolum\_1, West99\_1
- Track 14 : Kheth\_1
- Track 15 : Eaglehorse\_1
- Track 16 : Arbitrator\_1, ItsyBitsy1\_1, Lars\_1, Ares\_1, Calamitous\_1, Qyrzula\_1, Glass\_1, Rhinoforte\_1, LizLemon\_1, Holeinone\_1
- Track 17 : PrinceCharming\_1
- Track 18 : MasterPo\_1, Lephleur\_1
- Track 19 : Godines\_1
- Track 20 : Opia\_1
- Track 21 : Phantasmagoria\_1
- Track 22 : Kolhan\_1
- Track 23 : Bananafish\_1
- Track 24 : TA17A\_1
- Track 25 : Saguaro\_1
- Track 26 : PenguinLover67\_1
- Track 27 : Quesadilla\_1
- Track 28 : CRB2\_1
- Track 29 : BiggityBass\_1
- Track 30 : AksarBAT\_1
- Track 31 : NHagos\_1
- Track 32 : Evaa\_1
- Track 33 : Shatter\_1, Fresco\_1, Axumite\_1, Ligma\_1
- Track 34 : Mariokart\_1

- Track 35 : Sour\_1
- Track 36 : Sisko\_1
- Track 37 : CharlottesWeb\_1
- Track 38 : Coldpizza\_81
- Track 39 : Yago84\_1
- Track 40 : Jayden\_83
- Track 41 : NoodlelyBoi\_83, ClearAsMud\_86
- Track 42 : Piperis\_84, Pulchra\_85, Scumberland\_85, Ganandorf\_81, Crisis\_84, Cranjis\_84
- Track 43 : PhedwardCullen\_80, PiperSansNom\_84, CrazyRich\_81
- Track 44 : Savannah\_82
- Track 45 : Onika\_82, Quhwah\_87, EarickHC\_84, Shotgun\_82, BrazzalePHS\_82, Paschalis\_83, Phrancesco\_83, KaiHaiDragon\_84, Jefe\_83, Kowalski\_82, Ramiel05\_82, PierreOrion\_82, Antares\_83
- Track 46 : Jollipop\_84, Hermeonysus\_83
- Track 47 : LittleFortune\_84
- Track 48 : Fireman\_87, RobsFeet\_90
- Track 49 : Metamorphoo\_84
- Track 50 : Tyumbra\_83
- Track 51 : Megan\_1
- Track 52 : Shrubaron\_86
- Track 53 : Smarties\_92, Ariadne\_92
- Track 54 : Yeti\_84
- Track 55 : Sunny\_, Merry\_
- Track 56 : Glorp\_84, Phorgeous\_83
- Track 57 : SirFrank\_83
- Track 58 : Honeyfin\_83
- Track 59 : Selwyn23\_84
- Track 60 : Gina\_88, Teamocil\_88
- Track 61 : Nicole72\_1
- Track 62 : Busephilis\_82
- Track 63 : MementoMori\_97
- Track 64 : Cinna\_94, Matzah\_98
- Track 65 : Matzah\_1, Cinna\_1
- Track 66 : Terij\_1
- Track 67 : Margaery\_97
- Track 68 : Cressida\_1
- Track 69 : MementoMori\_1
- Track 70 : Margaery\_1
- Track 71 : Cressida\_96
- Track 72 : Maruru\_88
- Track 73 : Ottawa\_72, Kharcho\_72
- Track 74 : Kharcho\_73, Ottawa\_73
- Track 75 : Hilltopfarm\_1
- Track 76 : Typha\_1, AuntGwenStacy\_1, Faiyaz\_1
- Track 77 : Bipper\_1
- Track 78 : Cracklewink\_1
- Track 79 : RomansRevenge\_8
- Track 80 : Jace\_85
- Track 81 : TurkishDelight\_122
- Track 82 : Finch\_210

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

The start number called the most often in the published annotations is 31, it was called in 40 of the 126 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antares\_83, Ariadne\_92, BrazzalePHS\_82, Busephilis\_82, ClearAsMud\_86, Cranjis\_84, CrazyRich\_81, Crisis\_84, EarickHC\_84, Fireman\_87, Ganandorf\_81, Gina\_88, Glorp\_84, Hermeonysus\_83, Honeyfin\_83, Jayden\_83, Jefe\_83, Jollipop\_84, KaiHaiDragon\_84, Kowalski\_82, LittleFortune\_84, Metamorphoo\_84, NoodlelyBoi\_83, Onika\_82, Paschalis\_83, PhedwardCullen\_80, Phorgeous\_83, Phrancesco\_83, PierreOrion\_82, PiperSansNom\_84, Piperis\_84, Pulchra\_85, Quhwah\_87, Ramiel05\_82, RobsFeet\_90, Savannah\_82, Scumberland\_85, Selwyn23\_84, Shotgun\_82, Shrubaron\_86, SirFrank\_83, Smarties\_92, Teamocil\_88, Tyumbra\_83, Yeti\_84,

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

- Merry\_, Sunny\_,

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

- AWGoat\_9, AksarBAT\_1, Arbiter\_1, Ares\_1, AuntGwenStacy\_1, Axumite\_1, Bananafish\_1, Beagle\_15, BiggityBass\_1, Bipper\_1, Blocker23\_1, Boyle\_1, Brownie5\_1, BruhMoment\_12, CRB2\_1, Calamitous\_1, Causa\_2, CharlottesWeb\_1, Cinna\_1, Cinna\_94, Coffee\_1, Coldpizza\_81, Cracklewink\_1, Cressida\_1, Cressida\_96, DogYard\_13, Eaglehorse\_1, EastWest\_74, Evaa\_1, Faiyaz\_1, Faze9\_1, Finch\_210, Forrestell\_11, FrenchFry\_1, Fresco\_1, Glass\_1, Godines\_1, Hedgerow\_1, Hilltopfarm\_1, Holeinone\_1, ItsyBitsy1\_1, Jace\_85, Kharcho\_72, Kharcho\_73, Kheth\_1, Kolhan\_1, Kubulix\_14, Lars\_1, Laurie\_1, Lephleur\_1, Ligma\_1, LizLemon\_1, Margaery\_1, Margaery\_97, Mariokart\_1, Maruru\_88, MasterPo\_1, Matzah\_1, Matzah\_98, Megan\_1, MellowYellow\_12, MementoMori\_1, MementoMori\_97, NHagos\_1, Nicole72\_1, NyleyClemson\_12, Odyssey395\_16, Ollypop\_12, Opia\_1, Ottawa\_72, Ottawa\_73, PenguinLover67\_1, Phantasmagoria\_1, Pointis\_14, PrinceCharming\_1, Pureglobe5\_16, Quesadilla\_1, Qyrzula\_1, Ranunculus\_10, RazzB\_10, Rhinoforte\_1, Rizwana\_10, RomansRevenge\_8, Rosebush\_1, Saguaro\_1, Shatter\_1, SilentRX\_10, Sisko\_1, Sour\_1, StAugustine\_2, TA17A\_1, Tank\_11, Terij\_1, Tinciduntsolum\_1, Tres\_1, TurkishDelight\_122, Typha\_1, West99\_1, Wilde\_11, Yago84\_1,

## **Summary by start number:**

Start 4:

- Found in 33 of 147 ( 22.4% ) of genes in pham
- Manual Annotations of this start: 30 of 126
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Arbiter\_1 (B2), Ares\_1 (B2), Blocker23\_1 (B2), Boyle\_1 (B2), Brownie5\_1 (B2), Calamitous\_1 (B2), Coffee\_1 (B2), Eaglehorse\_1 (B2), Faze9\_1 (B2), FrenchFry\_1 (B2), Glass\_1 (B2), Godines\_1 (B2), Hedgerow\_1 (B2), Holeinone\_1 (B2), ItsyBitsy1\_1 (B2), Kheth\_1 (B2), Lars\_1 (B2), Laurie\_1 (B2), Lephleur\_1 (B2), LizLemon\_1 (B2), MasterPo\_1 (B2), Opia\_1 (B2), Phantasmagoria\_1 (B2), Qyrzula\_1 (B2), Rhinoforte\_1 (B2), Rosebush\_1 (B2), TA17A\_1 (B2), Tinciduntsolum\_1 (B2), Tres\_1 (B2), West99\_1 (B2),

Start 7:

- Found in 13 of 147 ( 8.8% ) of genes in pham
- Manual Annotations of this start: 1 of 126
- Called 23.1% of time when present
- Phage (with cluster) where this start called: Bananafish\_1 (B2), Kolhan\_1 (B2), PrinceCharming\_1 (B2),

Start 10:

- Found in 1 of 147 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Saguaro\_1 (B7),

Start 14:

- Found in 2 of 147 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 126
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Margaery\_97 (EI),

Start 15:

- Found in 7 of 147 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 4 of 126
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Cinna\_94 (EI), Cressida\_96 (EI), Matzah\_98 (EI), MementoMori\_97 (EI),

Start 16:

- Found in 2 of 147 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 2 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Megan\_1 (EC), Nicole72\_1 (EC),

Start 18:

- Found in 6 of 147 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 4 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AuntGwenStacy\_1 (Y), Bipper\_1 (Y), Cracklewink\_1 (Y), Faiyaz\_1 (Y), Hilltopfarm\_1 (Y), Typha\_1 (Y),

Start 19:

- Found in 6 of 147 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 6 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cinna\_1 (EI), Cressida\_1 (EI), Margaery\_1 (EI), Matzah\_1 (EI), MementoMori\_1 (EI), Terij\_1 (EI),

Start 20:

- Found in 3 of 147 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 126
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Coldpizza\_81 (DR), NHagos\_1 (DR),

Start 21:

- Found in 13 of 147 ( 8.8% ) of genes in pham
- Manual Annotations of this start: 9 of 126
- Called 76.9% of time when present
- Phage (with cluster) where this start called: AksarBAT\_1 (DR), Axumite\_1 (DR), BiggityBass\_1 (DR), Evaa\_1 (DR), Fresco\_1 (DR), Ligma\_1 (DR), Mariokart\_1 (DR), Shatter\_1 (DR), Sisko\_1 (DR), Yago84\_1 (DR),

#### Start 22:

- Found in 4 of 147 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 3 of 126
- Called 75.0% of time when present
- Phage (with cluster) where this start called: CRB2\_1 (B9), PenguinLover67\_1 (B9), Quesadilla\_1 (B9),

#### Start 23:

- Found in 2 of 147 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 2 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kharcho\_72 (FM), Ottawa\_72 (FM),

#### Start 24:

- Found in 5 of 147 ( 3.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Maruru\_88 (FG),

#### Start 26:

- Found in 2 of 147 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 2 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Finch\_210 (singleton), Sour\_1 (DR),

#### Start 28:

- Found in 1 of 147 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace\_85 (singleton),

#### Start 31:

- Found in 47 of 147 ( 32.0% ) of genes in pham
- Manual Annotations of this start: 40 of 126
- Called 95.7% of time when present
- Phage (with cluster) where this start called: Antares\_83 (EC), Ariadne\_92 (EC), BrazzalePHS\_82 (EC), Busephilis\_82 (EC), ClearAsMud\_86 (EC), Cranjjs\_84 (EC), CrazyRich\_81 (EC), Crisis\_84 (EC), EarickHC\_84 (EC), Fireman\_87 (EC), Ganandorf\_81 (EC), Gina\_88 (EC), Glorp\_84 (EC), Hermeonysus\_83 (EC), Honeyfin\_83 (EC), Jayden\_83 (EC), Jefe\_83 (EC), Jollipop\_84 (EC), KaiHaiDragon\_84 (EC), Kowalski\_82 (EC), LittleFortune\_84 (EC), Metamorphoo\_84 (EC), NoodlelyBoi\_83 (EC), Onika\_82 (EC), Paschalis\_83 (EC), PhedwardCullen\_80 (EC), Phorgeous\_83 (EC), Phrancesco\_83 (EC), PierreOrion\_82 (EC), PiperSansNom\_84 (EC), Piperis\_84 (EC), Pulchra\_85 (EC), Quhwah\_87 (EC), Ramiel05\_82 (EC), RobsFeet\_90 (EC), Savannah\_82 (EC), Scumberland\_85 (EC), Selwyn23\_84 (EC), Shotgun\_82 (EC), Shrubaron\_86 (EC), SirFrank\_83 (EC),

Smarties\_92 (EC), Teamocil\_88 (EC), Tyrumbra\_83 (EC), Yeti\_84 (EC),

Start 33:

- Found in 20 of 147 ( 13.6% ) of genes in pham
- Manual Annotations of this start: 12 of 126
- Called 95.0% of time when present
- Phage (with cluster) where this start called: AWGoat\_9 (AP4), Beagle\_15 (AP2), BruhMoment\_12 (AP3), DogYard\_13 (AP2), Forrestell\_11 (AP2), Kubulix\_14 (AP2), MellowYellow\_12 (AP2), NyleyClemson\_12 (AP2), Odyssey395\_16 (AP2), Ollypop\_12 (AP2), Pointis\_14 (AP2), Pureglobe5\_16 (AP2), Ranunculus\_10 (AP), RazzB\_10 (AP2), Rizwana\_10 (AP1), RomansRevenge\_8 (singleton), SilentRX\_10 (AP4), Tank\_11 (AP1), Wilde\_11 (AP1),

Start 34:

- Found in 2 of 147 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Causa\_2 (AI), StAugustine\_2 (AI),

Start 35:

- Found in 2 of 147 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 2 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kharcho\_73 (FM), Ottawa\_73 (FM),

Start 37:

- Found in 38 of 147 ( 25.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.6% of time when present
- Phage (with cluster) where this start called: CharlottesWeb\_1 (DR),

Start 38:

- Found in 1 of 147 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EastWest\_74 (AO),

Start 40:

- Found in 1 of 147 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 126
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TurkishDelight\_122 (singleton),

Start 46:

- Found in 56 of 147 ( 38.1% ) of genes in pham
- Manual Annotations of this start: 2 of 126
- Called 3.6% of time when present
- Phage (with cluster) where this start called: Merry\_ (EC), Sunny\_ (EC),

### Summary by clusters:

There are 17 clusters represented in this pham: AO, singleton, EI, AP, AP2, AP3, AP1, AP4, B9, AI, B7, EC, B2, FG, Y, DR, FM,



Info for manual annotations of cluster AI:

- Start number 34 was manually annotated 1 time for cluster AI.

Info for manual annotations of cluster AO:

- Start number 38 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AP:

- Start number 33 was manually annotated 1 time for cluster AP.

Info for manual annotations of cluster AP1:

- Start number 33 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 33 was manually annotated 5 times for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 33 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 33 was manually annotated 2 times for cluster AP4.

Info for manual annotations of cluster B2:

- Start number 4 was manually annotated 30 times for cluster B2.
- Start number 7 was manually annotated 1 time for cluster B2.

Info for manual annotations of cluster B7:

- Start number 10 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B9:

- Start number 22 was manually annotated 3 times for cluster B9.

Info for manual annotations of cluster DR:

- Start number 20 was manually annotated 1 time for cluster DR.
- Start number 21 was manually annotated 9 times for cluster DR.
- Start number 26 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster EC:

- Start number 16 was manually annotated 2 times for cluster EC.
- Start number 31 was manually annotated 40 times for cluster EC.
- Start number 46 was manually annotated 2 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 14 was manually annotated 1 time for cluster EI.
- Start number 15 was manually annotated 4 times for cluster EI.
- Start number 19 was manually annotated 6 times for cluster EI.

Info for manual annotations of cluster FM:

- Start number 23 was manually annotated 2 times for cluster FM.
- Start number 35 was manually annotated 2 times for cluster FM.

Info for manual annotations of cluster Y:

- Start number 18 was manually annotated 4 times for cluster Y.

### **Gene Information:**

Gene: AWGoat\_9 Start: 3580, Stop: 4173, Start Num: 33

Candidate Starts for AWGoat\_9:

(Start: 33 @3580 has 12 MA's), (88, 3808), (96, 3844), (97, 3853), (100, 3886), (101, 3889), (118, 3985), (120, 3991), (127, 4015), (132, 4051), (162, 4153), (164, 4159),

Gene: AksarBAT\_1 Start: 10, Stop: 633, Start Num: 21

Candidate Starts for AksarBAT\_1:

(Start: 20 @1 has 1 MA's), (Start: 21 @10 has 9 MA's), (48, 103), (49, 109), (60, 154), (70, 193), (77, 217), (93, 292), (116, 424), (126, 463), (143, 547), (154, 580), (166, 619), (167, 622), (170, 628),

Gene: Antares\_83 Start: 49113, Stop: 49772, Start Num: 31

Candidate Starts for Antares\_83:

(12, 49029), (Start: 31 @49113 has 40 MA's), (Start: 46 @49158 has 2 MA's), (47, 49161), (56, 49203), (64, 49227), (72, 49260), (87, 49323), (93, 49344), (112, 49458), (120, 49512), (139, 49608), (163, 49689), (176, 49728), (180, 49758),

Gene: Arbiter\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Arbiter\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Ares\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Ares\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Ariadne\_92 Start: 49948, Stop: 50610, Start Num: 31

Candidate Starts for Ariadne\_92:

(1, 49711), (12, 49864), (Start: 31 @49948 has 40 MA's), (42, 49975), (Start: 46 @49996 has 2 MA's), (47, 49999), (56, 50041), (64, 50065), (72, 50098), (87, 50161), (93, 50182), (111, 50293), (112, 50296), (139, 50446), (152, 50491), (163, 50527), (168, 50539), (176, 50566), (180, 50596),

Gene: AuntGwenStacy\_1 Start: 202, Stop: 861, Start Num: 18

Candidate Starts for AuntGwenStacy\_1:

(Start: 18 @202 has 4 MA's), (24, 235), (29, 247), (55, 352), (59, 364), (60, 367), (70, 406), (71, 409), (77, 430), (80, 445), (93, 481), (105, 559), (125, 652), (147, 760), (149, 763), (151, 766), (168, 814), (178, 850),

Gene: Axumite\_1 Start: 1, Stop: 606, Start Num: 21

Candidate Starts for Axumite\_1:

(Start: 21 @1 has 9 MA's), (48, 85), (54, 112), (60, 136), (70, 175), (104, 349), (130, 472), (154, 553), (166, 592), (167, 595), (170, 601),

Gene: Bananafish\_1 Start: 37, Stop: 792, Start Num: 7

Candidate Starts for Bananafish\_1:

(Start: 4 @1 has 30 MA's), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137,

679),

Gene: Beagle\_15 Start: 4696, Stop: 5277, Start Num: 33

Candidate Starts for Beagle\_15:

(Start: 33 @4696 has 12 MA's), (41, 4723), (88, 4924), (89, 4927), (91, 4933), (101, 5002), (110, 5041), (122, 5116), (165, 5266),

Gene: BiggityBass\_1 Start: 1, Stop: 600, Start Num: 21

Candidate Starts for BiggityBass\_1:

(Start: 21 @1 has 9 MA's), (37, 28), (48, 79), (57, 118), (70, 169), (97, 295), (141, 508), (166, 586),

Gene: Bipper\_1 Start: 202, Stop: 861, Start Num: 18

Candidate Starts for Bipper\_1:

(2, 25), (Start: 18 @202 has 4 MA's), (29, 247), (39, 271), (55, 352), (59, 364), (60, 367), (70, 406), (77, 430), (91, 472), (93, 481), (105, 559), (108, 571), (149, 763), (151, 766), (168, 814), (175, 844),

Gene: Blocker23\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Blocker23\_1:

(Start: 4 @1 has 30 MA's), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Boyle\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Boyle\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: BrazzalePHS\_82 Start: 48913, Stop: 49572, Start Num: 31

Candidate Starts for BrazzalePHS\_82:

(12, 48829), (Start: 31 @48913 has 40 MA's), (Start: 46 @48958 has 2 MA's), (47, 48961), (56, 49003), (64, 49027), (72, 49060), (87, 49123), (93, 49144), (112, 49258), (120, 49312), (139, 49408), (163, 49489), (176, 49528), (180, 49558),

Gene: Brownie5\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Brownie5\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: BruhMoment\_12 Start: 4721, Stop: 5308, Start Num: 33

Candidate Starts for BruhMoment\_12:

(11, 4628), (Start: 33 @4721 has 12 MA's), (88, 4949), (97, 4994), (101, 5030), (106, 5048), (118, 5126), (120, 5132), (131, 5189), (148, 5255), (165, 5297),

Gene: Busephilis\_82 Start: 48820, Stop: 49479, Start Num: 31

Candidate Starts for Busephilis\_82:

(12, 48736), (Start: 31 @48820 has 40 MA's), (Start: 46 @48865 has 2 MA's), (47, 48868), (56, 48910), (64, 48934), (72, 48967), (87, 49030), (93, 49051), (112, 49165), (120, 49219), (139, 49315), (140, 49318), (163, 49396), (176, 49435), (180, 49465),

Gene: CRB2\_1 Start: 1, Stop: 633, Start Num: 22

Candidate Starts for CRB2\_1:

(Start: 22 @1 has 3 MA's), (70, 187), (97, 313), (98, 316), (118, 433), (161, 601),

Gene: Calamitous\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Calamitous\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Causa\_2 Start: 428, Stop: 1015, Start Num: 34

Candidate Starts for Causa\_2:

(Start: 15 @359 has 4 MA's), (27, 416), (29, 419), (Start: 34 @428 has 1 MA's), (37, 437), (61, 542), (70, 578), (82, 626), (88, 662), (95, 689), (101, 740), (121, 836), (161, 989),

Gene: CharlottesWeb\_1 Start: 40, Stop: 612, Start Num: 37

Candidate Starts for CharlottesWeb\_1:

(Start: 21 @1 has 9 MA's), (37, 40), (48, 91), (60, 142), (70, 181), (87, 262), (93, 280), (97, 307), (130, 478), (143, 526), (154, 559), (166, 598), (167, 601), (170, 607),

Gene: Cinna\_94 Start: 54580, Stop: 55263, Start Num: 15

Candidate Starts for Cinna\_94:

(Start: 15 @54580 has 4 MA's), (43, 54667), (69, 54775), (74, 54793), (78, 54808), (85, 54838), (87, 54844), (99, 54898), (103, 54934), (109, 54964), (117, 55015), (118, 55024), (128, 55081), (141, 55129),

Gene: Cinna\_1 Start: 1, Stop: 648, Start Num: 19

Candidate Starts for Cinna\_1:

(Start: 19 @1 has 6 MA's), (Start: 46 @85 has 2 MA's), (51, 112), (53, 118), (66, 160), (78, 211), (85, 244), (87, 250), (102, 337), (141, 523), (152, 562), (174, 628),

Gene: ClearAsMud\_86 Start: 49132, Stop: 49797, Start Num: 31

Candidate Starts for ClearAsMud\_86:

(12, 49054), (Start: 31 @49132 has 40 MA's), (42, 49162), (Start: 46 @49183 has 2 MA's), (56, 49228), (64, 49252), (72, 49285), (87, 49348), (93, 49369), (112, 49483), (139, 49633), (140, 49636), (163, 49714),

Gene: Coffee\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Coffee\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: Coldpizza\_81 Start: 61643, Stop: 699, Start Num: 20

Candidate Starts for Coldpizza\_81:

(Start: 14 @61613 has 1 MA's), (Start: 20 @61643 has 1 MA's), (Start: 21 @61652 has 9 MA's), (48, 61751), (52, 61772), (93, 61940), (108, 62030), (116, 62072), (141, 62189), (149, 62222), (157, 62243), (171, 62279), (181, 62342),

Gene: Cracklewink\_1 Start: 202, Stop: 861, Start Num: 18

Candidate Starts for Cracklewink\_1:

(2, 25), (Start: 18 @202 has 4 MA's), (29, 247), (39, 271), (52, 337), (55, 352), (59, 364), (60, 367), (70, 406), (77, 430), (91, 472), (93, 481), (105, 559), (108, 571), (149, 763), (151, 766), (168, 814), (175, 844),

Gene: Cranjjs\_84 Start: 49100, Stop: 49759, Start Num: 31

Candidate Starts for Cranjjs\_84:

(12, 49016), (Start: 31 @49100 has 40 MA's), (Start: 46 @49145 has 2 MA's), (47, 49148), (56, 49190), (64, 49214), (72, 49247), (87, 49310), (93, 49331), (112, 49445), (120, 49499), (139, 49595), (140, 49598), (163, 49676), (176, 49715), (177, 49718), (180, 49745),

Gene: CrazyRich\_81 Start: 48604, Stop: 49263, Start Num: 31

Candidate Starts for CrazyRich\_81:

(12, 48526), (Start: 31 @48604 has 40 MA's), (Start: 46 @48649 has 2 MA's), (47, 48652), (56, 48694), (64, 48718), (72, 48751), (87, 48814), (93, 48835), (112, 48949), (120, 49003), (139, 49099), (163, 49180), (180, 49249),

Gene: Cressida\_1 Start: 1, Stop: 645, Start Num: 19

Candidate Starts for Cressida\_1:

(Start: 19 @1 has 6 MA's), (Start: 46 @85 has 2 MA's), (53, 118), (66, 160), (79, 217), (87, 247), (102, 334), (141, 520), (152, 559), (174, 625),

Gene: Cressida\_96 Start: 55174, Stop: 55857, Start Num: 15

Candidate Starts for Cressida\_96:

(Start: 15 @55174 has 4 MA's), (43, 55261), (69, 55369), (74, 55387), (78, 55402), (85, 55432), (87, 55438), (99, 55492), (103, 55528), (109, 55558), (117, 55609), (128, 55675),

Gene: Crisis\_84 Start: 49056, Stop: 49715, Start Num: 31

Candidate Starts for Crisis\_84:

(12, 48972), (Start: 31 @49056 has 40 MA's), (Start: 46 @49101 has 2 MA's), (47, 49104), (56, 49146), (64, 49170), (72, 49203), (87, 49266), (93, 49287), (112, 49401), (120, 49455), (139, 49551), (140, 49554), (163, 49632), (176, 49671), (177, 49674), (180, 49701),

Gene: DogYard\_13 Start: 4766, Stop: 5347, Start Num: 33

Candidate Starts for DogYard\_13:

(Start: 33 @4766 has 12 MA's), (41, 4793), (88, 4994), (89, 4997), (91, 5003), (101, 5072), (110, 5111), (122, 5186), (165, 5336),

Gene: Eaglehorse\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Eaglehorse\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: EarickHC\_84 Start: 48978, Stop: 49637, Start Num: 31

Candidate Starts for EarickHC\_84:

(12, 48894), (Start: 31 @48978 has 40 MA's), (Start: 46 @49023 has 2 MA's), (47, 49026), (56, 49068), (64, 49092), (72, 49125), (87, 49188), (93, 49209), (112, 49323), (120, 49377), (139, 49473), (163, 49554), (176, 49593), (180, 49623),

Gene: EastWest\_74 Start: 43726, Stop: 44280, Start Num: 38

Candidate Starts for EastWest\_74:

(Start: 38 @43726 has 1 MA's), (67, 43861), (68, 43864), (89, 43951), (94, 43972), (97, 43990), (162, 44260), (164, 44266),

Gene: Evaa\_1 Start: 1, Stop: 699, Start Num: 21

Candidate Starts for Evaa\_1:

(Start: 21 @1 has 9 MA's), (70, 190), (97, 316), (108, 379), (125, 457), (134, 517), (141, 538), (153, 577), (179, 676), (181, 691),

Gene: Faiyaz\_1 Start: 202, Stop: 861, Start Num: 18

Candidate Starts for Faiyaz\_1:

(Start: 18 @202 has 4 MA's), (24, 235), (29, 247), (55, 352), (59, 364), (60, 367), (70, 406), (71, 409), (77, 430), (80, 445), (93, 481), (105, 559), (125, 652), (147, 760), (149, 763), (151, 766), (168, 814), (178, 850),

Gene: Faze9\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Faze9\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: Finch\_210 Start: 122277, Stop: 122888, Start Num: 26

Candidate Starts for Finch\_210:

(Start: 26 @122277 has 2 MA's), (30, 122289), (32, 122292), (42, 122322), (Start: 46 @122343 has 2 MA's), (59, 122400), (70, 122442), (77, 122466), (92, 122535), (93, 122541), (97, 122568), (137, 122775), (140, 122787), (143, 122796),

Gene: Fireman\_87 Start: 50364, Stop: 51029, Start Num: 31

Candidate Starts for Fireman\_87:

(12, 50286), (Start: 31 @50364 has 40 MA's), (Start: 46 @50415 has 2 MA's), (56, 50460), (72, 50517), (93, 50601), (109, 50703), (111, 50712), (113, 50718), (139, 50865), (140, 50868), (163, 50946), (176, 50985), (180, 51015),

Gene: Forrestell\_11 Start: 4123, Stop: 4704, Start Num: 33

Candidate Starts for Forrestell\_11:

(Start: 33 @4123 has 12 MA's), (41, 4150), (88, 4351), (89, 4354), (91, 4360), (101, 4429), (110, 4468), (122, 4543), (165, 4693),

Gene: FrenchFry\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for FrenchFry\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: Fresco\_1 Start: 1, Stop: 606, Start Num: 21

Candidate Starts for Fresco\_1:

(Start: 21 @1 has 9 MA's), (48, 85), (54, 112), (60, 136), (70, 175), (104, 349), (130, 472), (154, 553), (166, 592), (167, 595), (170, 601),

Gene: Ganandorf\_81 Start: 48464, Stop: 49123, Start Num: 31

Candidate Starts for Ganandorf\_81:

(12, 48380), (Start: 31 @48464 has 40 MA's), (Start: 46 @48509 has 2 MA's), (47, 48512), (56, 48554), (64, 48578), (72, 48611), (87, 48674), (93, 48695), (112, 48809), (120, 48863), (139, 48959), (140, 48962), (163, 49040), (176, 49079), (177, 49082), (180, 49109),

Gene: Gina\_88 Start: 48970, Stop: 49635, Start Num: 31

Candidate Starts for Gina\_88:

(12, 48892), (Start: 31 @48970 has 40 MA's), (42, 49000), (Start: 46 @49021 has 2 MA's), (47, 49024), (56, 49066), (64, 49090), (72, 49123), (87, 49186), (93, 49207), (113, 49324), (139, 49471), (140, 49474), (163, 49552), (168, 49564), (176, 49591), (180, 49621),

Gene: Glass\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Glass\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Glorp\_84 Start: 48865, Stop: 49524, Start Num: 31

Candidate Starts for Glorp\_84:

(12, 48781), (Start: 31 @48865 has 40 MA's), (Start: 46 @48910 has 2 MA's), (47, 48913), (56, 48955), (64, 48979), (72, 49012), (87, 49075), (93, 49096), (112, 49210), (120, 49264), (139, 49360), (163, 49441), (180, 49510),

Gene: Godines\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Godines\_1:

(Start: 4 @1 has 30 MA's), (6, 28), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (70, 343), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (120, 595), (137, 679),

Gene: Hedgerow\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Hedgerow\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: Hermeonysus\_83 Start: 48821, Stop: 49480, Start Num: 31

Candidate Starts for Hermeonysus\_83:

(12, 48737), (Start: 31 @48821 has 40 MA's), (Start: 46 @48866 has 2 MA's), (47, 48869), (56, 48911), (64, 48935), (72, 48968), (87, 49031), (93, 49052), (112, 49166), (120, 49220), (139, 49316), (163, 49397), (176, 49436), (177, 49439), (180, 49466),

Gene: Hilltopfarm\_1 Start: 202, Stop: 861, Start Num: 18

Candidate Starts for Hilltopfarm\_1:

(Start: 18 @202 has 4 MA's), (24, 235), (29, 247), (55, 352), (60, 367), (70, 406), (71, 409), (77, 430), (80, 445), (93, 481), (105, 559), (108, 571), (125, 652), (147, 760), (149, 763), (151, 766), (168, 814), (178, 850),

Gene: Holeinone\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Holeinone\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Honeyfin\_83 Start: 48654, Stop: 49313, Start Num: 31

Candidate Starts for Honeyfin\_83:

(12, 48570), (Start: 31 @48654 has 40 MA's), (Start: 46 @48699 has 2 MA's), (47, 48702), (56, 48744), (72, 48801), (87, 48864), (93, 48885), (112, 48999), (120, 49053), (139, 49149), (163, 49230), (180, 49299),

Gene: ItsyBitsy1\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for ItsyBitsy1\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Jace\_85 Start: 47046, Stop: 47594, Start Num: 28

Candidate Starts for Jace\_85:

(Start: 28 @47046 has 1 MA's), (70, 47202), (76, 47223), (97, 47304), (98, 47307), (108, 47367), (146, 47559), (156, 47577), (158, 47586), (160, 47589),

Gene: Jayden\_83 Start: 48575, Stop: 49243, Start Num: 31

Candidate Starts for Jayden\_83:

(12, 48497), (Start: 31 @48575 has 40 MA's), (42, 48608), (Start: 46 @48629 has 2 MA's), (47, 48632), (56, 48674), (64, 48698), (72, 48731), (87, 48794), (89, 48800), (139, 49079), (140, 49082), (152, 49124), (163, 49160), (168, 49172), (176, 49199), (180, 49229),

Gene: Jefe\_83 Start: 48876, Stop: 49535, Start Num: 31

Candidate Starts for Jefe\_83:

(12, 48792), (Start: 31 @48876 has 40 MA's), (Start: 46 @48921 has 2 MA's), (47, 48924), (56, 48966), (64, 48990), (72, 49023), (87, 49086), (93, 49107), (112, 49221), (120, 49275), (139, 49371), (163, 49452), (176, 49491), (180, 49521),

Gene: Jollipop\_84 Start: 49241, Stop: 49900, Start Num: 31

Candidate Starts for Jollipop\_84:

(12, 49157), (Start: 31 @49241 has 40 MA's), (Start: 46 @49286 has 2 MA's), (47, 49289), (56, 49331), (64, 49355), (72, 49388), (87, 49451), (93, 49472), (112, 49586), (120, 49640), (139, 49736), (163, 49817), (176, 49856), (177, 49859), (180, 49886),

Gene: KaiHaiDragon\_84 Start: 48978, Stop: 49637, Start Num: 31

Candidate Starts for KaiHaiDragon\_84:

(12, 48894), (Start: 31 @48978 has 40 MA's), (Start: 46 @49023 has 2 MA's), (47, 49026), (56, 49068), (64, 49092), (72, 49125), (87, 49188), (93, 49209), (112, 49323), (120, 49377), (139, 49473), (163, 49554), (176, 49593), (180, 49623),

Gene: Kharcho\_73 Start: 42919, Stop: 43530, Start Num: 35

Candidate Starts for Kharcho\_73:

(Start: 35 @42919 has 2 MA's), (88, 43129), (118, 43291),

Gene: Kharcho\_72 Start: 42263, Stop: 42922, Start Num: 23

Candidate Starts for Kharcho\_72:

(Start: 23 @42263 has 2 MA's), (36, 42293), (60, 42395), (173, 42872),

Gene: Kheth\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Kheth\_1:

(Start: 4 @1 has 30 MA's), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Kolhan\_1 Start: 37, Stop: 792, Start Num: 7

Candidate Starts for Kolhan\_1:

(Start: 4 @1 has 30 MA's), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Kowalski\_82 Start: 48908, Stop: 49567, Start Num: 31

Candidate Starts for Kowalski\_82:

(12, 48824), (Start: 31 @48908 has 40 MA's), (Start: 46 @48953 has 2 MA's), (47, 48956), (56, 48998), (64, 49022), (72, 49055), (87, 49118), (93, 49139), (112, 49253), (120, 49307), (139, 49403), (163, 49484), (176, 49523), (180, 49553),



Gene: Kubulix\_14 Start: 4895, Stop: 5476, Start Num: 33

Candidate Starts for Kubulix\_14:

(Start: 33 @4895 has 12 MA's), (41, 4922), (88, 5123), (89, 5126), (91, 5132), (101, 5201), (110, 5240), (122, 5315), (165, 5465),

Gene: Lars\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Lars\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Laurie\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Laurie\_1:

(Start: 4 @1 has 30 MA's), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Lephleur\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Lephleur\_1:

(Start: 4 @1 has 30 MA's), (6, 28), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Ligma\_1 Start: 1, Stop: 606, Start Num: 21

Candidate Starts for Ligma\_1:

(Start: 21 @1 has 9 MA's), (48, 85), (54, 112), (60, 136), (70, 175), (104, 349), (130, 472), (154, 553), (166, 592), (167, 595), (170, 601),

Gene: LittleFortune\_84 Start: 48891, Stop: 49550, Start Num: 31

Candidate Starts for LittleFortune\_84:

(12, 48813), (Start: 31 @48891 has 40 MA's), (Start: 46 @48936 has 2 MA's), (47, 48939), (56, 48981), (64, 49005), (72, 49038), (87, 49101), (93, 49122), (112, 49236), (120, 49290), (139, 49386), (163, 49467), (176, 49506), (180, 49536),

Gene: LizLemon\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for LizLemon\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Margaery\_97 Start: 55238, Stop: 55930, Start Num: 14

Candidate Starts for Margaery\_97:

(3, 55121), (Start: 14 @55238 has 1 MA's), (Start: 15 @55247 has 4 MA's), (43, 55334), (69, 55442), (74, 55460), (78, 55475), (109, 55631), (141, 55796),

Gene: Margaery\_1 Start: 1, Stop: 645, Start Num: 19

Candidate Starts for Margaery\_1:

(Start: 19 @1 has 6 MA's), (Start: 46 @85 has 2 MA's), (53, 118), (78, 211), (85, 241), (109, 367), (117, 418), (119, 430), (141, 520), (152, 559), (174, 625),

Gene: Mariokart\_1 Start: 1, Stop: 612, Start Num: 21

Candidate Starts for Mariokart\_1:

(Start: 21 @1 has 9 MA's), (37, 40), (48, 91), (60, 142), (70, 181), (87, 262), (93, 280), (97, 307), (143, 526), (154, 559), (167, 601),

Gene: Maruru\_88 Start: 52810, Stop: 53424, Start Num: 24

Candidate Starts for Maruru\_88:

(8, 52684), (24, 52810), (Start: 33 @52831 has 12 MA's), (Start: 46 @52873 has 2 MA's), (63, 52939), (74, 52993), (81, 53023), (145, 53326), (156, 53350),

Gene: MasterPo\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for MasterPo\_1:

(Start: 4 @1 has 30 MA's), (6, 28), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Matzah\_1 Start: 1, Stop: 648, Start Num: 19

Candidate Starts for Matzah\_1:

(Start: 19 @1 has 6 MA's), (Start: 46 @85 has 2 MA's), (51, 112), (53, 118), (66, 160), (78, 211), (85, 244), (87, 250), (102, 337), (141, 523), (152, 562), (174, 628),

Gene: Matzah\_98 Start: 54900, Stop: 55583, Start Num: 15

Candidate Starts for Matzah\_98:

(Start: 15 @54900 has 4 MA's), (43, 54987), (69, 55095), (74, 55113), (78, 55128), (85, 55158), (87, 55164), (99, 55218), (103, 55254), (109, 55284), (117, 55335), (118, 55344), (128, 55401), (141, 55449),

Gene: Megan\_1 Start: 1, Stop: 666, Start Num: 16

Candidate Starts for Megan\_1:

(Start: 16 @1 has 2 MA's), (Start: 46 @97 has 2 MA's), (62, 154), (69, 190), (73, 205), (78, 223), (79, 229), (83, 244), (85, 253), (89, 265), (115, 403), (136, 517), (140, 529), (172, 637),

Gene: MellowYellow\_12 Start: 4153, Stop: 4734, Start Num: 33

Candidate Starts for MellowYellow\_12:

(Start: 33 @4153 has 12 MA's), (41, 4180), (88, 4381), (89, 4384), (91, 4390), (101, 4459), (110, 4498), (122, 4573), (165, 4723),

Gene: MementoMori\_97 Start: 54789, Stop: 55472, Start Num: 15

Candidate Starts for MementoMori\_97:

(Start: 15 @54789 has 4 MA's), (43, 54876), (69, 54984), (74, 55002), (78, 55017), (85, 55047), (87, 55053), (99, 55107), (103, 55143), (109, 55173), (128, 55290), (141, 55338),

Gene: MementoMori\_1 Start: 1, Stop: 645, Start Num: 19

Candidate Starts for MementoMori\_1:

(Start: 19 @1 has 6 MA's), (53, 118), (66, 160), (79, 217), (87, 247), (102, 334), (141, 520), (152, 559), (174, 625),

Gene: Merry\_ Start: 49109, Stop: 49729, Start Num: 46

Candidate Starts for Merry\_:

(Start: 31 @49061 has 40 MA's), (Start: 46 @49109 has 2 MA's), (56, 49154), (65, 49181), (72, 49211), (87, 49274), (119, 49460), (139, 49559), (140, 49562), (141, 49565), (159, 49625), (163, 49640), (176, 49679), (180, 49709),

Gene: Metamorphoo\_84 Start: 49657, Stop: 50322, Start Num: 31

Candidate Starts for Metamorphoo\_84:

(12, 49579), (Start: 31 @49657 has 40 MA's), (Start: 46 @49708 has 2 MA's), (56, 49753), (72, 49810), (93, 49894), (109, 49996), (111, 50005), (113, 50011), (139, 50158), (140, 50161), (163, 50239),

Gene: NHagos\_1 Start: 1, Stop: 633, Start Num: 20

Candidate Starts for NHagos\_1:

(Start: 20 @1 has 1 MA's), (Start: 21 @10 has 9 MA's), (48, 103), (49, 109), (60, 154), (70, 193), (77, 217), (93, 292), (116, 424), (126, 463), (143, 547), (154, 580), (166, 619), (167, 622), (170, 628),

Gene: Nicole72\_1 Start: 1, Stop: 666, Start Num: 16

Candidate Starts for Nicole72\_1:

(Start: 16 @1 has 2 MA's), (Start: 46 @97 has 2 MA's), (69, 190), (78, 223), (79, 229), (83, 244), (85, 253), (87, 259), (136, 517), (172, 637),

Gene: NoodlelyBoi\_83 Start: 49237, Stop: 49902, Start Num: 31

Candidate Starts for NoodlelyBoi\_83:

(12, 49159), (Start: 31 @49237 has 40 MA's), (42, 49267), (Start: 46 @49288 has 2 MA's), (56, 49333), (64, 49357), (72, 49390), (87, 49453), (93, 49474), (112, 49588), (139, 49738), (140, 49741), (163, 49819),

Gene: NyleyClemson\_12 Start: 4095, Stop: 4676, Start Num: 33

Candidate Starts for NyleyClemson\_12:

(Start: 33 @4095 has 12 MA's), (41, 4122), (88, 4323), (89, 4326), (91, 4332), (101, 4401), (110, 4440), (122, 4515), (165, 4665),

Gene: Odyssey395\_16 Start: 4894, Stop: 5475, Start Num: 33

Candidate Starts for Odyssey395\_16:

(Start: 33 @4894 has 12 MA's), (41, 4921), (88, 5122), (89, 5125), (91, 5131), (101, 5200), (110, 5239), (122, 5314), (165, 5464),

Gene: Ollypop\_12 Start: 4602, Stop: 5183, Start Num: 33

Candidate Starts for Ollypop\_12:

(Start: 33 @4602 has 12 MA's), (88, 4830), (89, 4833), (91, 4839), (101, 4908), (110, 4947), (122, 5022), (138, 5091), (162, 5163), (165, 5172),

Gene: Onika\_82 Start: 48879, Stop: 49538, Start Num: 31

Candidate Starts for Onika\_82:

(12, 48795), (Start: 31 @48879 has 40 MA's), (Start: 46 @48924 has 2 MA's), (47, 48927), (56, 48969), (64, 48993), (72, 49026), (87, 49089), (93, 49110), (112, 49224), (120, 49278), (139, 49374), (163, 49455), (176, 49494), (180, 49524),

Gene: Opia\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Opia\_1:

(Start: 4 @1 has 30 MA's), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: Ottawa\_72 Start: 42213, Stop: 42872, Start Num: 23

Candidate Starts for Ottawa\_72:

(Start: 23 @42213 has 2 MA's), (36, 42243), (60, 42345), (173, 42822),

Gene: Ottawa\_73 Start: 42869, Stop: 43480, Start Num: 35

Candidate Starts for Ottawa\_73:

(Start: 35 @42869 has 2 MA's), (88, 43079), (118, 43241),

Gene: Paschalis\_83 Start: 48906, Stop: 49565, Start Num: 31

Candidate Starts for Paschalis\_83:

(12, 48822), (Start: 31 @48906 has 40 MA's), (Start: 46 @48951 has 2 MA's), (47, 48954), (56, 48996), (64, 49020), (72, 49053), (87, 49116), (93, 49137), (112, 49251), (120, 49305), (139, 49401), (163, 49482), (176, 49521), (180, 49551),

Gene: PenguinLover67\_1 Start: 1, Stop: 633, Start Num: 22

Candidate Starts for PenguinLover67\_1:

(Start: 22 @1 has 3 MA's), (70, 187), (95, 298), (97, 313), (98, 316), (118, 433), (161, 601),

Gene: Phantasmagoria\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Phantasmagoria\_1:

(Start: 4 @1 has 30 MA's), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (118, 589), (120, 595), (137, 679),

Gene: PhedwardCullen\_80 Start: 48351, Stop: 49010, Start Num: 31

Candidate Starts for PhedwardCullen\_80:

(12, 48273), (Start: 31 @48351 has 40 MA's), (Start: 46 @48396 has 2 MA's), (47, 48399), (56, 48441), (64, 48465), (72, 48498), (87, 48561), (93, 48582), (112, 48696), (120, 48750), (139, 48846), (163, 48927), (180, 48996),

Gene: Phorgeous\_83 Start: 48695, Stop: 49354, Start Num: 31

Candidate Starts for Phorgeous\_83:

(12, 48611), (Start: 31 @48695 has 40 MA's), (Start: 46 @48740 has 2 MA's), (47, 48743), (56, 48785), (64, 48809), (72, 48842), (87, 48905), (93, 48926), (112, 49040), (120, 49094), (139, 49190), (163, 49271), (180, 49340),

Gene: Phrancesco\_83 Start: 49006, Stop: 49665, Start Num: 31

Candidate Starts for Phrancesco\_83:

(12, 48922), (Start: 31 @49006 has 40 MA's), (Start: 46 @49051 has 2 MA's), (47, 49054), (56, 49096), (64, 49120), (72, 49153), (87, 49216), (93, 49237), (112, 49351), (120, 49405), (139, 49501), (163, 49582), (176, 49621), (180, 49651),

Gene: PierreOrion\_82 Start: 48715, Stop: 49374, Start Num: 31

Candidate Starts for PierreOrion\_82:

(12, 48631), (Start: 31 @48715 has 40 MA's), (Start: 46 @48760 has 2 MA's), (47, 48763), (56, 48805), (64, 48829), (72, 48862), (87, 48925), (93, 48946), (112, 49060), (120, 49114), (139, 49210), (163, 49291), (176, 49330), (180, 49360),

Gene: PiperSansNom\_84 Start: 49209, Stop: 49868, Start Num: 31

Candidate Starts for PiperSansNom\_84:

(12, 49131), (Start: 31 @49209 has 40 MA's), (Start: 46 @49254 has 2 MA's), (47, 49257), (56, 49299), (64, 49323), (72, 49356), (87, 49419), (93, 49440), (112, 49554), (120, 49608), (139, 49704), (163, 49785), (180, 49854),

Gene: Piperis\_84 Start: 48814, Stop: 49473, Start Num: 31

Candidate Starts for Piperis\_84:

(12, 48730), (Start: 31 @48814 has 40 MA's), (Start: 46 @48859 has 2 MA's), (47, 48862), (56, 48904), (64, 48928), (72, 48961), (87, 49024), (93, 49045), (112, 49159), (120, 49213), (139, 49309), (140, 49312), (163, 49390), (176, 49429), (177, 49432), (180, 49459),

Gene: Pointis\_14 Start: 4895, Stop: 5476, Start Num: 33

Candidate Starts for Pointis\_14:

(Start: 33 @4895 has 12 MA's), (41, 4922), (88, 5123), (89, 5126), (91, 5132), (101, 5201), (110, 5240), (122, 5315), (165, 5465),

Gene: PrinceCharming\_1 Start: 37, Stop: 792, Start Num: 7

Candidate Starts for PrinceCharming\_1:

(Start: 4 @1 has 30 MA's), (6, 28), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (70, 343), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (108, 526), (118, 589), (120, 595), (137, 679),

Gene: Pulchra\_85 Start: 49381, Stop: 50040, Start Num: 31

Candidate Starts for Pulchra\_85:

(12, 49297), (Start: 31 @49381 has 40 MA's), (Start: 46 @49426 has 2 MA's), (47, 49429), (56, 49471), (64, 49495), (72, 49528), (87, 49591), (93, 49612), (112, 49726), (120, 49780), (139, 49876), (140, 49879), (163, 49957), (176, 49996), (177, 49999), (180, 50026),

Gene: Pureglobe5\_16 Start: 4908, Stop: 5489, Start Num: 33

Candidate Starts for Pureglobe5\_16:

(Start: 33 @4908 has 12 MA's), (41, 4935), (88, 5136), (89, 5139), (91, 5145), (101, 5214), (110, 5253), (122, 5328), (165, 5478),

Gene: Quesadilla\_1 Start: 1, Stop: 633, Start Num: 22

Candidate Starts for Quesadilla\_1:

(Start: 22 @1 has 3 MA's), (48, 97), (70, 187), (86, 265), (97, 313), (118, 433),

Gene: Quhwah\_87 Start: 49535, Stop: 50194, Start Num: 31

Candidate Starts for Quhwah\_87:

(12, 49451), (Start: 31 @49535 has 40 MA's), (Start: 46 @49580 has 2 MA's), (47, 49583), (56, 49625), (64, 49649), (72, 49682), (87, 49745), (93, 49766), (112, 49880), (120, 49934), (139, 50030), (163, 50111), (176, 50150), (180, 50180),

Gene: Qyrzula\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Qyrzula\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Ramiel05\_82 Start: 48908, Stop: 49567, Start Num: 31

Candidate Starts for Ramiel05\_82:

(12, 48824), (Start: 31 @48908 has 40 MA's), (Start: 46 @48953 has 2 MA's), (47, 48956), (56, 48998), (64, 49022), (72, 49055), (87, 49118), (93, 49139), (112, 49253), (120, 49307), (139, 49403), (163, 49484), (176, 49523), (180, 49553),

Gene: Ranunculus\_10 Start: 4388, Stop: 4969, Start Num: 33

Candidate Starts for Ranunculus\_10:

(5, 4211), (Start: 33 @4388 has 12 MA's), (58, 4490), (88, 4616), (89, 4619), (110, 4733), (138, 4877), (139, 4880), (140, 4883), (164, 4955),

Gene: RazzB\_10 Start: 3923, Stop: 4504, Start Num: 33

Candidate Starts for RazzB\_10:

(Start: 33 @3923 has 12 MA's), (41, 3950), (88, 4151), (89, 4154), (91, 4160), (101, 4229), (110, 4268), (122, 4343), (165, 4493),

Gene: Rhinoforte\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Rhinoforte\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: Rizwana\_10 Start: 4484, Stop: 5074, Start Num: 33

Candidate Starts for Rizwana\_10:

(Start: 33 @4484 has 12 MA's), (48, 4541), (59, 4589), (75, 4655), (94, 4739), (100, 4790), (101, 4793), (114, 4850), (124, 4913), (127, 4922), (133, 4964), (139, 4982), (162, 5054), (165, 5063),

Gene: RobsFeet\_90 Start: 49974, Stop: 50639, Start Num: 31

Candidate Starts for RobsFeet\_90:

(12, 49896), (Start: 31 @49974 has 40 MA's), (Start: 46 @50025 has 2 MA's), (56, 50070), (72, 50127), (93, 50211), (109, 50313), (111, 50322), (113, 50328), (139, 50475), (140, 50478), (163, 50556), (176, 50595), (180, 50625),

Gene: RomansRevenge\_8 Start: 3035, Stop: 3610, Start Num: 33

Candidate Starts for RomansRevenge\_8:

(Start: 33 @3035 has 12 MA's), (44, 3071), (45, 3074), (48, 3089), (68, 3179), (86, 3254), (90, 3266), (91, 3269), (99, 3308), (105, 3353), (107, 3362), (123, 3443), (138, 3512), (150, 3554), (155, 3563), (162, 3590),

Gene: Rosebush\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Rosebush\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: Saguaro\_1 Start: 1, Stop: 735, Start Num: 10

Candidate Starts for Saguaro\_1:

(Start: 10 @1 has 1 MA's), (13, 28), (Start: 22 @79 has 3 MA's), (50, 187), (70, 265), (88, 349), (91, 358), (93, 364), (95, 376), (97, 391), (98, 394), (106, 445), (120, 517), (144, 625), (169, 700),

Gene: Savannah\_82 Start: 49100, Stop: 49759, Start Num: 31

Candidate Starts for Savannah\_82:

(12, 49016), (Start: 31 @49100 has 40 MA's), (Start: 46 @49145 has 2 MA's), (47, 49148), (56, 49190), (72, 49247), (87, 49310), (93, 49331), (112, 49445), (120, 49499), (139, 49595), (140, 49598), (163, 49676), (176, 49715), (177, 49718), (180, 49745),

Gene: Scumberland\_85 Start: 49154, Stop: 49813, Start Num: 31

Candidate Starts for Scumberland\_85:

(12, 49070), (Start: 31 @49154 has 40 MA's), (Start: 46 @49199 has 2 MA's), (47, 49202), (56, 49244), (64, 49268), (72, 49301), (87, 49364), (93, 49385), (112, 49499), (120, 49553), (139, 49649), (140, 49652), (163, 49730), (176, 49769), (177, 49772), (180, 49799),

Gene: Selwyn23\_84 Start: 49039, Stop: 49698, Start Num: 31

Candidate Starts for Selwyn23\_84:

(12, 48955), (Start: 31 @49039 has 40 MA's), (Start: 46 @49084 has 2 MA's), (47, 49087), (56, 49129), (64, 49153), (72, 49186), (87, 49249), (93, 49270), (112, 49384), (139, 49534), (140, 49537), (163, 49615), (176, 49654), (177, 49657), (180, 49684),

Gene: Shatter\_1 Start: 1, Stop: 606, Start Num: 21

Candidate Starts for Shatter\_1:

(Start: 21 @1 has 9 MA's), (48, 85), (54, 112), (60, 136), (70, 175), (104, 349), (130, 472), (154, 553), (166, 592), (167, 595), (170, 601),

Gene: Shotgun\_82 Start: 48410, Stop: 49069, Start Num: 31

Candidate Starts for Shotgun\_82:

(12, 48326), (Start: 31 @48410 has 40 MA's), (Start: 46 @48455 has 2 MA's), (47, 48458), (56, 48500), (64, 48524), (72, 48557), (87, 48620), (93, 48641), (112, 48755), (120, 48809), (139, 48905), (163, 48986), (176, 49025), (180, 49055),

Gene: Shrubaron\_86 Start: 49564, Stop: 50229, Start Num: 31

Candidate Starts for Shrubaron\_86:

(12, 49486), (Start: 31 @49564 has 40 MA's), (Start: 46 @49615 has 2 MA's), (56, 49660), (72, 49717), (93, 49801), (109, 49903), (111, 49912), (113, 49918), (139, 50065), (140, 50068), (163, 50146), (180, 50215),

Gene: SilentRX\_10 Start: 3301, Stop: 3894, Start Num: 33

Candidate Starts for SilentRX\_10:

(Start: 33 @3301 has 12 MA's), (70, 3454), (88, 3529), (96, 3565), (97, 3574), (100, 3607), (101, 3610), (118, 3706), (120, 3712), (127, 3736), (132, 3772), (162, 3874), (164, 3880),

Gene: SirFrank\_83 Start: 48824, Stop: 49489, Start Num: 31

Candidate Starts for SirFrank\_83:

(Start: 31 @48824 has 40 MA's), (42, 48854), (Start: 46 @48875 has 2 MA's), (56, 48920), (64, 48944), (72, 48977), (87, 49040), (93, 49061), (112, 49175), (139, 49325), (140, 49328), (163, 49406),

Gene: Sisko\_1 Start: 1, Stop: 600, Start Num: 21

Candidate Starts for Sisko\_1:

(Start: 21 @1 has 9 MA's), (37, 28), (48, 79), (57, 118), (97, 295), (166, 586), (167, 589),

Gene: Smarties\_92 Start: 49945, Stop: 50607, Start Num: 31

Candidate Starts for Smarties\_92:

(1, 49708), (12, 49861), (Start: 31 @49945 has 40 MA's), (42, 49972), (Start: 46 @49993 has 2 MA's), (47, 49996), (56, 50038), (64, 50062), (72, 50095), (87, 50158), (93, 50179), (111, 50290), (112, 50293), (139, 50443), (152, 50488), (163, 50524), (168, 50536), (176, 50563), (180, 50593),

Gene: Sour\_1 Start: 1, Stop: 615, Start Num: 26

Candidate Starts for Sour\_1:

(Start: 26 @1 has 2 MA's), (60, 130), (70, 169), (77, 193), (93, 268), (97, 295), (118, 415), (161, 583),

Gene: StAugustine\_2 Start: 428, Stop: 1015, Start Num: 34

Candidate Starts for StAugustine\_2:

(Start: 15 @359 has 4 MA's), (27, 416), (29, 419), (Start: 34 @428 has 1 MA's), (37, 437), (61, 542), (70, 578), (82, 626), (88, 662), (95, 689), (101, 740), (121, 836), (161, 989),

Gene: Sunny\_ Start: 49111, Stop: 49731, Start Num: 46

Candidate Starts for Sunny\_:

(Start: 31 @49063 has 40 MA's), (Start: 46 @49111 has 2 MA's), (56, 49156), (65, 49183), (72, 49213), (87, 49276), (119, 49462), (139, 49561), (140, 49564), (141, 49567), (159, 49627), (163, 49642), (176, 49681), (180, 49711),

Gene: TA17A\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for TA17A\_1:

(Start: 4 @1 has 30 MA's), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679), (139, 688),

Gene: Tank\_11 Start: 4502, Stop: 5092, Start Num: 33

Candidate Starts for Tank\_11:

(Start: 33 @4502 has 12 MA's), (75, 4673), (88, 4730), (94, 4757), (98, 4778), (101, 4811), (107, 4835), (115, 4871), (133, 4982), (135, 4988), (139, 5000), (164, 5078), (165, 5081),

Gene: Teamocil\_88 Start: 49063, Stop: 49728, Start Num: 31

Candidate Starts for Teamocil\_88:

(12, 48985), (Start: 31 @49063 has 40 MA's), (42, 49093), (Start: 46 @49114 has 2 MA's), (47, 49117), (56, 49159), (64, 49183), (72, 49216), (87, 49279), (93, 49300), (113, 49417), (139, 49564), (140, 49567), (163, 49645), (168, 49657), (176, 49684), (180, 49714),

Gene: Terij\_1 Start: 1, Stop: 645, Start Num: 19

Candidate Starts for Terij\_1:

(Start: 19 @1 has 6 MA's), (Start: 46 @85 has 2 MA's), (53, 118), (85, 241), (87, 247), (117, 418), (119, 430), (141, 520), (152, 559), (174, 625),

Gene: Tinciduntolum\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Tinciduntolum\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: Tres\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for Tres\_1:

(Start: 4 @1 has 30 MA's), (Start: 7 @37 has 1 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (137, 679),

Gene: TurkishDelight\_122 Start: 89500, Stop: 90093, Start Num: 40

Candidate Starts for TurkishDelight\_122:

(Start: 40 @89500 has 1 MA's), (44, 89518), (60, 89584), (84, 89689),

Gene: Typha\_1 Start: 202, Stop: 861, Start Num: 18

Candidate Starts for Typha\_1:

(Start: 18 @202 has 4 MA's), (24, 235), (29, 247), (55, 352), (59, 364), (60, 367), (70, 406), (71, 409), (77, 430), (80, 445), (93, 481), (105, 559), (125, 652), (147, 760), (149, 763), (151, 766), (168, 814), (178, 850),

Gene: Tyrumbra\_83 Start: 49578, Stop: 50243, Start Num: 31

Candidate Starts for Tyrumbra\_83:

(12, 49500), (Start: 31 @49578 has 40 MA's), (Start: 46 @49629 has 2 MA's), (47, 49632), (56, 49674), (72, 49731), (87, 49794), (93, 49815), (109, 49917), (111, 49926), (113, 49932), (139, 50079), (140, 50082), (141, 50085), (163, 50160), (176, 50199), (180, 50229),

Gene: West99\_1 Start: 1, Stop: 792, Start Num: 4

Candidate Starts for West99\_1:

(Start: 4 @1 has 30 MA's), (9, 76), (17, 133), (25, 172), (27, 181), (37, 202), (70, 343), (71, 346), (77, 367), (78, 373), (88, 421), (93, 436), (97, 463), (99, 469), (117, 583), (118, 589), (119, 592), (120, 595), (137, 679),

Gene: Wilde\_11 Start: 4430, Stop: 5020, Start Num: 33

Candidate Starts for Wilde\_11:



(Start: 33 @4430 has 12 MA's), (75, 4601), (88, 4658), (94, 4685), (98, 4706), (101, 4739), (107, 4763), (115, 4799), (133, 4910), (135, 4916), (139, 4928), (164, 5006), (165, 5009),

Gene: Yago84\_1 Start: 1, Stop: 600, Start Num: 21

Candidate Starts for Yago84\_1:

(Start: 21 @1 has 9 MA's), (37, 28), (48, 79), (57, 118), (97, 295), (129, 463), (166, 586), (167, 589),

Gene: Yeti\_84 Start: 48436, Stop: 49095, Start Num: 31

Candidate Starts for Yeti\_84:

(12, 48352), (Start: 31 @48436 has 40 MA's), (Start: 46 @48481 has 2 MA's), (47, 48484), (56, 48526), (64, 48550), (72, 48583), (87, 48646), (93, 48667), (112, 48781), (120, 48835), (139, 48931), (142, 48940), (163, 49012), (180, 49081),