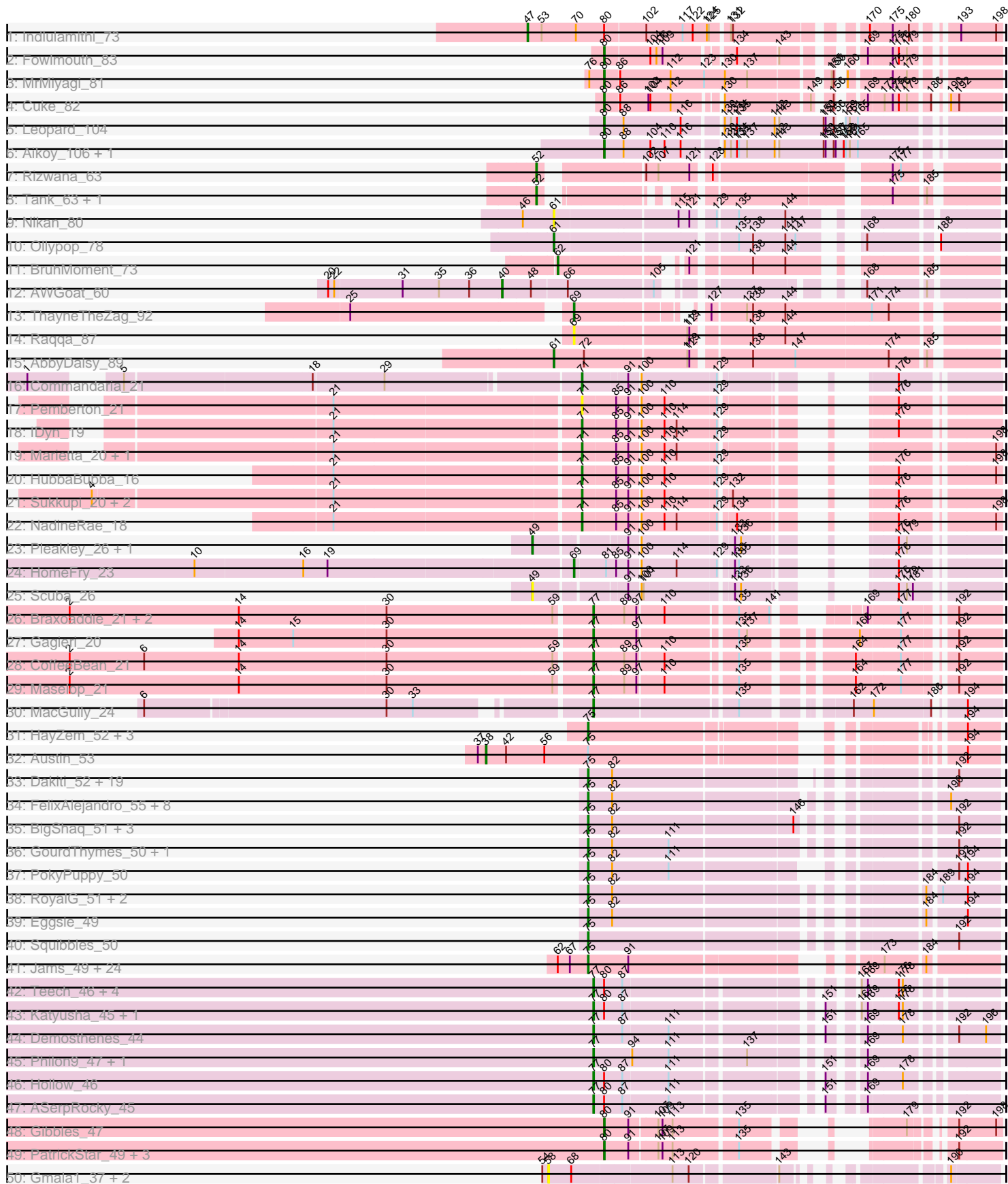
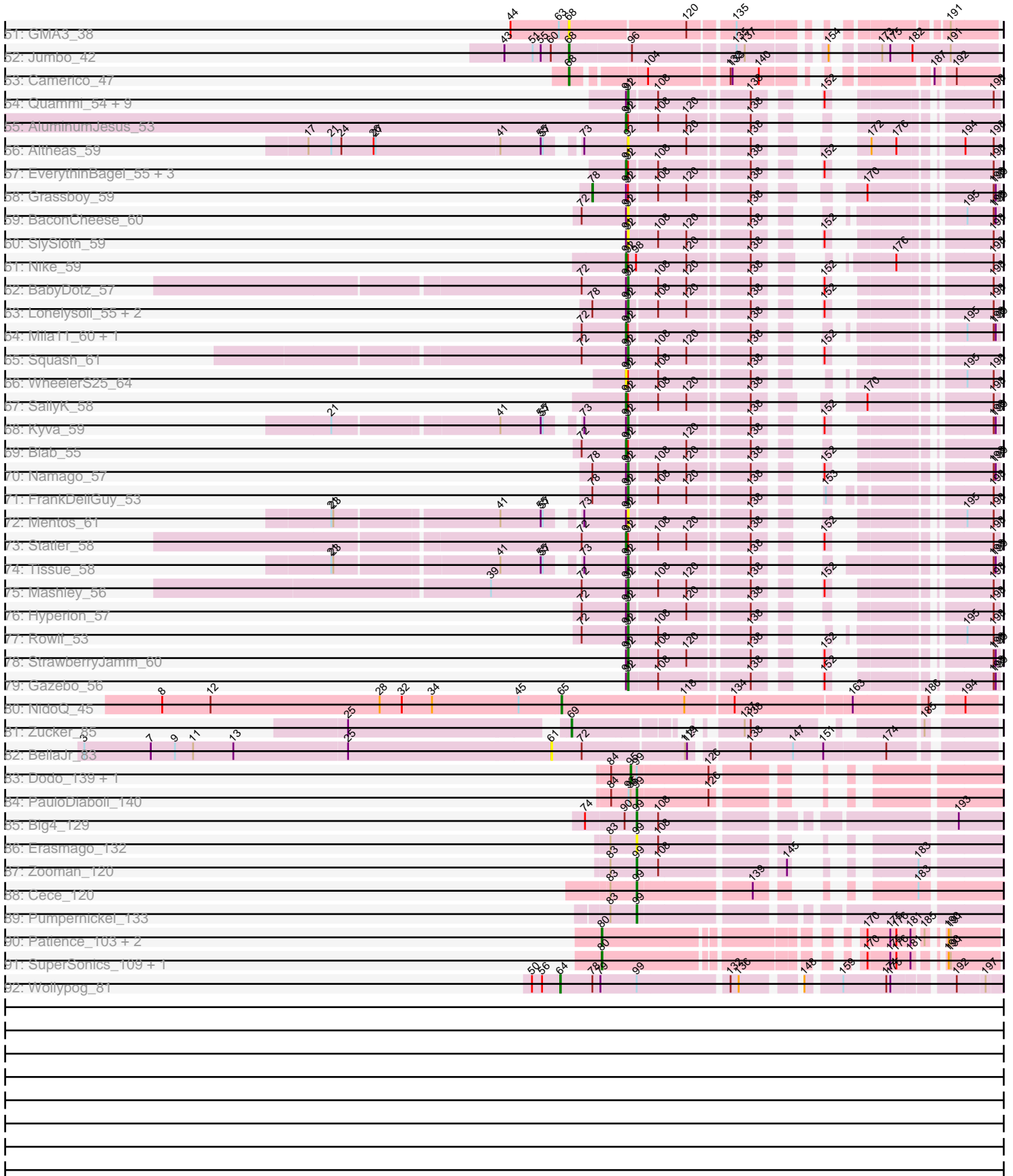


Pham 311257



Pham 311257



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 311257 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311257 has 190 members, 25 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi\_73
- Track 2 : Fowlmouth\_83
- Track 3 : MrMiyagi\_81
- Track 4 : Cuke\_82
- Track 5 : Leopard\_104
- Track 6 : Aikoy\_106, Onyinye\_105
- Track 7 : Rizwana\_63
- Track 8 : Tank\_63, Wilde\_65
- Track 9 : Nikan\_80
- Track 10 : Ollypop\_78
- Track 11 : BruhMoment\_73
- Track 12 : AWGoat\_60
- Track 13 : ThayneTheZag\_92
- Track 14 : Raqqa\_87
- Track 15 : AbbyDaisy\_89
- Track 16 : Commandaria\_21
- Track 17 : Pemberton\_21
- Track 18 : IDyn\_19
- Track 19 : Marietta\_20, WhoseManz\_20
- Track 20 : HubbaBubba\_16
- Track 21 : Sukkupi\_20, BiPauneto\_21, Yndexa\_20
- Track 22 : NadineRae\_18
- Track 23 : Pleakley\_26, Fury\_26
- Track 24 : HomeFry\_23
- Track 25 : Scuba\_26
- Track 26 : Braxoaddie\_21, Polyuyuki\_21, Apiary\_21
- Track 27 : Gagjeri\_20
- Track 28 : CoffeeBean\_21
- Track 29 : Maselop\_21
- Track 30 : MacGully\_24
- Track 31 : HayZem\_52, GMA7\_42, GTE7\_41, Amore2\_53
- Track 32 : Austin\_53
- Track 33 : Dakiti\_52, Lizzo\_50, CathyBurgh\_50, Adgers\_52, Chelms\_51, Gorko\_50, RemRem\_51, BirksAndSocks\_55, Hotorobo\_50, Barbochs\_49, Flakey\_50, Linetti\_52, Ekhein\_51, Breezic\_50, John316\_54, Monty\_49, Sam12\_50, Kelzog\_52, Beaver\_54, Exiguo\_50

- Track 34 : FelixAlejandro\_55, Jellybones\_53, Msay19\_55, CinnamonToast\_56, Butterball\_54, Boneham\_54, BillyBobJr\_56, Poland\_55, Sombrero\_51
- Track 35 : BigShaq\_51, BenoitCattle\_52, PierreThree\_51, Crete\_52
- Track 36 : GourdThymes\_50, Worcestershire\_51
- Track 37 : PokyPuppy\_50
- Track 38 : RoyalG\_51, Diabla\_54, SteveFrench\_50
- Track 39 : Eggsie\_49
- Track 40 : Squibbles\_50
- Track 41 : Jams\_49, Anamika\_49, Hail2Pitt\_48, Charianelly\_49, Jormungandr\_49, Shelley\_49, GalacticEye\_49, MrWormie\_49, Harambe\_49, Luker\_50, Kaseim\_49, Newt\_50, Damp\_49, Nimi13\_49, Sticker17\_49, Teal\_49, Hello\_49, Berries\_49, Lahirium\_49, Neoevie\_49, Woes\_49, Minos\_50, Lidong\_49, Bianmat\_49, Guillaume\_49
- Track 42 : Teech\_46, Tredge\_46, Niagara\_45, Kvothe\_45, Teatealatte\_46
- Track 43 : Katyusha\_45, Benczkowski14\_45
- Track 44 : Demosthenes\_44
- Track 45 : Philon9\_47, Vitaenoi\_47
- Track 46 : Hollow\_46
- Track 47 : ASerpRocky\_45
- Track 48 : Gibbles\_47
- Track 49 : PatrickStar\_49, RobinSparkles\_52, Orchid\_48, Kampe\_49
- Track 50 : Gmala1\_37, GordDuk1\_37, GordTnk2\_37
- Track 51 : GMA3\_38
- Track 52 : Jumbo\_42
- Track 53 : Camerico\_47
- Track 54 : Quammi\_54, Wheelie\_56, Casend\_57, Llemily\_56, Sillytadpoles\_57, DonaldDuck\_56, Viceroy\_55, Zhafia\_59, Wayne3\_58, Teehee\_57
- Track 55 : AluminumJesus\_53
- Track 56 : Altheas\_59
- Track 57 : EverythinBagel\_55, Jehoshaphat\_58, Rudy\_54, Phabia\_56
- Track 58 : Grassboy\_59
- Track 59 : BaconCheese\_60
- Track 60 : SlySloth\_59
- Track 61 : Nike\_59
- Track 62 : BabyDotz\_57
- Track 63 : Lonelysoil\_55, Zagie\_57, Judebell\_58
- Track 64 : Mila11\_60, MorillMayhem\_58
- Track 65 : Squash\_61
- Track 66 : WheelerS25\_64
- Track 67 : SallyK\_58
- Track 68 : Kyva\_59
- Track 69 : Blab\_55
- Track 70 : Namago\_57
- Track 71 : FrankDeliGuy\_53
- Track 72 : Mentos\_61
- Track 73 : Statler\_58
- Track 74 : Tissue\_58
- Track 75 : Mashley\_56
- Track 76 : Hyperion\_57
- Track 77 : Rowlf\_53
- Track 78 : StrawberryJamm\_60
- Track 79 : Gazebo\_56
- Track 80 : NidoQ\_45

- Track 81 : Zucker\_85
- Track 82 : BellaJr\_83
- Track 83 : Dodo\_139, A3Wally\_136
- Track 84 : PauloDiaboli\_140
- Track 85 : Big4\_129
- Track 86 : Erasmago\_132
- Track 87 : Zooman\_120
- Track 88 : Cece\_120
- Track 89 : Pumpnickel\_133
- Track 90 : Patience\_103, Madruga\_101, Demikore\_104
- Track 91 : SuperSonics\_109, Labelle\_102
- Track 92 : Wollypog\_81

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

The start number called the most often in the published annotations is 75, it was called in 63 of the 165 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adgers\_52, Amore2\_53, Anamika\_49, Barbochs\_49, Beaver\_54, BenoitCattle\_52, Berries\_49, Bianmat\_49, BigShaq\_51, BillyBobJr\_56, BirksAndSocks\_55, Boneham\_54, Breezic\_50, Butterball\_54, CathyBurgh\_50, Charianelly\_49, Chelms\_51, CinnamonToast\_56, Crete\_52, Dakiti\_52, Damp\_49, Diabla\_54, Eggsie\_49, Ekhein\_51, Exiguo\_50, FelixAlejandro\_55, Flakey\_50, GMA7\_42, GTE7\_41, GalacticEye\_49, Gorko\_50, GourdThymes\_50, Guillaume\_49, Hail2Pitt\_48, Harambe\_49, HayZem\_52, Hello\_49, Hotorobo\_50, Jams\_49, Jellybones\_53, John316\_54, Jormungandr\_49, Kaseim\_49, Kelzog\_52, Lahirium\_49, Lidong\_49, Linetti\_52, Lizzo\_50, Luker\_50, Minos\_50, Monty\_49, MrWormie\_49, Msay19\_55, Neoevie\_49, Newt\_50, Nimi13\_49, PierreThree\_51, PokyPuppy\_50, Poland\_55, RemRem\_51, RoyalG\_51, Sam12\_50, Shelley\_49, Sombrero\_51, Squibbles\_50, SteveFrench\_50, Sticker17\_49, Teal\_49, Woes\_49, Worcestershire\_51,

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

- Austin\_53,

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

- A3Wally\_136, ASerpRocky\_45, AWGoat\_60, AbbyDaisy\_89, Aikoy\_106, Altheas\_59, AluminumJesus\_53, Apiary\_21, BabyDotz\_57, BaconCheese\_60, BellaJr\_83, Benczkowski14\_45, BiPauneto\_21, Big4\_129, Blab\_55, Braxoaddie\_21, BruhMoment\_73, Camerico\_47, Casend\_57, Cece\_120, CoffeeBean\_21, Commandaria\_21, Cuke\_82, Demikore\_104, Demosthenes\_44, Dodo\_139, DonaldDuck\_56, Erasmago\_132, EverythinBagel\_55, Fowlmouth\_83, FrankDeliGuy\_53, Fury\_26, GMA3\_38, Gagieri\_20, Gazebo\_56, Gibbles\_47, Gmala1\_37, GordDuk1\_37, GordTnk2\_37, Grassboy\_59, Hollow\_46, HomeFry\_23, HubbaBubba\_16, Hyperion\_57, IDyn\_19, Indlulamithi\_73, Jehoshaphat\_58, Judebell\_58, Jumbo\_42, Kampe\_49, Katyusha\_45, Kvothe\_45, Kyva\_59, Labelle\_102, Leopard\_104, Llemily\_56, Lonelysoil\_55, MacGully\_24, Madruga\_101, Marietta\_20, Maselop\_21, Mashley\_56, Mentos\_61, Mila11\_60, MorillMayhem\_58, MrMiyagi\_81, NadineRae\_18, Namago\_57, Niagara\_45, NidoQ\_45, Nikan\_80,

Nike\_59, Ollypop\_78, Onyinye\_105, Orchid\_48, Patience\_103, PatrickStar\_49, PauloDiaboli\_140, Pemberton\_21, Phabia\_56, Philon9\_47, Pleakley\_26, Polyyuki\_21, Pumpernickel\_133, Quammi\_54, Raqqa\_87, Rizwana\_63, RobinSparkles\_52, Rowlf\_53, Rudy\_54, SallyK\_58, Scuba\_26, Sillytadpoles\_57, SlySloth\_59, Squash\_61, Statler\_58, StrawberryJamm\_60, Sukkupi\_20, SuperSonics\_109, Tank\_63, Teatealatte\_46, Teech\_46, Teehee\_57, ThayneTheZag\_92, Tissue\_58, Tredge\_46, Viceroy\_55, Vitaenoi\_47, Wayne3\_58, WheelerS25\_64, Wheelie\_56, WhoseManz\_20, Wilde\_65, Wollypog\_81, Yndexa\_20, Zagie\_57, Zhafia\_59, Zooman\_120, Zucker\_85,

### Summary by start number:

#### Start 38:

- Found in 1 of 190 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Austin\_53 (CS1),

#### Start 40:

- Found in 1 of 190 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat\_60 (AP4),

#### Start 47:

- Found in 1 of 190 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi\_73 (AC),

#### Start 49:

- Found in 3 of 190 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 2 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fury\_26 (CR5), Pleakley\_26 (CR5), Scuba\_26 (CR5),

#### Start 52:

- Found in 3 of 190 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 3 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rizwana\_63 (AP1), Tank\_63 (AP1), Wilde\_65 (AP1),

#### Start 58:

- Found in 3 of 190 ( 1.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gmala1\_37 (DF1), GordDuk1\_37 (DF1), GordTnk2\_37 (DF1),

#### Start 61:

- Found in 4 of 190 ( 2.1% ) of genes in pham

- Manual Annotations of this start: 2 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_89 (AY), BellaJr\_83 (FN), Nikan\_80 (AP2), Ollypop\_78 (AP2),

#### Start 62:

- Found in 26 of 190 ( 13.7% ) of genes in pham
- Manual Annotations of this start: 1 of 165
- Called 3.8% of time when present
- Phage (with cluster) where this start called: BruhMoment\_73 (AP3),

#### Start 64:

- Found in 1 of 190 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wollypog\_81 (singleton),

#### Start 65:

- Found in 1 of 190 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NidoQ\_45 (FA),

#### Start 68:

- Found in 6 of 190 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 2 of 165
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Camerico\_47 (DF4), GMA3\_38 (DF2), Jumbo\_42 (DF3),

#### Start 69:

- Found in 4 of 190 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 3 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HomeFry\_23 (CR5), Raqqa\_87 (AY), ThayneTheZag\_92 (AY), Zucker\_85 (FN),

#### Start 71:

- Found in 10 of 190 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 9 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BiPauneto\_21 (CR4), Commandaria\_21 (CR2), HubbaBubba\_16 (CR4), IDyn\_19 (CR4), Marietta\_20 (CR4), NadineRae\_18 (CR4), Pemberton\_21 (CR4), Sukkupi\_20 (CR4), WhoseManz\_20 (CR4), Yndexa\_20 (CR4),

#### Start 75:

- Found in 71 of 190 ( 37.4% ) of genes in pham
- Manual Annotations of this start: 63 of 165
- Called 98.6% of time when present
- Phage (with cluster) where this start called: Adgers\_52 (CS2), Amore2\_53 (CS1), Anamika\_49 (CS3), Barbochs\_49 (CS2), Beaver\_54 (CS2), BenoitCattle\_52 (CS2), Berries\_49 (CS3), Bianmat\_49 (CS3), BigShaq\_51 (CS2), BillyBobJr\_56 (CS2),

BirksAndSocks\_55 (CS2), Boneham\_54 (CS2), Breezic\_50 (CS2), Butterball\_54 (CS2), CathyBurgh\_50 (CS2), Charianelly\_49 (CS3), Chelms\_51 (CS2), CinnamonToast\_56 (CS2), Crete\_52 (CS2), Dakiti\_52 (CS2), Damp\_49 (CS3), Diabla\_54 (CS2), Eggsie\_49 (CS2), Ekhein\_51 (CS2), Exiguo\_50 (CS2), FelixAlejandro\_55 (CS2), Flakey\_50 (CS2), GMA7\_42 (CS1), GTE7\_41 (CS1), GalacticEye\_49 (CS3), Gorko\_50 (CS2), GourdThymes\_50 (CS2), Guillaume\_49 (CS3), Hail2Pitt\_48 (CS3), Harambe\_49 (CS3), HayZem\_52 (CS1), Hello\_49 (CS3), Hotorobo\_50 (CS2), Jams\_49 (CS3), Jellybones\_53 (CS2), John316\_54 (CS2), Jormungandr\_49 (CS3), Kaseim\_49 (CS3), Kelzog\_52 (CS2), Lahirium\_49 (CS3), Lidong\_49 (CS3), Linetti\_52 (CS2), Lizzo\_50 (CS2), Luker\_50 (CS3), Minos\_50 (CS3), Monty\_49 (CS2), MrWormie\_49 (CS3), Msay19\_55 (CS2), Neoevie\_49 (CS3), Newt\_50 (CS3), Nimi13\_49 (CS3), PierreThree\_51 (CS2), PokyPuppy\_50 (CS2), Poland\_55 (CS2), RemRem\_51 (CS2), RoyalG\_51 (CS2), Sam12\_50 (CS2), Shelley\_49 (CS3), Sombrero\_51 (CS2), Squibbles\_50 (CS2), SteveFrench\_50 (CS2), Sticker17\_49 (CS3), Teal\_49 (CS3), Woes\_49 (CS3), Worcestershire\_51 (CS2),

#### Start 77:

- Found in 19 of 190 ( 10.0% ) of genes in pham
- Manual Annotations of this start: 19 of 165
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ASerpRocky\_45 (CS4), Apiary\_21 (CR6), Benczkowski14\_45 (CS4), Braxoaddie\_21 (CR6), CoffeeBean\_21 (CR6), Demosthenes\_44 (CS4), Gagieri\_20 (CR6), Hollow\_46 (CS4), Katyusha\_45 (CS4), Kvothe\_45 (CS4), MacGully\_24 (CR7), Maselop\_21 (CR6), Niagara\_45 (CS4), Philon9\_47 (CS4), Polyyuki\_21 (CR6), Teatealatte\_46 (CS4), Teech\_46 (CS4), Tredge\_46 (CS4), Vitaenoi\_47 (CS4),

#### Start 78:

- Found in 7 of 190 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 1 of 165
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Grassboy\_59 (EG),

#### Start 80:

- Found in 26 of 190 ( 13.7% ) of genes in pham
- Manual Annotations of this start: 14 of 165
- Called 61.5% of time when present
- Phage (with cluster) where this start called: Aikoy\_106 (AE), Cuke\_82 (AC), Demikore\_104 (U), Fowlmouth\_83 (AC), Gibbles\_47 (CX), Kampe\_49 (CX), Labelle\_102 (U), Leopard\_104 (AE), Madrugada\_101 (U), MrMiyagi\_81 (AC), Onyinye\_105 (AE), Orchid\_48 (CX), Patience\_103 (U), PatrickStar\_49 (CX), RobinSparkles\_52 (CX), SuperSonics\_109 (U),

#### Start 91:

- Found in 84 of 190 ( 44.2% ) of genes in pham
- Manual Annotations of this start: 10 of 165
- Called 14.3% of time when present
- Phage (with cluster) where this start called: AluminumJesus\_53 (EG), Blab\_55 (EG), EverythinBagel\_55 (EG), Jehoshaphat\_58 (EG), Mila11\_60 (EG), MorillMayhem\_58 (EG), Nike\_59 (EG), Phabia\_56 (EG), Rudy\_54 (EG), SallyK\_58 (EG), Statler\_58 (EG), WheelerS25\_64 (EG),

#### Start 92:

- Found in 41 of 190 ( 21.6% ) of genes in pham
- Manual Annotations of this start: 24 of 165
- Called 68.3% of time when present
- Phage (with cluster) where this start called: Altheas\_59 (EG), BabyDotz\_57 (EG), BaconCheese\_60 (EG), Casend\_57 (EG), DonaldDuck\_56 (EG), FrankDeliGuy\_53 (EG), Gazebo\_56 (EG), Hyperion\_57 (EG), Judebell\_58 (EG), Kyva\_59 (EG), Llemily\_56 (EG), Lonelysoil\_55 (EG), Mashley\_56 (EG), Mentos\_61 (EG), Namago\_57 (EG), Quammi\_54 (EG), Rowlf\_53 (EG), Sillytadpoles\_57 (EG), SlySloth\_59 (EG), Squash\_61 (EG), StrawberryJamm\_60 (EG), Teehee\_57 (EG), Tissue\_58 (EG), Viceroy\_55 (EG), Wayne3\_58 (EG), Wheelie\_56 (EG), Zagie\_57 (EG), Zhafia\_59 (EG),

Start 95:

- Found in 3 of 190 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 2 of 165
- Called 66.7% of time when present
- Phage (with cluster) where this start called: A3Wally\_136 (GD1), Dodo\_139 (GD1),

Start 99:

- Found in 9 of 190 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 5 of 165
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Big4\_129 (GD2), Cece\_120 (GD3), Erasmago\_132 (GD2), PauloDiaboli\_140 (GD1), Pumpernickel\_133 (GD4), Zooman\_120 (GD2),

### Summary by clusters:

There are 30 clusters represented in this pham: GD1, GD2, GD3, GD4, AP2, AP3, AP1, singleton, AP4, FA, FN, DF4, DF1, DF3, DF2, CS4, CS1, CS3, CS2, AC, AE, EG, CX, U, AY, CR2, CR6, CR7, CR4, CR5,

Info for manual annotations of cluster AC:

- Start number 47 was manually annotated 1 time for cluster AC.
- Start number 80 was manually annotated 3 times for cluster AC.

Info for manual annotations of cluster AE:

- Start number 80 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster AP1:

- Start number 52 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 61 was manually annotated 1 time for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 62 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 40 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster AY:

- Start number 61 was manually annotated 1 time for cluster AY.

- Start number 69 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster CR2:

- Start number 71 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CR4:

- Start number 71 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 49 was manually annotated 2 times for cluster CR5.
- Start number 69 was manually annotated 1 time for cluster CR5.

Info for manual annotations of cluster CR6:

- Start number 77 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CR7:

- Start number 77 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster CS1:

- Start number 38 was manually annotated 1 time for cluster CS1.
- Start number 75 was manually annotated 2 times for cluster CS1.

Info for manual annotations of cluster CS2:

- Start number 75 was manually annotated 36 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 75 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:

- Start number 77 was manually annotated 12 times for cluster CS4.

Info for manual annotations of cluster CX:

- Start number 80 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster DF3:

- Start number 68 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:

- Start number 68 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster EG:

- Start number 78 was manually annotated 1 time for cluster EG.
- Start number 91 was manually annotated 10 times for cluster EG.
- Start number 92 was manually annotated 24 times for cluster EG.

Info for manual annotations of cluster FA:

- Start number 65 was manually annotated 1 time for cluster FA.

Info for manual annotations of cluster FN:

- Start number 69 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster GD1:

- Start number 95 was manually annotated 2 times for cluster GD1.
- Start number 99 was manually annotated 1 time for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 99 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 99 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 99 was manually annotated 1 time for cluster GD4.

Info for manual annotations of cluster U:

- Start number 80 was manually annotated 3 times for cluster U.

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

Gene: A3Wally\_136 Start: 86849, Stop: 87247, Start Num: 95

Candidate Starts for A3Wally\_136:

(84, 86822), (Start: 95 @86849 has 2 MA's), (Start: 99 @86858 has 5 MA's), (126, 86957),

Gene: ASerpRocky\_45 Start: 46949, Stop: 46455, Start Num: 77

Candidate Starts for ASerpRocky\_45:

(Start: 77 @46949 has 19 MA's), (Start: 80 @46934 has 14 MA's), (87, 46907), (111, 46841), (151, 46658), (169, 46619),

Gene: AWGoat\_60 Start: 44171, Stop: 43587, Start Num: 40

Candidate Starts for AWGoat\_60:

(20, 44426), (22, 44417), (31, 44318), (35, 44264), (36, 44219), (Start: 40 @44171 has 1 MA's), (48, 44129), (66, 44078), (105, 43961), (168, 43760), (185, 43682),

Gene: AbbyDaisy\_89 Start: 50820, Stop: 51422, Start Num: 61

Candidate Starts for AbbyDaisy\_89:

(Start: 61 @50820 has 2 MA's), (72, 50865), (119, 51009), (121, 51012), (138, 51087), (147, 51150), (174, 51285), (185, 51333),

Gene: Adgers\_52 Start: 46769, Stop: 46248, Start Num: 75

Candidate Starts for Adgers\_52:

(Start: 75 @46769 has 63 MA's), (82, 46733), (192, 46307),

Gene: Aikoy\_106 Start: 67335, Stop: 67865, Start Num: 80

Candidate Starts for Aikoy\_106:

(Start: 80 @67335 has 14 MA's), (88, 67362), (104, 67401), (110, 67422), (116, 67443), (130, 67494), (131, 67503), (134, 67512), (135, 67515), (137, 67527), (142, 67566), (143, 67569), (150, 67635), (151, 67638), (156, 67650), (157, 67653), (158, 67665), (159, 67668), (161, 67674), (165, 67686),

Gene: Altheas\_59 Start: 43024, Stop: 42620, Start Num: 92

Candidate Starts for Altheas\_59:

(17, 43459), (21, 43426), (24, 43411), (26, 43366), (27, 43363), (41, 43180), (55, 43120), (57, 43117), (73, 43087), (Start: 92 @43024 has 24 MA's), (120, 42937), (138, 42856), (172, 42775), (176, 42739),

(194, 42670), (198, 42628),

Gene: AluminumJesus\_53 Start: 41962, Stop: 41567, Start Num: 91

Candidate Starts for AluminumJesus\_53:

(Start: 91 @41962 has 10 MA's), (Start: 92 @41959 has 24 MA's), (108, 41917), (120, 41875), (138, 41794),

Gene: Amore2\_53 Start: 47169, Stop: 46684, Start Num: 75

Candidate Starts for Amore2\_53:

(Start: 75 @47169 has 63 MA's), (194, 46731),

Gene: Anamika\_49 Start: 47821, Stop: 47318, Start Num: 75

Candidate Starts for Anamika\_49:

(Start: 62 @47866 has 1 MA's), (67, 47848), (Start: 75 @47821 has 63 MA's), (Start: 91 @47761 has 10 MA's), (173, 47470), (184, 47416),

Gene: Apiary\_21 Start: 10881, Stop: 11363, Start Num: 77

Candidate Starts for Apiary\_21:

(2, 10119), (14, 10371), (30, 10587), (59, 10830), (Start: 77 @10881 has 19 MA's), (89, 10926), (97, 10944), (110, 10980), (135, 11076), (141, 11121), (169, 11196), (177, 11241), (192, 11301),

Gene: Austin\_53 Start: 47319, Stop: 46684, Start Num: 38

Candidate Starts for Austin\_53:

(37, 47331), (Start: 38 @47319 has 1 MA's), (42, 47289), (56, 47232), (Start: 75 @47169 has 63 MA's), (194, 46731),

Gene: BabyDotz\_57 Start: 43429, Stop: 43037, Start Num: 92

Candidate Starts for BabyDotz\_57:

(72, 43498), (Start: 91 @43432 has 10 MA's), (Start: 92 @43429 has 24 MA's), (108, 43387), (120, 43345), (138, 43264), (152, 43219), (198, 43045),

Gene: BaconCheese\_60 Start: 43894, Stop: 43499, Start Num: 92

Candidate Starts for BaconCheese\_60:

(72, 43963), (Start: 91 @43897 has 10 MA's), (Start: 92 @43894 has 24 MA's), (138, 43732), (195, 43546), (198, 43507), (199, 43504),

Gene: Barbochs\_49 Start: 46513, Stop: 45992, Start Num: 75

Candidate Starts for Barbochs\_49:

(Start: 75 @46513 has 63 MA's), (82, 46477), (192, 46051),

Gene: Beaver\_54 Start: 48283, Stop: 47762, Start Num: 75

Candidate Starts for Beaver\_54:

(Start: 75 @48283 has 63 MA's), (82, 48247), (192, 47821),

Gene: BellaJr\_83 Start: 47858, Stop: 48460, Start Num: 61

Candidate Starts for BellaJr\_83:

(3, 47168), (7, 47267), (9, 47303), (11, 47330), (13, 47390), (25, 47558), (Start: 61 @47858 has 2 MA's), (72, 47903), (119, 48047), (121, 48050), (138, 48125), (147, 48188), (151, 48233), (174, 48323),

Gene: Benczkowski14\_45 Start: 47238, Stop: 46744, Start Num: 77

Candidate Starts for Benczkowski14\_45:

(Start: 77 @47238 has 19 MA's), (Start: 80 @47223 has 14 MA's), (87, 47196), (151, 46947), (167, 46917), (169, 46908), (176, 46866), (178, 46860),

Gene: BenoitCattle\_52 Start: 47030, Stop: 46509, Start Num: 75

Candidate Starts for BenoitCattle\_52:

(Start: 75 @47030 has 63 MA's), (82, 46994), (146, 46736), (192, 46568),

Gene: Berries\_49 Start: 47793, Stop: 47290, Start Num: 75

Candidate Starts for Berries\_49:

(Start: 62 @47838 has 1 MA's), (67, 47820), (Start: 75 @47793 has 63 MA's), (Start: 91 @47733 has 10 MA's), (173, 47442), (184, 47388),

Gene: BiPauneto\_21 Start: 8586, Stop: 9044, Start Num: 71

Candidate Starts for BiPauneto\_21:

(4, 7887), (21, 8232), (Start: 71 @8586 has 9 MA's), (85, 8634), (Start: 91 @8652 has 10 MA's), (100, 8667), (110, 8700), (129, 8775), (132, 8787), (176, 8916),

Gene: Bianmat\_49 Start: 47833, Stop: 47330, Start Num: 75

Candidate Starts for Bianmat\_49:

(Start: 62 @47878 has 1 MA's), (67, 47860), (Start: 75 @47833 has 63 MA's), (Start: 91 @47773 has 10 MA's), (173, 47482), (184, 47428),

Gene: Big4\_129 Start: 85559, Stop: 86026, Start Num: 99

Candidate Starts for Big4\_129:

(74, 85493), (90, 85544), (Start: 99 @85559 has 5 MA's), (108, 85589), (193, 85961),

Gene: BigShaq\_51 Start: 47035, Stop: 46514, Start Num: 75

Candidate Starts for BigShaq\_51:

(Start: 75 @47035 has 63 MA's), (82, 46999), (146, 46741), (192, 46573),

Gene: BillyBobJr\_56 Start: 48593, Stop: 48072, Start Num: 75

Candidate Starts for BillyBobJr\_56:

(Start: 75 @48593 has 63 MA's), (82, 48557), (190, 48143),

Gene: BirksAndSocks\_55 Start: 48633, Stop: 48112, Start Num: 75

Candidate Starts for BirksAndSocks\_55:

(Start: 75 @48633 has 63 MA's), (82, 48597), (192, 48171),

Gene: Blab\_55 Start: 42584, Stop: 42189, Start Num: 91

Candidate Starts for Blab\_55:

(72, 42650), (Start: 91 @42584 has 10 MA's), (Start: 92 @42581 has 24 MA's), (120, 42497), (138, 42416),

Gene: Boneham\_54 Start: 48534, Stop: 48013, Start Num: 75

Candidate Starts for Boneham\_54:

(Start: 75 @48534 has 63 MA's), (82, 48498), (190, 48084),

Gene: Braxoaddie\_21 Start: 10869, Stop: 11351, Start Num: 77

Candidate Starts for Braxoaddie\_21:

(2, 10107), (14, 10359), (30, 10575), (59, 10818), (Start: 77 @10869 has 19 MA's), (89, 10914), (97, 10932), (110, 10968), (135, 11064), (141, 11109), (169, 11184), (177, 11229), (192, 11289),

Gene: Breezic\_50 Start: 46526, Stop: 46005, Start Num: 75

Candidate Starts for Breezic\_50:

(Start: 75 @46526 has 63 MA's), (82, 46490), (192, 46064),

Gene: BruhMoment\_73 Start: 49223, Stop: 48708, Start Num: 62

Candidate Starts for BruhMoment\_73:

(Start: 62 @49223 has 1 MA's), (121, 49073), (138, 48998), (144, 48950),

Gene: Butterball\_54 Start: 48539, Stop: 48018, Start Num: 75

Candidate Starts for Butterball\_54:

(Start: 75 @48539 has 63 MA's), (82, 48503), (190, 48089),

Gene: Camerico\_47 Start: 46654, Stop: 46154, Start Num: 68

Candidate Starts for Camerico\_47:

(Start: 68 @46654 has 2 MA's), (104, 46561), (132, 46453), (133, 46450), (140, 46411), (187, 46240), (192, 46216),

Gene: Casend\_57 Start: 42837, Stop: 42448, Start Num: 92

Candidate Starts for Casend\_57:

(Start: 91 @42840 has 10 MA's), (Start: 92 @42837 has 24 MA's), (108, 42798), (138, 42675), (152, 42630), (198, 42456),

Gene: CathyBurgh\_50 Start: 47103, Stop: 46582, Start Num: 75

Candidate Starts for CathyBurgh\_50:

(Start: 75 @47103 has 63 MA's), (82, 47067), (192, 46641),

Gene: Cece\_120 Start: 88234, Stop: 88626, Start Num: 99

Candidate Starts for Cece\_120:

(83, 88198), (Start: 99 @88234 has 5 MA's), (139, 88387), (183, 88513),

Gene: Charianelly\_49 Start: 47543, Stop: 47040, Start Num: 75

Candidate Starts for Charianelly\_49:

(Start: 62 @47588 has 1 MA's), (67, 47570), (Start: 75 @47543 has 63 MA's), (Start: 91 @47483 has 10 MA's), (173, 47192), (184, 47138),

Gene: Chelms\_51 Start: 47023, Stop: 46514, Start Num: 75

Candidate Starts for Chelms\_51:

(Start: 75 @47023 has 63 MA's), (82, 46987), (192, 46573),

Gene: CinnamonToast\_56 Start: 48593, Stop: 48072, Start Num: 75

Candidate Starts for CinnamonToast\_56:

(Start: 75 @48593 has 63 MA's), (82, 48557), (190, 48143),

Gene: CoffeeBean\_21 Start: 10806, Stop: 11321, Start Num: 77

Candidate Starts for CoffeeBean\_21:

(2, 10044), (6, 10155), (14, 10296), (30, 10512), (59, 10755), (Start: 77 @10806 has 19 MA's), (89, 10851), (97, 10869), (110, 10905), (135, 11001), (164, 11136), (177, 11199), (192, 11259),

Gene: Commandaria\_21 Start: 9793, Stop: 10248, Start Num: 71

Candidate Starts for Commandaria\_21:

(1, 9061), (5, 9148), (18, 9418), (29, 9520), (Start: 71 @9793 has 9 MA's), (Start: 91 @9856 has 10 MA's), (100, 9871), (129, 9979), (176, 10120),

Gene: Crete\_52 Start: 47301, Stop: 46780, Start Num: 75

Candidate Starts for Crete\_52:

(Start: 75 @47301 has 63 MA's), (82, 47265), (146, 47007), (192, 46839),

Gene: Cuke\_82 Start: 48535, Stop: 49002, Start Num: 80

Candidate Starts for Cuke\_82:

(Start: 80 @48535 has 14 MA's), (86, 48553), (103, 48595), (104, 48598), (112, 48628), (130, 48685), (149, 48799), (156, 48817), (169, 48841), (173, 48862), (175, 48874), (176, 48883), (179, 48895), (186, 48922), (190, 48928), (192, 48940),

Gene: Dakiti\_52 Start: 47891, Stop: 47382, Start Num: 75

Candidate Starts for Dakiti\_52:

(Start: 75 @47891 has 63 MA's), (82, 47855), (192, 47441),

Gene: Damp\_49 Start: 46707, Stop: 46204, Start Num: 75

Candidate Starts for Damp\_49:

(Start: 62 @46752 has 1 MA's), (67, 46734), (Start: 75 @46707 has 63 MA's), (Start: 91 @46647 has 10 MA's), (173, 46356), (184, 46302),

Gene: Demikore\_104 Start: 64612, Stop: 65076, Start Num: 80

Candidate Starts for Demikore\_104:

(Start: 80 @64612 has 14 MA's), (170, 64918), (175, 64948), (176, 64957), (181, 64978), (185, 64990), (190, 65002), (191, 65005),

Gene: Demosthenes\_44 Start: 46925, Stop: 46431, Start Num: 77

Candidate Starts for Demosthenes\_44:

(Start: 77 @46925 has 19 MA's), (87, 46883), (111, 46817), (151, 46634), (169, 46595), (178, 46547), (192, 46490), (196, 46451),

Gene: Diabla\_54 Start: 48464, Stop: 47943, Start Num: 75

Candidate Starts for Diabla\_54:

(Start: 75 @48464 has 63 MA's), (82, 48428), (184, 48041), (189, 48026), (194, 47990),

Gene: Dodo\_139 Start: 87192, Stop: 87590, Start Num: 95

Candidate Starts for Dodo\_139:

(84, 87165), (Start: 95 @87192 has 2 MA's), (Start: 99 @87201 has 5 MA's), (126, 87300),

Gene: DonaldDuck\_56 Start: 42186, Stop: 41797, Start Num: 92

Candidate Starts for DonaldDuck\_56:

(Start: 91 @42189 has 10 MA's), (Start: 92 @42186 has 24 MA's), (108, 42147), (138, 42024), (152, 41979), (198, 41805),

Gene: Eggsie\_49 Start: 46426, Stop: 45905, Start Num: 75

Candidate Starts for Eggsie\_49:

(Start: 75 @46426 has 63 MA's), (82, 46390), (184, 46003), (194, 45952),

Gene: Ekhein\_51 Start: 46231, Stop: 45710, Start Num: 75

Candidate Starts for Ekhein\_51:

(Start: 75 @46231 has 63 MA's), (82, 46195), (192, 45769),

Gene: Erasmago\_132 Start: 83948, Stop: 84340, Start Num: 99

Candidate Starts for Erasmago\_132:

(83, 83912), (Start: 99 @83948 has 5 MA's), (108, 83978),

Gene: EverythinBagel\_55 Start: 42550, Stop: 42158, Start Num: 91  
Candidate Starts for EverythinBagel\_55:  
(Start: 91 @42550 has 10 MA's), (Start: 92 @42547 has 24 MA's), (108, 42508), (138, 42385), (152, 42340), (198, 42166),

Gene: Exiguo\_50 Start: 46243, Stop: 45722, Start Num: 75  
Candidate Starts for Exiguo\_50:  
(Start: 75 @46243 has 63 MA's), (82, 46207), (192, 45781),

Gene: FelixAlejandro\_55 Start: 48737, Stop: 48216, Start Num: 75  
Candidate Starts for FelixAlejandro\_55:  
(Start: 75 @48737 has 63 MA's), (82, 48701), (190, 48287),

Gene: Flakey\_50 Start: 47107, Stop: 46586, Start Num: 75  
Candidate Starts for Flakey\_50:  
(Start: 75 @47107 has 63 MA's), (82, 47071), (192, 46645),

Gene: Fowlmouth\_83 Start: 51110, Stop: 51577, Start Num: 80  
Candidate Starts for Fowlmouth\_83:  
(Start: 80 @51110 has 14 MA's), (104, 51173), (106, 51182), (109, 51191), (134, 51278), (143, 51335), (169, 51416), (175, 51449), (176, 51458), (179, 51470),

Gene: FrankDeliGuy\_53 Start: 42165, Stop: 41773, Start Num: 92  
Candidate Starts for FrankDeliGuy\_53:  
(Start: 78 @42216 has 1 MA's), (Start: 91 @42168 has 10 MA's), (Start: 92 @42165 has 24 MA's), (108, 42126), (120, 42084), (138, 42003), (153, 41958), (198, 41781),

Gene: Fury\_26 Start: 10463, Stop: 10972, Start Num: 49  
Candidate Starts for Fury\_26:  
(Start: 49 @10463 has 2 MA's), (Start: 91 @10580 has 10 MA's), (100, 10595), (133, 10718), (136, 10727), (176, 10844), (179, 10856),

Gene: GMA3\_38 Start: 40837, Stop: 40325, Start Num: 68  
Candidate Starts for GMA3\_38:  
(44, 40918), (63, 40849), (Start: 68 @40837 has 2 MA's), (120, 40669), (135, 40609), (191, 40390),

Gene: GMA7\_42 Start: 41383, Stop: 40898, Start Num: 75  
Candidate Starts for GMA7\_42:  
(Start: 75 @41383 has 63 MA's), (194, 40945),

Gene: GTE7\_41 Start: 41414, Stop: 40929, Start Num: 75  
Candidate Starts for GTE7\_41:  
(Start: 75 @41414 has 63 MA's), (194, 40976),

Gene: Gagieri\_20 Start: 10423, Stop: 10938, Start Num: 77  
Candidate Starts for Gagieri\_20:  
(14, 9913), (15, 9994), (30, 10129), (Start: 77 @10423 has 19 MA's), (97, 10486), (135, 10618), (137, 10630), (166, 10759), (177, 10816), (192, 10876),

Gene: GalacticEye\_49 Start: 47504, Stop: 47001, Start Num: 75  
Candidate Starts for GalacticEye\_49:  
(Start: 62 @47549 has 1 MA's), (67, 47531), (Start: 75 @47504 has 63 MA's), (Start: 91 @47444 has 10 MA's), (173, 47153), (184, 47099),

Gene: Gazebo\_56 Start: 42670, Stop: 42278, Start Num: 92

Candidate Starts for Gazebo\_56:

(Start: 91 @42673 has 10 MA's), (Start: 92 @42670 has 24 MA's), (108, 42628), (138, 42505), (152, 42460), (198, 42286), (199, 42283),

Gene: Gibbles\_47 Start: 45170, Stop: 44748, Start Num: 80

Candidate Starts for Gibbles\_47:

(Start: 80 @45170 has 14 MA's), (Start: 91 @45134 has 10 MA's), (107, 45095), (109, 45089), (113, 45074), (135, 44984), (179, 44855), (192, 44810), (198, 44756),

Gene: Gmala1\_37 Start: 39458, Stop: 38919, Start Num: 58

Candidate Starts for Gmala1\_37:

(54, 39467), (58, 39458), (Start: 68 @39425 has 2 MA's), (113, 39281), (120, 39257), (143, 39143), (190, 38987),

Gene: GordDuk1\_37 Start: 39399, Stop: 38860, Start Num: 58

Candidate Starts for GordDuk1\_37:

(54, 39408), (58, 39399), (Start: 68 @39366 has 2 MA's), (113, 39222), (120, 39198), (143, 39084), (190, 38928),

Gene: GordTnk2\_37 Start: 39365, Stop: 38826, Start Num: 58

Candidate Starts for GordTnk2\_37:

(54, 39374), (58, 39365), (Start: 68 @39332 has 2 MA's), (113, 39188), (120, 39164), (143, 39050), (190, 38894),

Gene: Gorko\_50 Start: 46235, Stop: 45714, Start Num: 75

Candidate Starts for Gorko\_50:

(Start: 75 @46235 has 63 MA's), (82, 46199), (192, 45773),

Gene: GourdThymes\_50 Start: 47109, Stop: 46588, Start Num: 75

Candidate Starts for GourdThymes\_50:

(Start: 75 @47109 has 63 MA's), (82, 47073), (111, 46989), (192, 46647),

Gene: Grassboy\_59 Start: 43110, Stop: 42643, Start Num: 78

Candidate Starts for Grassboy\_59:

(Start: 78 @43110 has 1 MA's), (Start: 91 @43062 has 10 MA's), (Start: 92 @43059 has 24 MA's), (108, 43020), (120, 42978), (138, 42897), (170, 42801), (198, 42651), (199, 42648),

Gene: Guillaume\_49 Start: 47554, Stop: 47051, Start Num: 75

Candidate Starts for Guillaume\_49:

(Start: 62 @47599 has 1 MA's), (67, 47581), (Start: 75 @47554 has 63 MA's), (Start: 91 @47494 has 10 MA's), (173, 47203), (184, 47149),

Gene: Hail2Pitt\_48 Start: 48030, Stop: 47527, Start Num: 75

Candidate Starts for Hail2Pitt\_48:

(Start: 62 @48075 has 1 MA's), (67, 48057), (Start: 75 @48030 has 63 MA's), (Start: 91 @47970 has 10 MA's), (173, 47679), (184, 47625),

Gene: Harambe\_49 Start: 47821, Stop: 47318, Start Num: 75

Candidate Starts for Harambe\_49:

(Start: 62 @47866 has 1 MA's), (67, 47848), (Start: 75 @47821 has 63 MA's), (Start: 91 @47761 has 10 MA's), (173, 47470), (184, 47416),

Gene: HayZem\_52 Start: 47166, Stop: 46681, Start Num: 75  
Candidate Starts for HayZem\_52:  
(Start: 75 @47166 has 63 MA's), (194, 46728),

Gene: Hello\_49 Start: 47783, Stop: 47280, Start Num: 75  
Candidate Starts for Hello\_49:  
(Start: 62 @47828 has 1 MA's), (67, 47810), (Start: 75 @47783 has 63 MA's), (Start: 91 @47723 has 10 MA's), (173, 47432), (184, 47378),

Gene: Hollow\_46 Start: 47574, Stop: 47080, Start Num: 77  
Candidate Starts for Hollow\_46:  
(Start: 77 @47574 has 19 MA's), (Start: 80 @47559 has 14 MA's), (87, 47532), (111, 47466), (151, 47283), (169, 47244), (178, 47196),

Gene: HomeFry\_23 Start: 9368, Stop: 9835, Start Num: 69  
Candidate Starts for HomeFry\_23:  
(10, 8822), (16, 8981), (19, 9017), (Start: 69 @9368 has 3 MA's), (81, 9413), (85, 9428), (Start: 91 @9443 has 10 MA's), (100, 9458), (114, 9509), (129, 9566), (133, 9581), (135, 9587), (176, 9707),

Gene: Hotorobo\_50 Start: 47114, Stop: 46593, Start Num: 75  
Candidate Starts for Hotorobo\_50:  
(Start: 75 @47114 has 63 MA's), (82, 47078), (192, 46652),

Gene: HubbaBubba\_16 Start: 7112, Stop: 7570, Start Num: 71  
Candidate Starts for HubbaBubba\_16:  
(21, 6758), (Start: 71 @7112 has 9 MA's), (85, 7160), (Start: 91 @7178 has 10 MA's), (100, 7193), (110, 7226), (129, 7301), (176, 7442), (198, 7562),

Gene: Hyperion\_57 Start: 42845, Stop: 42456, Start Num: 92  
Candidate Starts for Hyperion\_57:  
(72, 42914), (Start: 91 @42848 has 10 MA's), (Start: 92 @42845 has 24 MA's), (120, 42764), (138, 42683), (198, 42464),

Gene: IDyn\_19 Start: 8503, Stop: 8961, Start Num: 71  
Candidate Starts for IDyn\_19:  
(21, 8149), (Start: 71 @8503 has 9 MA's), (85, 8551), (Start: 91 @8569 has 10 MA's), (100, 8584), (110, 8617), (114, 8635), (129, 8692), (176, 8833),

Gene: Indlulamithi\_73 Start: 51686, Stop: 52294, Start Num: 47  
Candidate Starts for Indlulamithi\_73:  
(Start: 47 @51686 has 1 MA's), (53, 51707), (70, 51758), (Start: 80 @51800 has 14 MA's), (102, 51857), (117, 51911), (122, 51926), (124, 51947), (125, 51950), (131, 51974), (132, 51977), (170, 52136), (175, 52166), (180, 52190), (193, 52235), (198, 52286),

Gene: Jams\_49 Start: 46993, Stop: 46490, Start Num: 75  
Candidate Starts for Jams\_49:  
(Start: 62 @47038 has 1 MA's), (67, 47020), (Start: 75 @46993 has 63 MA's), (Start: 91 @46933 has 10 MA's), (173, 46642), (184, 46588),

Gene: Jehoshaphat\_58 Start: 43108, Stop: 42716, Start Num: 91  
Candidate Starts for Jehoshaphat\_58:

(Start: 91 @43108 has 10 MA's), (Start: 92 @43105 has 24 MA's), (108, 43066), (138, 42943), (152, 42898), (198, 42724),

Gene: Jellybones\_53 Start: 48215, Stop: 47694, Start Num: 75

Candidate Starts for Jellybones\_53:

(Start: 75 @48215 has 63 MA's), (82, 48179), (190, 47765),

Gene: John316\_54 Start: 48272, Stop: 47751, Start Num: 75

Candidate Starts for John316\_54:

(Start: 75 @48272 has 63 MA's), (82, 48236), (192, 47810),

Gene: Jormungandr\_49 Start: 47536, Stop: 47033, Start Num: 75

Candidate Starts for Jormungandr\_49:

(Start: 62 @47581 has 1 MA's), (67, 47563), (Start: 75 @47536 has 63 MA's), (Start: 91 @47476 has 10 MA's), (173, 47185), (184, 47131),

Gene: Judebell\_58 Start: 42554, Stop: 42165, Start Num: 92

Candidate Starts for Judebell\_58:

(Start: 78 @42605 has 1 MA's), (Start: 91 @42557 has 10 MA's), (Start: 92 @42554 has 24 MA's), (108, 42515), (120, 42473), (138, 42392), (152, 42347), (198, 42173),

Gene: Jumbo\_42 Start: 45467, Stop: 44925, Start Num: 68

Candidate Starts for Jumbo\_42:

(43, 45563), (51, 45521), (55, 45509), (60, 45494), (Start: 68 @45467 has 2 MA's), (96, 45380), (135, 45239), (137, 45227), (154, 45140), (173, 45095), (175, 45083), (182, 45050), (191, 44993),

Gene: Kampe\_49 Start: 45153, Stop: 44731, Start Num: 80

Candidate Starts for Kampe\_49:

(Start: 80 @45153 has 14 MA's), (Start: 91 @45117 has 10 MA's), (107, 45078), (109, 45072), (113, 45057), (135, 44967), (192, 44793),

Gene: Kaseim\_49 Start: 46978, Stop: 46475, Start Num: 75

Candidate Starts for Kaseim\_49:

(Start: 62 @47023 has 1 MA's), (67, 47005), (Start: 75 @46978 has 63 MA's), (Start: 91 @46918 has 10 MA's), (173, 46627), (184, 46573),

Gene: Katyusha\_45 Start: 47238, Stop: 46744, Start Num: 77

Candidate Starts for Katyusha\_45:

(Start: 77 @47238 has 19 MA's), (Start: 80 @47223 has 14 MA's), (87, 47196), (151, 46947), (167, 46917), (169, 46908), (176, 46866), (178, 46860),

Gene: Kelzog\_52 Start: 47121, Stop: 46600, Start Num: 75

Candidate Starts for Kelzog\_52:

(Start: 75 @47121 has 63 MA's), (82, 47085), (192, 46659),

Gene: Kvothe\_45 Start: 47137, Stop: 46643, Start Num: 77

Candidate Starts for Kvothe\_45:

(Start: 77 @47137 has 19 MA's), (Start: 80 @47122 has 14 MA's), (87, 47095), (167, 46816), (169, 46807), (176, 46765), (178, 46759),

Gene: Kyva\_59 Start: 43089, Stop: 42700, Start Num: 92

Candidate Starts for Kyva\_59:

(21, 43476), (41, 43245), (55, 43185), (57, 43182), (73, 43152), (Start: 91 @43092 has 10 MA's),  
(Start: 92 @43089 has 24 MA's), (138, 42927), (152, 42882), (198, 42708), (199, 42705),

Gene: Labelle\_102 Start: 64800, Stop: 65264, Start Num: 80

Candidate Starts for Labelle\_102:

(Start: 80 @64800 has 14 MA's), (170, 65106), (175, 65136), (176, 65145), (181, 65166), (190, 65190),  
(191, 65193),

Gene: Lahirium\_49 Start: 48058, Stop: 47555, Start Num: 75

Candidate Starts for Lahirium\_49:

(Start: 62 @48103 has 1 MA's), (67, 48085), (Start: 75 @48058 has 63 MA's), (Start: 91 @47998 has  
10 MA's), (173, 47707), (184, 47653),

Gene: Leopard\_104 Start: 67266, Stop: 67778, Start Num: 80

Candidate Starts for Leopard\_104:

(Start: 80 @67266 has 14 MA's), (88, 67293), (116, 67374), (130, 67425), (131, 67434), (134, 67443),  
(135, 67446), (142, 67497), (143, 67500), (150, 67566), (151, 67569), (156, 67581), (159, 67584),  
(161, 67590), (165, 67599),

Gene: Lidong\_49 Start: 47793, Stop: 47290, Start Num: 75

Candidate Starts for Lidong\_49:

(Start: 62 @47838 has 1 MA's), (67, 47820), (Start: 75 @47793 has 63 MA's), (Start: 91 @47733 has  
10 MA's), (173, 47442), (184, 47388),

Gene: Linetti\_52 Start: 48032, Stop: 47523, Start Num: 75

Candidate Starts for Linetti\_52:

(Start: 75 @48032 has 63 MA's), (82, 47996), (192, 47582),

Gene: Lizzo\_50 Start: 47103, Stop: 46582, Start Num: 75

Candidate Starts for Lizzo\_50:

(Start: 75 @47103 has 63 MA's), (82, 47067), (192, 46641),

Gene: Llemily\_56 Start: 41881, Stop: 41492, Start Num: 92

Candidate Starts for Llemily\_56:

(Start: 91 @41884 has 10 MA's), (Start: 92 @41881 has 24 MA's), (108, 41842), (138, 41719), (152,  
41674), (198, 41500),

Gene: Lonelysoil\_55 Start: 42037, Stop: 41648, Start Num: 92

Candidate Starts for Lonelysoil\_55:

(Start: 78 @42088 has 1 MA's), (Start: 91 @42040 has 10 MA's), (Start: 92 @42037 has 24 MA's),  
(108, 41998), (120, 41956), (138, 41875), (152, 41830), (198, 41656),

Gene: Luker\_50 Start: 48011, Stop: 47508, Start Num: 75

Candidate Starts for Luker\_50:

(Start: 62 @48056 has 1 MA's), (67, 48038), (Start: 75 @48011 has 63 MA's), (Start: 91 @47951 has  
10 MA's), (173, 47660), (184, 47606),

Gene: MacGully\_24 Start: 10356, Stop: 10865, Start Num: 77

Candidate Starts for MacGully\_24:

(6, 9750), (30, 10098), (33, 10137), (Start: 77 @10356 has 19 MA's), (135, 10551), (162, 10677), (172,  
10704), (186, 10785), (194, 10815),

Gene: Madruga\_101 Start: 64424, Stop: 64888, Start Num: 80

Candidate Starts for Madruga\_101:

(Start: 80 @64424 has 14 MA's), (170, 64730), (175, 64760), (176, 64769), (181, 64790), (185, 64802), (190, 64814), (191, 64817),

Gene: Marietta\_20 Start: 8429, Stop: 8887, Start Num: 71

Candidate Starts for Marietta\_20:

(21, 8075), (Start: 71 @8429 has 9 MA's), (85, 8477), (Start: 91 @8495 has 10 MA's), (100, 8510), (110, 8543), (114, 8561), (129, 8618), (198, 8879),

Gene: Maselop\_21 Start: 10882, Stop: 11397, Start Num: 77

Candidate Starts for Maselop\_21:

(2, 10120), (14, 10372), (30, 10588), (59, 10831), (Start: 77 @10882 has 19 MA's), (89, 10927), (97, 10945), (110, 10981), (135, 11077), (164, 11212), (177, 11275), (192, 11335),

Gene: Mashley\_56 Start: 42624, Stop: 42232, Start Num: 92

Candidate Starts for Mashley\_56:

(39, 42828), (72, 42693), (Start: 91 @42627 has 10 MA's), (Start: 92 @42624 has 24 MA's), (108, 42582), (120, 42540), (138, 42459), (152, 42414), (198, 42240),

Gene: Mentos\_61 Start: 43855, Stop: 43466, Start Num: 92

Candidate Starts for Mentos\_61:

(21, 44245), (23, 44242), (41, 44011), (55, 43951), (57, 43948), (73, 43918), (Start: 91 @43858 has 10 MA's), (Start: 92 @43855 has 24 MA's), (138, 43693), (195, 43513), (198, 43474),

Gene: Mila11\_60 Start: 44086, Stop: 43688, Start Num: 91

Candidate Starts for Mila11\_60:

(72, 44152), (Start: 91 @44086 has 10 MA's), (Start: 92 @44083 has 24 MA's), (138, 43921), (195, 43735), (198, 43696), (199, 43693),

Gene: Minos\_50 Start: 47535, Stop: 47032, Start Num: 75

Candidate Starts for Minos\_50:

(Start: 62 @47580 has 1 MA's), (67, 47562), (Start: 75 @47535 has 63 MA's), (Start: 91 @47475 has 10 MA's), (173, 47184), (184, 47130),

Gene: Monty\_49 Start: 46253, Stop: 45732, Start Num: 75

Candidate Starts for Monty\_49:

(Start: 75 @46253 has 63 MA's), (82, 46217), (192, 45791),

Gene: MorillMayhem\_58 Start: 42963, Stop: 42565, Start Num: 91

Candidate Starts for MorillMayhem\_58:

(72, 43029), (Start: 91 @42963 has 10 MA's), (Start: 92 @42960 has 24 MA's), (138, 42798), (195, 42612), (198, 42573), (199, 42570),

Gene: MrMiyagi\_81 Start: 51354, Stop: 51842, Start Num: 80

Candidate Starts for MrMiyagi\_81:

(76, 51333), (Start: 80 @51354 has 14 MA's), (86, 51372), (112, 51447), (123, 51495), (130, 51525), (137, 51558), (155, 51654), (156, 51657), (160, 51660), (175, 51714), (179, 51735),

Gene: MrWormie\_49 Start: 46696, Stop: 46193, Start Num: 75

Candidate Starts for MrWormie\_49:

(Start: 62 @46741 has 1 MA's), (67, 46723), (Start: 75 @46696 has 63 MA's), (Start: 91 @46636 has 10 MA's), (173, 46345), (184, 46291),

Gene: Msay19\_55 Start: 48726, Stop: 48205, Start Num: 75

Candidate Starts for Msay19\_55:

(Start: 75 @48726 has 63 MA's), (82, 48690), (190, 48276),

Gene: NadineRae\_18 Start: 7679, Stop: 8137, Start Num: 71

Candidate Starts for NadineRae\_18:

(21, 7325), (Start: 71 @7679 has 9 MA's), (85, 7727), (Start: 91 @7745 has 10 MA's), (100, 7760), (110, 7793), (114, 7811), (129, 7868), (134, 7886), (176, 8009), (198, 8129),

Gene: Namago\_57 Start: 42027, Stop: 41638, Start Num: 92

Candidate Starts for Namago\_57:

(Start: 78 @42078 has 1 MA's), (Start: 91 @42030 has 10 MA's), (Start: 92 @42027 has 24 MA's), (108, 41988), (120, 41946), (138, 41865), (152, 41820), (198, 41646), (199, 41643),

Gene: Neoevie\_49 Start: 47797, Stop: 47294, Start Num: 75

Candidate Starts for Neoevie\_49:

(Start: 62 @47842 has 1 MA's), (67, 47824), (Start: 75 @47797 has 63 MA's), (Start: 91 @47737 has 10 MA's), (173, 47446), (184, 47392),

Gene: Newt\_50 Start: 48025, Stop: 47522, Start Num: 75

Candidate Starts for Newt\_50:

(Start: 62 @48070 has 1 MA's), (67, 48052), (Start: 75 @48025 has 63 MA's), (Start: 91 @47965 has 10 MA's), (173, 47674), (184, 47620),

Gene: Niagara\_45 Start: 47216, Stop: 46722, Start Num: 77

Candidate Starts for Niagara\_45:

(Start: 77 @47216 has 19 MA's), (Start: 80 @47201 has 14 MA's), (87, 47174), (167, 46895), (169, 46886), (176, 46844), (178, 46838),

Gene: NidoQ\_45 Start: 31660, Stop: 32259, Start Num: 65

Candidate Starts for NidoQ\_45:

(8, 31066), (12, 31138), (28, 31390), (32, 31423), (34, 31468), (45, 31597), (Start: 65 @31660 has 1 MA's), (118, 31843), (134, 31912), (163, 32080), (186, 32182), (194, 32212),

Gene: Nikan\_80 Start: 49613, Stop: 49059, Start Num: 61

Candidate Starts for Nikan\_80:

(46, 49658), (Start: 61 @49613 has 2 MA's), (115, 49439), (121, 49424), (129, 49397), (135, 49370), (144, 49301),

Gene: Nike\_59 Start: 43351, Stop: 42950, Start Num: 91

Candidate Starts for Nike\_59:

(Start: 91 @43351 has 10 MA's), (Start: 92 @43348 has 24 MA's), (98, 43336), (120, 43264), (138, 43183), (176, 43069), (198, 42958),

Gene: Nimi13\_49 Start: 47544, Stop: 47041, Start Num: 75

Candidate Starts for Nimi13\_49:

(Start: 62 @47589 has 1 MA's), (67, 47571), (Start: 75 @47544 has 63 MA's), (Start: 91 @47484 has 10 MA's), (173, 47193), (184, 47139),

Gene: Ollypop\_78 Start: 50399, Stop: 49848, Start Num: 61

Candidate Starts for Ollypop\_78:

(Start: 61 @50399 has 2 MA's), (135, 50156), (138, 50135), (144, 50087), (147, 50072), (168, 50021), (188, 49934),

Gene: Onyinye\_105 Start: 67128, Stop: 67658, Start Num: 80

Candidate Starts for Onyinye\_105:

(Start: 80 @67128 has 14 MA's), (88, 67155), (104, 67194), (110, 67215), (116, 67236), (130, 67287), (131, 67296), (134, 67305), (135, 67308), (137, 67320), (142, 67359), (143, 67362), (150, 67428), (151, 67431), (156, 67443), (157, 67446), (158, 67458), (159, 67461), (161, 67467), (165, 67479),

Gene: Orchid\_48 Start: 45154, Stop: 44732, Start Num: 80

Candidate Starts for Orchid\_48:

(Start: 80 @45154 has 14 MA's), (Start: 91 @45118 has 10 MA's), (107, 45079), (109, 45073), (113, 45058), (135, 44968), (192, 44794),

Gene: Patience\_103 Start: 65328, Stop: 65792, Start Num: 80

Candidate Starts for Patience\_103:

(Start: 80 @65328 has 14 MA's), (170, 65634), (175, 65664), (176, 65673), (181, 65694), (185, 65706), (190, 65718), (191, 65721),

Gene: PatrickStar\_49 Start: 45153, Stop: 44731, Start Num: 80

Candidate Starts for PatrickStar\_49:

(Start: 80 @45153 has 14 MA's), (Start: 91 @45117 has 10 MA's), (107, 45078), (109, 45072), (113, 45057), (135, 44967), (192, 44793),

Gene: PauloDiaboli\_140 Start: 86201, Stop: 86590, Start Num: 99

Candidate Starts for PauloDiaboli\_140:

(84, 86165), (93, 86189), (Start: 95 @86192 has 2 MA's), (Start: 99 @86201 has 5 MA's), (126, 86300),

Gene: Pemberton\_21 Start: 8397, Stop: 8855, Start Num: 71

Candidate Starts for Pemberton\_21:

(21, 8043), (Start: 71 @8397 has 9 MA's), (85, 8445), (Start: 91 @8463 has 10 MA's), (100, 8478), (110, 8511), (129, 8586), (176, 8727),

Gene: Phabia\_56 Start: 42299, Stop: 41907, Start Num: 91

Candidate Starts for Phabia\_56:

(Start: 91 @42299 has 10 MA's), (Start: 92 @42296 has 24 MA's), (108, 42257), (138, 42134), (152, 42089), (198, 41915),

Gene: Philon9\_47 Start: 48247, Stop: 47753, Start Num: 77

Candidate Starts for Philon9\_47:

(Start: 77 @48247 has 19 MA's), (94, 48193), (111, 48139), (137, 48037), (169, 47917),

Gene: PierreThree\_51 Start: 47781, Stop: 47260, Start Num: 75

Candidate Starts for PierreThree\_51:

(Start: 75 @47781 has 63 MA's), (82, 47745), (146, 47487), (192, 47319),

Gene: Pleakley\_26 Start: 10464, Stop: 10973, Start Num: 49

Candidate Starts for Pleakley\_26:

(Start: 49 @10464 has 2 MA's), (Start: 91 @10581 has 10 MA's), (100, 10596), (133, 10719), (136, 10728), (176, 10845), (179, 10857),

Gene: PokyPuppy\_50 Start: 47715, Stop: 47209, Start Num: 75

Candidate Starts for PokyPuppy\_50:

(Start: 75 @47715 has 63 MA's), (82, 47679), (111, 47595), (192, 47268), (194, 47256),

Gene: Poland\_55 Start: 48705, Stop: 48184, Start Num: 75

Candidate Starts for Poland\_55:

(Start: 75 @48705 has 63 MA's), (82, 48669), (190, 48255),

Gene: Polyyuki\_21 Start: 10892, Stop: 11374, Start Num: 77

Candidate Starts for Polyyuki\_21:

(2, 10130), (14, 10382), (30, 10598), (59, 10841), (Start: 77 @10892 has 19 MA's), (89, 10937), (97, 10955), (110, 10991), (135, 11087), (141, 11132), (169, 11207), (177, 11252), (192, 11312),

Gene: Pumpernickel\_133 Start: 86998, Stop: 87462, Start Num: 99

Candidate Starts for Pumpernickel\_133:

(83, 86962), (Start: 99 @86998 has 5 MA's),

Gene: Quammi\_54 Start: 41996, Stop: 41607, Start Num: 92

Candidate Starts for Quammi\_54:

(Start: 91 @41999 has 10 MA's), (Start: 92 @41996 has 24 MA's), (108, 41957), (138, 41834), (152, 41789), (198, 41615),

Gene: Raqqa\_87 Start: 48508, Stop: 49080, Start Num: 69

Candidate Starts for Raqqa\_87:

(Start: 69 @48508 has 3 MA's), (119, 48667), (121, 48670), (138, 48745), (144, 48793),

Gene: RemRem\_51 Start: 46243, Stop: 45722, Start Num: 75

Candidate Starts for RemRem\_51:

(Start: 75 @46243 has 63 MA's), (82, 46207), (192, 45781),

Gene: Rizwana\_63 Start: 46128, Stop: 45559, Start Num: 52

Candidate Starts for Rizwana\_63:

(Start: 52 @46128 has 3 MA's), (102, 46002), (107, 45984), (121, 45939), (128, 45918), (175, 45690), (177, 45678),

Gene: RobinSparkles\_52 Start: 45706, Stop: 45284, Start Num: 80

Candidate Starts for RobinSparkles\_52:

(Start: 80 @45706 has 14 MA's), (Start: 91 @45670 has 10 MA's), (107, 45631), (109, 45625), (113, 45610), (135, 45520), (192, 45346),

Gene: Rowlf\_53 Start: 41900, Stop: 41508, Start Num: 92

Candidate Starts for Rowlf\_53:

(72, 41969), (Start: 91 @41903 has 10 MA's), (Start: 92 @41900 has 24 MA's), (108, 41858), (138, 41735), (195, 41555), (198, 41516),

Gene: RoyalG\_51 Start: 47075, Stop: 46554, Start Num: 75

Candidate Starts for RoyalG\_51:

(Start: 75 @47075 has 63 MA's), (82, 47039), (184, 46652), (189, 46637), (194, 46601),

Gene: Rudy\_54 Start: 42035, Stop: 41643, Start Num: 91

Candidate Starts for Rudy\_54:

(Start: 91 @42035 has 10 MA's), (Start: 92 @42032 has 24 MA's), (108, 41993), (138, 41870), (152, 41825), (198, 41651),

Gene: SallyK\_58 Start: 43182, Stop: 42760, Start Num: 91

Candidate Starts for SallyK\_58:

(Start: 91 @43182 has 10 MA's), (Start: 92 @43179 has 24 MA's), (108, 43137), (120, 43095), (138, 43014), (170, 42918), (198, 42768),

Gene: Sam12\_50 Start: 46243, Stop: 45722, Start Num: 75

Candidate Starts for Sam12\_50:

(Start: 75 @46243 has 63 MA's), (82, 46207), (192, 45781),

Gene: Scuba\_26 Start: 10550, Stop: 11059, Start Num: 49

Candidate Starts for Scuba\_26:

(Start: 49 @10550 has 2 MA's), (Start: 91 @10667 has 10 MA's), (100, 10682), (101, 10685), (133, 10805), (136, 10814), (176, 10931), (179, 10943), (181, 10952),

Gene: Shelley\_49 Start: 47020, Stop: 46517, Start Num: 75

Candidate Starts for Shelley\_49:

(Start: 62 @47065 has 1 MA's), (67, 47047), (Start: 75 @47020 has 63 MA's), (Start: 91 @46960 has 10 MA's), (173, 46669), (184, 46615),

Gene: Sillytadpoles\_57 Start: 41869, Stop: 41480, Start Num: 92

Candidate Starts for Sillytadpoles\_57:

(Start: 91 @41872 has 10 MA's), (Start: 92 @41869 has 24 MA's), (108, 41830), (138, 41707), (152, 41662), (198, 41488),

Gene: SlySloth\_59 Start: 42544, Stop: 42152, Start Num: 92

Candidate Starts for SlySloth\_59:

(Start: 91 @42547 has 10 MA's), (Start: 92 @42544 has 24 MA's), (108, 42502), (120, 42460), (138, 42379), (152, 42334), (198, 42160),

Gene: Sombrero\_51 Start: 46616, Stop: 46095, Start Num: 75

Candidate Starts for Sombrero\_51:

(Start: 75 @46616 has 63 MA's), (82, 46580), (190, 46166),

Gene: Squash\_61 Start: 43540, Stop: 43148, Start Num: 92

Candidate Starts for Squash\_61:

(72, 43609), (Start: 91 @43543 has 10 MA's), (Start: 92 @43540 has 24 MA's), (108, 43498), (120, 43456), (138, 43375), (152, 43330),

Gene: Squibbles\_50 Start: 47106, Stop: 46585, Start Num: 75

Candidate Starts for Squibbles\_50:

(Start: 75 @47106 has 63 MA's), (192, 46644),

Gene: Statler\_58 Start: 42622, Stop: 42227, Start Num: 91

Candidate Starts for Statler\_58:

(72, 42688), (Start: 91 @42622 has 10 MA's), (Start: 92 @42619 has 24 MA's), (108, 42577), (120, 42535), (138, 42454), (152, 42409), (198, 42235),

Gene: SteveFrench\_50 Start: 47315, Stop: 46794, Start Num: 75

Candidate Starts for SteveFrench\_50:

(Start: 75 @47315 has 63 MA's), (82, 47279), (184, 46892), (189, 46877), (194, 46841),

Gene: Sticker17\_49 Start: 47535, Stop: 47032, Start Num: 75

Candidate Starts for Sticker17\_49:

(Start: 62 @47580 has 1 MA's), (67, 47562), (Start: 75 @47535 has 63 MA's), (Start: 91 @47475 has 10 MA's), (173, 47184), (184, 47130),

Gene: StrawberryJamm\_60 Start: 42333, Stop: 41941, Start Num: 92

Candidate Starts for StrawberryJamm\_60:

(Start: 91 @42336 has 10 MA's), (Start: 92 @42333 has 24 MA's), (108, 42291), (120, 42249), (138, 42168), (152, 42123), (198, 41949), (199, 41946),

Gene: Sukkupi\_20 Start: 8477, Stop: 8935, Start Num: 71

Candidate Starts for Sukkupi\_20:

(4, 7778), (21, 8123), (Start: 71 @8477 has 9 MA's), (85, 8525), (Start: 91 @8543 has 10 MA's), (100, 8558), (110, 8591), (129, 8666), (132, 8678), (176, 8807),

Gene: SuperSonics\_109 Start: 64383, Stop: 64847, Start Num: 80

Candidate Starts for SuperSonics\_109:

(Start: 80 @64383 has 14 MA's), (170, 64689), (175, 64719), (176, 64728), (181, 64749), (190, 64773), (191, 64776),

Gene: Tank\_63 Start: 46124, Stop: 45591, Start Num: 52

Candidate Starts for Tank\_63:

(Start: 52 @46124 has 3 MA's), (175, 45722), (185, 45680),

Gene: Teal\_49 Start: 48002, Stop: 47499, Start Num: 75

Candidate Starts for Teal\_49:

(Start: 62 @48047 has 1 MA's), (67, 48029), (Start: 75 @48002 has 63 MA's), (Start: 91 @47942 has 10 MA's), (173, 47651), (184, 47597),

Gene: Teatealatte\_46 Start: 47140, Stop: 46646, Start Num: 77

Candidate Starts for Teatealatte\_46:

(Start: 77 @47140 has 19 MA's), (Start: 80 @47125 has 14 MA's), (87, 47098), (167, 46819), (169, 46810), (176, 46768), (178, 46762),

Gene: Teech\_46 Start: 46941, Stop: 46447, Start Num: 77

Candidate Starts for Teech\_46:

(Start: 77 @46941 has 19 MA's), (Start: 80 @46926 has 14 MA's), (87, 46899), (167, 46620), (169, 46611), (176, 46569), (178, 46563),

Gene: Teehee\_57 Start: 43102, Stop: 42713, Start Num: 92

Candidate Starts for Teehee\_57:

(Start: 91 @43105 has 10 MA's), (Start: 92 @43102 has 24 MA's), (108, 43063), (138, 42940), (152, 42895), (198, 42721),

Gene: ThayneTheZag\_92 Start: 49112, Stop: 49648, Start Num: 69

Candidate Starts for ThayneTheZag\_92:

(25, 48812), (Start: 69 @49112 has 3 MA's), (127, 49262), (137, 49307), (138, 49316), (144, 49364), (171, 49487), (174, 49511),

Gene: Tissue\_58 Start: 42946, Stop: 42539, Start Num: 92

Candidate Starts for Tissue\_58:

(21, 43333), (23, 43330), (41, 43102), (55, 43042), (57, 43039), (73, 43009), (Start: 91 @42949 has 10 MA's), (Start: 92 @42946 has 24 MA's), (138, 42784), (198, 42547), (199, 42544),

Gene: Tredge\_46 Start: 47140, Stop: 46646, Start Num: 77

Candidate Starts for Tredge\_46:

(Start: 77 @47140 has 19 MA's), (Start: 80 @47125 has 14 MA's), (87, 47098), (167, 46819), (169, 46810), (176, 46768), (178, 46762),

Gene: Viceroy\_55 Start: 42002, Stop: 41613, Start Num: 92

Candidate Starts for Viceroy\_55:

(Start: 91 @42005 has 10 MA's), (Start: 92 @42002 has 24 MA's), (108, 41963), (138, 41840), (152, 41795), (198, 41621),

Gene: Vitaenoi\_47 Start: 48246, Stop: 47752, Start Num: 77

Candidate Starts for Vitaenoi\_47:

(Start: 77 @48246 has 19 MA's), (94, 48192), (111, 48138), (137, 48036), (169, 47916),

Gene: Wayne3\_58 Start: 42865, Stop: 42476, Start Num: 92

Candidate Starts for Wayne3\_58:

(Start: 91 @42868 has 10 MA's), (Start: 92 @42865 has 24 MA's), (108, 42826), (138, 42703), (152, 42658), (198, 42484),

Gene: WheelerS25\_64 Start: 44030, Stop: 43635, Start Num: 91

Candidate Starts for WheelerS25\_64:

(Start: 91 @44030 has 10 MA's), (Start: 92 @44027 has 24 MA's), (108, 43985), (138, 43862), (195, 43682), (198, 43643),

Gene: Wheelie\_56 Start: 42186, Stop: 41797, Start Num: 92

Candidate Starts for Wheelie\_56:

(Start: 91 @42189 has 10 MA's), (Start: 92 @42186 has 24 MA's), (108, 42147), (138, 42024), (152, 41979), (198, 41805),

Gene: WhoseManz\_20 Start: 8040, Stop: 8498, Start Num: 71

Candidate Starts for WhoseManz\_20:

(21, 7686), (Start: 71 @8040 has 9 MA's), (85, 8088), (Start: 91 @8106 has 10 MA's), (100, 8121), (110, 8154), (114, 8172), (129, 8229), (198, 8490),

Gene: Wilde\_65 Start: 46423, Stop: 45890, Start Num: 52

Candidate Starts for Wilde\_65:

(Start: 52 @46423 has 3 MA's), (175, 46021), (185, 45979),

Gene: Woes\_49 Start: 48053, Stop: 47550, Start Num: 75

Candidate Starts for Woes\_49:

(Start: 62 @48098 has 1 MA's), (67, 48080), (Start: 75 @48053 has 63 MA's), (Start: 91 @47993 has 10 MA's), (173, 47702), (184, 47648),

Gene: Wollypog\_81 Start: 56236, Stop: 56814, Start Num: 64

Candidate Starts for Wollypog\_81:

(50, 56194), (56, 56209), (Start: 64 @56236 has 1 MA's), (Start: 78 @56284 has 1 MA's), (79, 56296), (Start: 99 @56350 has 5 MA's), (132, 56476), (136, 56488), (148, 56560), (159, 56605), (174, 56668), (175, 56674), (192, 56752), (197, 56791),

Gene: Worcestershire\_51 Start: 46245, Stop: 45724, Start Num: 75

Candidate Starts for Worcestershire\_51:

(Start: 75 @46245 has 63 MA's), (82, 46209), (111, 46125), (192, 45783),

Gene: Yndexa\_20 Start: 8477, Stop: 8935, Start Num: 71

Candidate Starts for Yndexa\_20:

(4, 7778), (21, 8123), (Start: 71 @8477 has 9 MA's), (85, 8525), (Start: 91 @8543 has 10 MA's), (100, 8558), (110, 8591), (129, 8666), (132, 8678), (176, 8807),

Gene: Zagie\_57 Start: 42527, Stop: 42138, Start Num: 92

Candidate Starts for Zagie\_57:

(Start: 78 @42578 has 1 MA's), (Start: 91 @42530 has 10 MA's), (Start: 92 @42527 has 24 MA's), (108, 42488), (120, 42446), (138, 42365), (152, 42320), (198, 42146),

Gene: Zhafia\_59 Start: 42666, Stop: 42277, Start Num: 92

Candidate Starts for Zhafia\_59:

(Start: 91 @42669 has 10 MA's), (Start: 92 @42666 has 24 MA's), (108, 42627), (138, 42504), (152, 42459), (198, 42285),

Gene: Zooman\_120 Start: 82979, Stop: 83374, Start Num: 99

Candidate Starts for Zooman\_120:

(83, 82943), (Start: 99 @82979 has 5 MA's), (108, 83009), (145, 83171), (183, 83261),

Gene: Zucker\_85 Start: 49487, Stop: 49963, Start Num: 69

Candidate Starts for Zucker\_85:

(25, 49187), (Start: 69 @49487 has 3 MA's), (137, 49670), (138, 49679), (185, 49874),