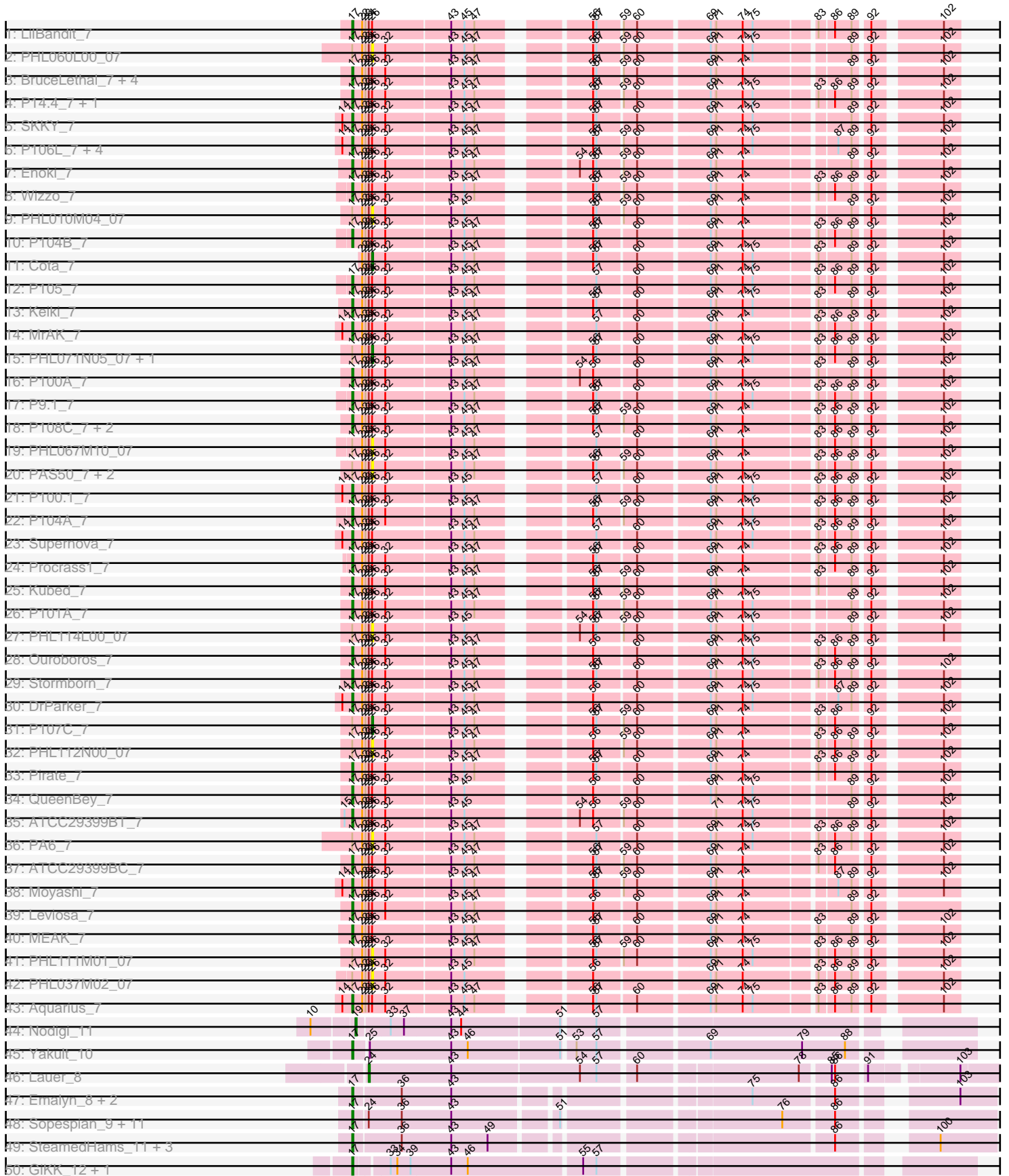
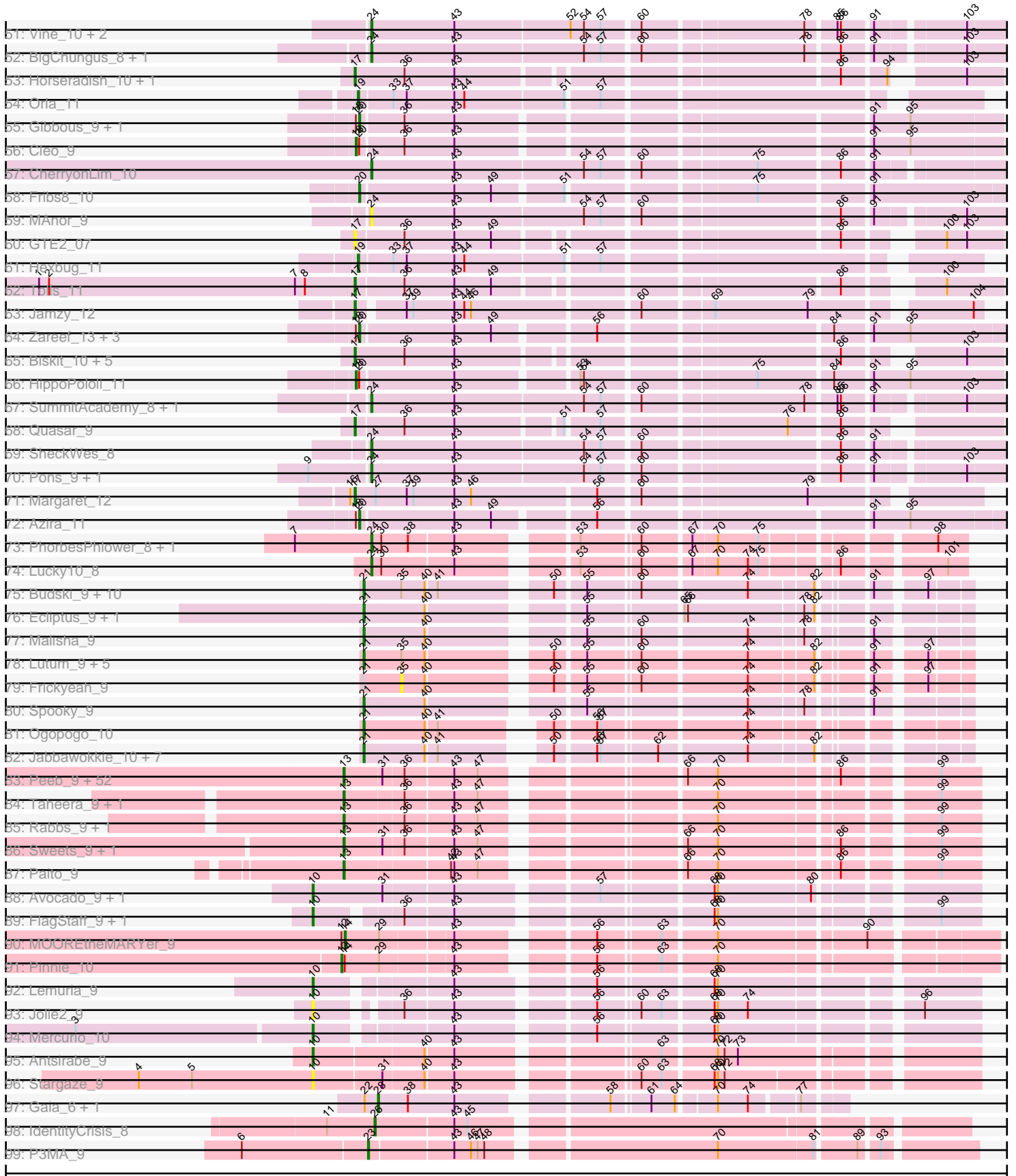


Pham 171184



Pham 171184



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 171184 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171184 has 227 members, 32 are drafts.

Phages represented in each track:

- Track 1 : LilBandit\_7
- Track 2 : PHL060L00\_07
- Track 3 : BruceLethal\_7, Rileysaurus\_7, Enochoraptor\_7, Lauchelly\_7, P1.1\_7
- Track 4 : P14.4\_7, Attacne\_7
- Track 5 : SKKY\_7
- Track 6 : P106L\_7, P106I\_7, P106M\_7, P106C\_7, P106A\_7
- Track 7 : Enoki\_7
- Track 8 : Wizzo\_7
- Track 9 : PHL010M04\_07
- Track 10 : P104B\_7
- Track 11 : Cota\_7
- Track 12 : P105\_7
- Track 13 : Keiki\_7
- Track 14 : MrAK\_7
- Track 15 : PHL071N05\_07, P107A\_7
- Track 16 : P100A\_7
- Track 17 : P9.1\_7
- Track 18 : P108C\_7, Solid\_7, P100D\_7
- Track 19 : PHL067M10\_07
- Track 20 : PAS50\_7, PAD20\_7, PHL113M01\_07
- Track 21 : P100.1\_7
- Track 22 : P104A\_7
- Track 23 : Supernova\_7
- Track 24 : Procrass1\_7
- Track 25 : Kubed\_7
- Track 26 : P101A\_7
- Track 27 : PHL114L00\_07
- Track 28 : Ouroboros\_7
- Track 29 : Stormborn\_7
- Track 30 : DrParker\_7
- Track 31 : P107C\_7
- Track 32 : PHL112N00\_07
- Track 33 : Pirate\_7
- Track 34 : QueenBey\_7
- Track 35 : ATCC29399BT\_7
- Track 36 : PA6\_7
- Track 37 : ATCC29399BC\_7

- Track 38 : Moyashi\_7
- Track 39 : Leviosa\_7
- Track 40 : MEAK\_7
- Track 41 : PHL111M01\_07
- Track 42 : PHL037M02\_07
- Track 43 : Aquarius\_7
- Track 44 : Nodigi\_11
- Track 45 : Yakult\_10
- Track 46 : Lauer\_8
- Track 47 : Emalyn\_8, Amok\_8, AikoCarson\_8
- Track 48 : Sopespian\_9, Elliott\_9, Nina\_10, Cozz\_9, Agatha\_9, GoldHunter\_10, MunkgeeRoachy\_10, Typhonmarchy\_10, RedBaron\_10, PsychoKiller\_9, Burnsey\_9, Axym\_9
- Track 49 : SteamedHams\_11, AndPeggy\_8, BillDoor\_11, Yarn\_8
- Track 50 : GiKK\_12, Button\_10
- Track 51 : Vine\_10, Elinal\_10, KayGee\_8
- Track 52 : BigChungus\_8, Feastonyeet\_8
- Track 53 : Horseradish\_10, Yummy\_10
- Track 54 : Orla\_11
- Track 55 : Gibbous\_9, Dre3\_9
- Track 56 : Cleo\_9
- Track 57 : CherryonLim\_10
- Track 58 : Fribs8\_10
- Track 59 : MAnor\_9
- Track 60 : GTE2\_07
- Track 61 : Hexbug\_11
- Track 62 : Tolls\_11
- Track 63 : Jamzy\_12
- Track 64 : Zareef\_13, Survivors\_11, Nibbles\_11, MaVan\_11
- Track 65 : Biskit\_10, SweatNTears\_11, Troje\_9, SketchMex\_8, Buttrmlkdreams\_9, MScarn\_11
- Track 66 : HippoPololi\_11
- Track 67 : SummitAcademy\_8, PotPie\_9
- Track 68 : Quasar\_9
- Track 69 : SheckWes\_8
- Track 70 : Pons\_9, Mayweather\_10
- Track 71 : Margaret\_12
- Track 72 : Azira\_11
- Track 73 : PhorbesPhlower\_8, Morkie\_8
- Track 74 : Lucky10\_8
- Track 75 : Budski\_9, CheeseTouch\_9, Getalong\_9, Kamaru\_9, Holliday\_9, Periwinkle\_9, Phistory\_9, Whitney\_9, Phabuloso\_9, Squiddly\_10, LitninMcQueen\_9
- Track 76 : Ecliptus\_9, ODay\_9
- Track 77 : Malisha\_9
- Track 78 : Lutum\_9, Horus\_9, BENtherdunthat\_9, Asapag\_9, Kenna\_9, Leroy\_9
- Track 79 : Frickyeah\_9
- Track 80 : Spooky\_9
- Track 81 : Ogopogo\_10
- Track 82 : Jabbawokkie\_10, Che9d\_9, Soul22\_9, Yoshi\_9, Avani\_9, Zapner\_10, Blarby\_10, Demsculpinboyz\_9
- Track 83 : Peeb\_9, Gomashi\_9, Hotshotbaby7\_9, OctaviousRex\_9, Jane\_9, Angel\_9, ShaboiShabazz\_9, Sizemore\_9, Cherrybomb426\_9, Crespo\_9, Darionha\_9, Aroostook\_9, Marmie\_9, Camri\_9, Gideon\_9, Mowgli\_9, LouisV14\_9, Coleslaw\_9,

JorRay\_9, ECartman\_9, Hope\_9, BruceB\_9, Barkley26\_9, Phreak\_9, Jolene\_9, Schiebel\_9, GoldenAsh\_9, Avrafan\_9, Phish\_9, TomBrady\_9, Grizzly\_9, Zombie\_9, CLED96\_9, BPs\_9, Jonghyun\_9, Liefie\_9, ZoMa\_9, Frosty24\_9, Annihilator\_9, DNAll\_009, PinkYoshi\_9, Renaissance\_9, Kasen3\_9, Kareem\_9, Remy19\_9, Cedasite\_9, Plagueis\_9, Chance64\_9, Periodt\_9, CassieYates\_9, Olga\_9, DMoney\_9, BQuat\_9

- Track 84 : Taheera\_9, Terror\_9
- Track 85 : Rabbs\_9, Sneeze\_9
- Track 86 : Sweets\_9, Halo\_9
- Track 87 : Paito\_9
- Track 88 : Avocado\_9, Cambiare\_10
- Track 89 : FlagStaff\_9, Pace1224\_9
- Track 90 : MOOREtheMARYer\_9
- Track 91 : Pinnie\_10
- Track 92 : Lemuria\_9
- Track 93 : Jolie2\_9
- Track 94 : Mercurio\_10
- Track 95 : Antsirabe\_9
- Track 96 : Stargaze\_9
- Track 97 : Gaia\_6, Nebkiss\_6
- Track 98 : IdentityCrisis\_8
- Track 99 : P3MA\_9

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

The start number called the most often in the published annotations is 17, it was called in 67 of the 195 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• ATCC29399BC\_7, ATCC29399BT\_7, Agatha\_9, AikoCarson\_8, Amok\_8, AndPeggy\_8, Aquarius\_7, Attacne\_7, Axym\_9, BillDoor\_11, Biskit\_10, BruceLethal\_7, Burnsey\_9, Button\_10, Buttrmlkdreams\_9, Cozz\_9, DrParker\_7, Elliott\_9, Emalyn\_8, Enochoraptor\_7, Enoki\_7, GTE2\_07, GiKK\_12, GoldHunter\_10, Horseradish\_10, Jamzy\_12, Keiki\_7, Kubed\_7, Lauchelly\_7, Leviosa\_7, LilBandit\_7, MEAK\_7, MScarn\_11, Margaret\_12, Moyashi\_7, MrAK\_7, MunkgeeRoachy\_10, Nina\_10, Ouroboros\_7, P1.1\_7, P100.1\_7, P100A\_7, P100D\_7, P101A\_7, P104A\_7, P104B\_7, P105\_7, P106A\_7, P106C\_7, P106I\_7, P106L\_7, P106M\_7, P108C\_7, P14.4\_7, P9.1\_7, Pirate\_7, Procrass1\_7, PsychoKiller\_9, Quasar\_9, QueenBey\_7, RedBaron\_10, Rileysaurus\_7, SKKY\_7, SketchMex\_8, Solid\_7, Sopespian\_9, SteamedHams\_11, Stormborn\_7, Supernova\_7, SweatNTears\_11, Tolls\_11, Troje\_9, Typhonmarchy\_10, Wizzo\_7, Yakult\_10, Yarn\_8, Yummy\_10,

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

• P107A\_7, P107C\_7, PA6\_7, PAD20\_7, PAS50\_7, PHL010M04\_07, PHL037M02\_07, PHL060L00\_07, PHL067M10\_07, PHL071N05\_07, PHL111M01\_07, PHL112N00\_07, PHL113M01\_07, PHL114L00\_07,

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

• Angel\_9, Annihilator\_9, Antsirabe\_9, Aroostook\_9, Asapag\_9, Avani\_9, Avocado\_9, Avrafan\_9, Azira\_11, BENtherdunthat\_9, BPs\_9, BQuat\_9, Barkley26\_9,

BigChungus\_8, Blarby\_10, BruceB\_9, Budski\_9, CLED96\_9, Cambiare\_10, Camri\_9, CassieYates\_9, Cedasite\_9, Chance64\_9, Che9d\_9, CheeseTouch\_9, Cherrybomb426\_9, CherryonLim\_10, Cleo\_9, Coleslaw\_9, Cota\_7, Crespo\_9, DMoney\_9, DNAIII\_009, Darionha\_9, Demsculpinboyz\_9, Dre3\_9, ECartman\_9, Ecliptus\_9, Elinal\_10, Feastonyeet\_8, FlagStaff\_9, Fribs8\_10, Frickyeah\_9, Frosty24\_9, Gaia\_6, Getalong\_9, Gibbous\_9, Gideon\_9, GoldenAsh\_9, Gomashi\_9, Grizzly\_9, Halo\_9, Hexbug\_11, HippoPololi\_11, Holliday\_9, Hope\_9, Horus\_9, Hotshotbaby7\_9, IdentityCrisis\_8, Jabbawokkie\_10, Jane\_9, Jolene\_9, Jolie2\_9, Jonghyun\_9, JorRay\_9, Kamaru\_9, Kareem\_9, Kasen3\_9, KayGee\_8, Kenna\_9, Lauer\_8, Lemuria\_9, Leroy\_9, Liefie\_9, LitninMcQueen\_9, LouisV14\_9, Lucky10\_8, Lutum\_9, MAnor\_9, MOOREtheMARYer\_9, MaVan\_11, Malisha\_9, Marmie\_9, Mayweather\_10, Mercurio\_10, Morkie\_8, Mowgli\_9, Nebkiss\_6, Nibbles\_11, Nodigi\_11, ODay\_9, OctaviousRex\_9, Ogopogo\_10, Olga\_9, Orla\_11, P3MA\_9, Pace1224\_9, Paito\_9, Peeb\_9, Periodt\_9, Periwinkle\_9, Phabuloso\_9, Phish\_9, Phistory\_9, PhorbessPhlower\_8, Phreak\_9, PinkYoshi\_9, Pinnie\_10, Plagueis\_9, Pons\_9, PotPie\_9, Rabbs\_9, Remy19\_9, Renaissance\_9, Schiebel\_9, ShaboiShabazz\_9, SheckWes\_8, Sizemore\_9, Sneeze\_9, Soul22\_9, Spooky\_9, Squiddly\_10, Stargaze\_9, SummitAcademy\_8, Survivors\_11, Sweets\_9, Taheera\_9, Terror\_9, TomBrady\_9, Vine\_10, Whitney\_9, Yoshi\_9, Zapner\_10, Zareef\_13, ZoMa\_9, Zombie\_9,

### Summary by start number:

#### Start 10:

- Found in 10 of 227 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 6 of 195
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Antsirabe\_9 (G5), Avocado\_9 (G2), Cambiare\_10 (G2), FlagStaff\_9 (G2), Jolie2\_9 (G4), Lemuria\_9 (G4), Mercurio\_10 (G4), Pace1224\_9 (G2), Stargaze\_9 (G5),

#### Start 12:

- Found in 2 of 227 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 195
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Pinnie\_10 (G3),

#### Start 13:

- Found in 60 of 227 ( 26.4% ) of genes in pham
- Manual Annotations of this start: 58 of 195
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angel\_9 (G1), Annihilator\_9 (G1), Aroostook\_9 (G1), Avrafan\_9 (G1), BPs\_9 (G1), BQuat\_9 (G1), Barkley26\_9 (G1), BruceB\_9 (G1), CLED96\_9 (G1), Camri\_9 (G1), CassieYates\_9 (G1), Cedasite\_9 (G1), Chance64\_9 (G1), Cherrybomb426\_9 (G1), Coleslaw\_9 (G1), Crespo\_9 (G1), DMoney\_9 (G1), DNAIII\_009 (G1), Darionha\_9 (G1), ECartman\_9 (G1), Frosty24\_9 (G1), Gideon\_9 (G1), GoldenAsh\_9 (G1), Gomashi\_9 (G1), Grizzly\_9 (G1), Halo\_9 (G1), Hope\_9 (G1), Hotshotbaby7\_9 (G1), Jane\_9 (G1), Jolene\_9 (G1), Jonghyun\_9 (G1), JorRay\_9 (G1), Kareem\_9 (G1), Kasen3\_9 (G1), Liefie\_9 (G1), LouisV14\_9 (G1), Marmie\_9 (G1), Mowgli\_9 (G1), OctaviousRex\_9 (G1), Olga\_9 (G1), Paito\_9 (G1), Peeb\_9 (G1), Periodt\_9 (G1), Phish\_9 (G1), Phreak\_9 (G1), PinkYoshi\_9 (G1), Plagueis\_9 (G1), Rabbs\_9 (G1), Remy19\_9 (G1), Renaissance\_9 (G1), Schiebel\_9 (G1), ShaboiShabazz\_9 (G1), Sizemore\_9 (G1), Sneeze\_9 (G1), Sweets\_9 (G1),

Taheera\_9 (G1), Terror\_9 (G1), TomBrady\_9 (G1), ZoMa\_9 (G1), Zombie\_9 (G1),

Start 14:

- Found in 14 of 227 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 1 of 195
- Called 7.1% of time when present
- Phage (with cluster) where this start called: MOOREtheMARYer\_9 (G3),

Start 17:

- Found in 91 of 227 ( 40.1% ) of genes in pham
- Manual Annotations of this start: 67 of 195
- Called 84.6% of time when present
- Phage (with cluster) where this start called: ATCC29399BC\_7 (BU), ATCC29399BT\_7 (BU), Agatha\_9 (CT), AikoCarson\_8 (CT), Amok\_8 (CT), AndPeggy\_8 (CT), Aquarius\_7 (BU), Attacne\_7 (BU), Axym\_9 (CT), BillDoor\_11 (CT), Biskit\_10 (CT), BruceLethal\_7 (BU), Burnsey\_9 (CT), Button\_10 (CT), Buttrmlkdreams\_9 (CT), Cozz\_9 (CT), DrParker\_7 (BU), Elliott\_9 (CT), Emalyn\_8 (CT), Enochoraptor\_7 (BU), Enoki\_7 (BU), GTE2\_07 (CT), GiKK\_12 (CT), GoldHunter\_10 (CT), Horseradish\_10 (CT), Jamzy\_12 (CT), Keiki\_7 (BU), Kubed\_7 (BU), Lauchelly\_7 (BU), Leviosa\_7 (BU), LilBandit\_7 (BU), MEAK\_7 (BU), MScarn\_11 (CT), Margaret\_12 (CT), Moyashi\_7 (BU), MrAK\_7 (BU), MunkgeeRoachy\_10 (CT), Nina\_10 (CT), Ouroboros\_7 (BU), P1.1\_7 (BU), P100.1\_7 (BU), P100A\_7 (BU), P100D\_7 (BU), P101A\_7 (BU), P104A\_7 (BU), P104B\_7 (BU), P105\_7 (BU), P106A\_7 (BU), P106C\_7 (BU), P106I\_7 (BU), P106L\_7 (BU), P106M\_7 (BU), P108C\_7 (BU), P14.4\_7 (BU), P9.1\_7 (BU), Pirate\_7 (BU), Procrass1\_7 (BU), PsychoKiller\_9 (CT), Quasar\_9 (CT), QueenBey\_7 (BU), RedBaron\_10 (CT), Rileysaurus\_7 (BU), SKKY\_7 (BU), SketchMex\_8 (CT), Solid\_7 (BU), Sopespian\_9 (CT), SteamedHams\_11 (CT), Stormborn\_7 (BU), Supernova\_7 (BU), SweatNTears\_11 (CT), Tolls\_11 (CT), Troje\_9 (CT), Typhonmarchy\_10 (CT), Wizzo\_7 (BU), Yakult\_10 (CT), Yarn\_8 (CT), Yummy\_10 (CT),

Start 18:

- Found in 9 of 227 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 2 of 195
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Cleo\_9 (CT), HippoPololi\_11 (CT),

Start 19:

- Found in 3 of 227 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 3 of 195
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hexbug\_11 (CT), Nodigi\_11 (CT), Orla\_11 (CT),

Start 20:

- Found in 10 of 227 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 7 of 195
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Azira\_11 (CT), Dre3\_9 (CT), Fribs8\_10 (CT), Gibbous\_9 (CT), MaVan\_11 (CT), Nibbles\_11 (CT), Survivors\_11 (CT), Zareef\_13 (CT),

Start 21:

- Found in 31 of 227 ( 13.7% ) of genes in pham
- Manual Annotations of this start: 29 of 195
- Called 96.8% of time when present
- Phage (with cluster) where this start called: Asapag\_9 (DN1), Avani\_9 (F2), BENTherdunthat\_9 (DN1), Blarby\_10 (F), Budski\_9 (DN), Che9d\_9 (F2), CheeseTouch\_9 (DN1), Demsculpinboyz\_9 (F2), Ecliptus\_9 (DN), Getalong\_9 (DN1), Holliday\_9 (DN1), Horus\_9 (DN1), Jabbawokkie\_10 (F2), Kamaru\_9 (DN1), Kenna\_9 (DN1), Leroy\_9 (DN1), LitninMcQueen\_9 (DN1), Lutum\_9 (DN1), Malisha\_9 (DN), ODay\_9 (DN), Ogopogo\_10 (F1), Periwinkle\_9 (DN1), Phabuloso\_9 (DN1), Phistory\_9 (DN1), Soul22\_9 (F2), Spooky\_9 (DN2), Squiddly\_10 (DN2), Whitney\_9 (DN1), Yoshi\_9 (F2), Zapner\_10 (F2),

#### Start 23:

- Found in 58 of 227 ( 25.6% ) of genes in pham
- Manual Annotations of this start: 1 of 195
- Called 1.7% of time when present
- Phage (with cluster) where this start called: P3MA\_9 (singleton),

#### Start 24:

- Found in 85 of 227 ( 37.4% ) of genes in pham
- Manual Annotations of this start: 14 of 195
- Called 18.8% of time when present
- Phage (with cluster) where this start called: BigChungus\_8 (CT), CherryonLim\_10 (CT), Elinal\_10 (CT), Feastonyet\_8 (CT), KayGee\_8 (CT), Lauer\_8 (CT), Lucky10\_8 (DH), MAnor\_9 (CT), Mayweather\_10 (CT), Morkie\_8 (DH), PhorbesPhlower\_8 (DH), Pons\_9 (CT), PotPie\_9 (CT), SheckWes\_8 (CT), SummitAcademy\_8 (CT), Vine\_10 (CT),

#### Start 26:

- Found in 58 of 227 ( 25.6% ) of genes in pham
- Manual Annotations of this start: 4 of 195
- Called 27.6% of time when present
- Phage (with cluster) where this start called: Cota\_7 (BU), IdentityCrisis\_8 (singleton), P107A\_7 (BU), P107C\_7 (BU), PA6\_7 (BU), PAD20\_7 (BU), PAS50\_7 (BU), PHL010M04\_07 (BU), PHL037M02\_07 (BU), PHL060L00\_07 (BU), PHL067M10\_07 (BU), PHL071N05\_07 (BU), PHL111M01\_07 (BU), PHL112N00\_07 (BU), PHL113M01\_07 (BU), PHL114L00\_07 (BU),

#### Start 28:

- Found in 2 of 227 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 195
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia\_6 (X), Nebkiss\_6 (X),

#### Start 35:

- Found in 18 of 227 ( 7.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Frickyeah\_9 (DN1),

### Summary by clusters:



There are 16 clusters represented in this pham: DN, F1, F2, G4, G3, DH, G1, F, G5, BU, DN1, DN2, X, singleton, G2, CT,

Info for manual annotations of cluster BU:

- Start number 17 was manually annotated 40 times for cluster BU.
- Start number 26 was manually annotated 3 times for cluster BU.

Info for manual annotations of cluster CT:

- Start number 17 was manually annotated 27 times for cluster CT.
- Start number 18 was manually annotated 2 times for cluster CT.
- Start number 19 was manually annotated 3 times for cluster CT.
- Start number 20 was manually annotated 7 times for cluster CT.
- Start number 24 was manually annotated 11 times for cluster CT.

Info for manual annotations of cluster DH:

- Start number 24 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 21 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 21 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 21 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster F1:

- Start number 21 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 21 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster G1:

- Start number 13 was manually annotated 58 times for cluster G1.

Info for manual annotations of cluster G2:

- Start number 10 was manually annotated 3 times for cluster G2.

Info for manual annotations of cluster G3:

- Start number 12 was manually annotated 1 time for cluster G3.
- Start number 14 was manually annotated 1 time for cluster G3.

Info for manual annotations of cluster G4:

- Start number 10 was manually annotated 2 times for cluster G4.

Info for manual annotations of cluster G5:

- Start number 10 was manually annotated 1 time for cluster G5.

Info for manual annotations of cluster X:

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

**Gene Information:**

Gene: ATCC29399BC\_7 Start: 5617, Stop: 6096, Start Num: 17

Candidate Starts for ATCC29399BC\_7:

(Start: 17 @5617 has 67 MA's), (22, 5626), (Start: 23 @5629 has 1 MA's), (Start: 24 @5632 has 14 MA's), (Start: 26 @5635 has 4 MA's), (32, 5647), (43, 5704), (45, 5716), (47, 5725), (56, 5806), (57, 5809), (59, 5830), (60, 5842), (69, 5902), (71, 5905), (74, 5929), (83, 5989), (86, 6001), (92, 6028), (102, 6082),

Gene: ATCC29399BT\_7 Start: 5613, Stop: 6092, Start Num: 17

Candidate Starts for ATCC29399BT\_7:

(15, 5607), (Start: 17 @5613 has 67 MA's), (22, 5622), (Start: 23 @5625 has 1 MA's), (Start: 24 @5628 has 14 MA's), (Start: 26 @5631 has 4 MA's), (32, 5643), (43, 5700), (45, 5712), (54, 5790), (56, 5802), (59, 5826), (60, 5838), (71, 5901), (74, 5925), (75, 5934), (89, 6012), (92, 6024), (102, 6078),

Gene: Agatha\_9 Start: 6417, Stop: 6926, Start Num: 17

Candidate Starts for Agatha\_9:

(Start: 17 @6417 has 67 MA's), (Start: 24 @6429 has 14 MA's), (36, 6459), (43, 6504), (51, 6591), (76, 6768), (86, 6810),

Gene: AikoCarson\_8 Start: 6147, Stop: 6656, Start Num: 17

Candidate Starts for AikoCarson\_8:

(Start: 17 @6147 has 67 MA's), (36, 6189), (43, 6234), (75, 6471), (86, 6540), (103, 6624),

Gene: Amok\_8 Start: 6147, Stop: 6656, Start Num: 17

Candidate Starts for Amok\_8:

(Start: 17 @6147 has 67 MA's), (36, 6189), (43, 6234), (75, 6471), (86, 6540), (103, 6624),

Gene: AndPeggy\_8 Start: 6435, Stop: 6944, Start Num: 17

Candidate Starts for AndPeggy\_8:

(Start: 17 @6435 has 67 MA's), (36, 6477), (43, 6522), (49, 6555), (86, 6828), (100, 6894),

Gene: Angel\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Angel\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Annihilator\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Annihilator\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Antsirabe\_9 Start: 8572, Stop: 9105, Start Num: 10

Candidate Starts for Antsirabe\_9:

(Start: 10 @8572 has 6 MA's), (40, 8668), (43, 8692), (63, 8851), (70, 8896), (72, 8902), (73, 8914),

Gene: Aquarius\_7 Start: 5607, Stop: 6086, Start Num: 17

Candidate Starts for Aquarius\_7:

(Start: 14 @5598 has 1 MA's), (Start: 17 @5607 has 67 MA's), (22, 5616), (Start: 23 @5619 has 1 MA's), (Start: 24 @5622 has 14 MA's), (Start: 26 @5625 has 4 MA's), (32, 5637), (43, 5694), (45, 5706), (47, 5715), (56, 5796), (57, 5799), (60, 5832), (69, 5892), (71, 5895), (74, 5919), (75, 5928), (83, 5979), (86, 5991), (89, 6006), (92, 6018), (102, 6072),

Gene: Aroostook\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Aroostook\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Asapag\_9 Start: 6026, Stop: 6490, Start Num: 21

Candidate Starts for Asapag\_9:

(Start: 21 @6026 has 29 MA's), (35, 6059), (40, 6080), (50, 6173), (55, 6197), (60, 6239), (74, 6329), (82, 6383), (91, 6419), (97, 6455),

Gene: Attacne\_7 Start: 5618, Stop: 6097, Start Num: 17

Candidate Starts for Attacne\_7:

(Start: 17 @5618 has 67 MA's), (22, 5627), (Start: 23 @5630 has 1 MA's), (Start: 24 @5633 has 14 MA's), (Start: 26 @5636 has 4 MA's), (32, 5648), (43, 5705), (45, 5717), (47, 5726), (56, 5807), (57, 5810), (59, 5831), (60, 5843), (69, 5903), (71, 5906), (74, 5930), (75, 5939), (83, 5990), (86, 6002), (89, 6017), (92, 6029), (102, 6083),

Gene: Avani\_9 Start: 5986, Stop: 6441, Start Num: 21

Candidate Starts for Avani\_9:

(Start: 21 @5986 has 29 MA's), (40, 6040), (41, 6049), (50, 6124), (56, 6157), (57, 6160), (62, 6205), (74, 6280), (82, 6334),

Gene: Avocado\_9 Start: 8415, Stop: 8948, Start Num: 10

Candidate Starts for Avocado\_9:

(Start: 10 @8415 has 6 MA's), (31, 8478), (43, 8538), (57, 8649), (68, 8739), (70, 8742), (80, 8823),

Gene: Avrafan\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Avrafan\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Axym\_9 Start: 6417, Stop: 6926, Start Num: 17

Candidate Starts for Axym\_9:

(Start: 17 @6417 has 67 MA's), (Start: 24 @6429 has 14 MA's), (36, 6459), (43, 6504), (51, 6591), (76, 6768), (86, 6810),

Gene: Azira\_11 Start: 7290, Stop: 7823, Start Num: 20

Candidate Starts for Azira\_11:

(Start: 18 @7287 has 2 MA's), (Start: 20 @7290 has 7 MA's), (43, 7371), (49, 7404), (56, 7485), (91, 7704), (95, 7737),

Gene: BENtherdunthat\_9 Start: 6026, Stop: 6490, Start Num: 21

Candidate Starts for BENtherdunthat\_9:

(Start: 21 @6026 has 29 MA's), (35, 6059), (40, 6080), (50, 6173), (55, 6197), (60, 6239), (74, 6329), (82, 6383), (91, 6419), (97, 6455),

Gene: BPs\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for BPs\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: BQuat\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for BQuat\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Barkley26\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Barkley26\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: BigChungus\_8 Start: 6193, Stop: 6720, Start Num: 24

Candidate Starts for BigChungus\_8:

(Start: 24 @6193 has 14 MA's), (43, 6268), (54, 6382), (57, 6397), (60, 6427), (78, 6562), (86, 6589), (91, 6613), (103, 6685),

Gene: BillDoor\_11 Start: 6400, Stop: 6909, Start Num: 17

Candidate Starts for BillDoor\_11:

(Start: 17 @6400 has 67 MA's), (36, 6442), (43, 6487), (49, 6520), (86, 6793), (100, 6859),

Gene: Biskit\_10 Start: 6398, Stop: 6910, Start Num: 17

Candidate Starts for Biskit\_10:

(Start: 17 @6398 has 67 MA's), (36, 6443), (43, 6488), (86, 6794), (103, 6878),

Gene: Blarby\_10 Start: 6510, Stop: 6965, Start Num: 21

Candidate Starts for Blarby\_10:

(Start: 21 @6510 has 29 MA's), (40, 6564), (41, 6573), (50, 6648), (56, 6681), (57, 6684), (62, 6729), (74, 6804), (82, 6858),

Gene: BruceB\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for BruceB\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: BruceLethal\_7 Start: 5607, Stop: 6086, Start Num: 17

Candidate Starts for BruceLethal\_7:

(Start: 17 @5607 has 67 MA's), (22, 5616), (Start: 23 @5619 has 1 MA's), (Start: 24 @5622 has 14 MA's), (Start: 26 @5625 has 4 MA's), (32, 5637), (43, 5694), (45, 5706), (47, 5715), (56, 5796), (57, 5799), (59, 5820), (60, 5832), (69, 5892), (71, 5895), (74, 5919), (89, 6006), (92, 6018), (102, 6072),

Gene: Budski\_9 Start: 6031, Stop: 6495, Start Num: 21

Candidate Starts for Budski\_9:

(Start: 21 @6031 has 29 MA's), (35, 6064), (40, 6085), (41, 6094), (50, 6178), (55, 6202), (60, 6244), (74, 6334), (82, 6388), (91, 6424), (97, 6460),

Gene: Burnsey\_9 Start: 6418, Stop: 6927, Start Num: 17

Candidate Starts for Burnsey\_9:

(Start: 17 @6418 has 67 MA's), (Start: 24 @6430 has 14 MA's), (36, 6460), (43, 6505), (51, 6592), (76, 6769), (86, 6811),

Gene: Button\_10 Start: 6434, Stop: 6943, Start Num: 17

Candidate Starts for Button\_10:

(Start: 17 @6434 has 67 MA's), (33, 6461), (34, 6467), (39, 6479), (43, 6515), (46, 6530), (55, 6629), (57, 6641),

Gene: Buttrmlkdreams\_9 Start: 6392, Stop: 6904, Start Num: 17  
Candidate Starts for Buttrmlkdreams\_9:  
(Start: 17 @6392 has 67 MA's), (36, 6437), (43, 6482), (86, 6788), (103, 6872),

Gene: CLED96\_9 Start: 8314, Stop: 8811, Start Num: 13  
Candidate Starts for CLED96\_9:  
(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605),  
(86, 8704), (99, 8776),

Gene: Cambiare\_10 Start: 8877, Stop: 9410, Start Num: 10  
Candidate Starts for Cambiare\_10:  
(Start: 10 @8877 has 6 MA's), (31, 8940), (43, 9000), (57, 9111), (68, 9201), (70, 9204), (80, 9285),

Gene: Camri\_9 Start: 8314, Stop: 8811, Start Num: 13  
Candidate Starts for Camri\_9:  
(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605),  
(86, 8704), (99, 8776),

Gene: CassieYates\_9 Start: 8314, Stop: 8811, Start Num: 13  
Candidate Starts for CassieYates\_9:  
(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605),  
(86, 8704), (99, 8776),

Gene: Cedasite\_9 Start: 8314, Stop: 8811, Start Num: 13  
Candidate Starts for Cedasite\_9:  
(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605),  
(86, 8704), (99, 8776),

Gene: Chance64\_9 Start: 8314, Stop: 8811, Start Num: 13  
Candidate Starts for Chance64\_9:  
(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605),  
(86, 8704), (99, 8776),

Gene: Che9d\_9 Start: 5995, Stop: 6450, Start Num: 21  
Candidate Starts for Che9d\_9:  
(Start: 21 @5995 has 29 MA's), (40, 6049), (41, 6058), (50, 6133), (56, 6166), (57, 6169), (62, 6214),  
(74, 6289), (82, 6343),

Gene: CheeseTouch\_9 Start: 6031, Stop: 6495, Start Num: 21  
Candidate Starts for CheeseTouch\_9:  
(Start: 21 @6031 has 29 MA's), (35, 6064), (40, 6085), (41, 6094), (50, 6178), (55, 6202), (60, 6244),  
(74, 6334), (82, 6388), (91, 6424), (97, 6460),

Gene: Cherrybomb426\_9 Start: 8314, Stop: 8811, Start Num: 13  
Candidate Starts for Cherrybomb426\_9:  
(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605),  
(86, 8704), (99, 8776),

Gene: CherryonLim\_10 Start: 6919, Stop: 7446, Start Num: 24  
Candidate Starts for CherryonLim\_10:  
(Start: 24 @6919 has 14 MA's), (43, 6994), (54, 7108), (57, 7123), (60, 7153), (75, 7246), (86, 7315),  
(91, 7339),

Gene: Cleo\_9 Start: 6596, Stop: 7126, Start Num: 18

Candidate Starts for Cleo\_9:

(Start: 18 @6596 has 2 MA's), (Start: 20 @6599 has 7 MA's), (36, 6635), (43, 6680), (91, 7013), (95, 7046),

Gene: Coleslaw\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Coleslaw\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Cota\_7 Start: 5643, Stop: 6104, Start Num: 26

Candidate Starts for Cota\_7:

(22, 5634), (Start: 23 @5637 has 1 MA's), (Start: 24 @5640 has 14 MA's), (Start: 26 @5643 has 4 MA's), (32, 5655), (43, 5712), (45, 5724), (47, 5733), (56, 5814), (57, 5817), (60, 5850), (69, 5910), (71, 5913), (74, 5937), (75, 5946), (83, 5997), (89, 6024), (92, 6036), (102, 6090),

Gene: Cozz\_9 Start: 6418, Stop: 6927, Start Num: 17

Candidate Starts for Cozz\_9:

(Start: 17 @6418 has 67 MA's), (Start: 24 @6430 has 14 MA's), (36, 6460), (43, 6505), (51, 6592), (76, 6769), (86, 6811),

Gene: Crespo\_9 Start: 8315, Stop: 8812, Start Num: 13

Candidate Starts for Crespo\_9:

(Start: 13 @8315 has 58 MA's), (31, 8348), (36, 8366), (43, 8408), (47, 8429), (66, 8579), (70, 8606), (86, 8705), (99, 8777),

Gene: DMoney\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for DMoney\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: DNAlll\_009 Start: 8323, Stop: 8820, Start Num: 13

Candidate Starts for DNAlll\_009:

(Start: 13 @8323 has 58 MA's), (31, 8356), (36, 8374), (43, 8416), (47, 8437), (66, 8587), (70, 8614), (86, 8713), (99, 8785),

Gene: Darionha\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Darionha\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Demsculpinboyz\_9 Start: 5986, Stop: 6441, Start Num: 21

Candidate Starts for Demsculpinboyz\_9:

(Start: 21 @5986 has 29 MA's), (40, 6040), (41, 6049), (50, 6124), (56, 6157), (57, 6160), (62, 6205), (74, 6280), (82, 6334),

Gene: DrParker\_7 Start: 5632, Stop: 6111, Start Num: 17

Candidate Starts for DrParker\_7:

(Start: 14 @5623 has 1 MA's), (Start: 17 @5632 has 67 MA's), (22, 5641), (Start: 23 @5644 has 1 MA's), (Start: 24 @5647 has 14 MA's), (Start: 26 @5650 has 4 MA's), (32, 5662), (43, 5719), (45, 5731), (47, 5740), (56, 5821), (60, 5857), (69, 5917), (71, 5920), (74, 5944), (75, 5953), (87, 6019), (89, 6031), (92, 6043), (102, 6097),

Gene: Dre3\_9 Start: 6546, Stop: 7073, Start Num: 20

Candidate Starts for Dre3\_9:

(Start: 18 @6543 has 2 MA's), (Start: 20 @6546 has 7 MA's), (36, 6582), (43, 6627), (91, 6960), (95, 6993),

Gene: ECartman\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for ECartman\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Ecliptus\_9 Start: 6053, Stop: 6520, Start Num: 21

Candidate Starts for Ecliptus\_9:

(Start: 21 @6053 has 29 MA's), (40, 6107), (55, 6224), (65, 6299), (66, 6302), (78, 6401), (82, 6410),

Gene: Elinal\_10 Start: 6174, Stop: 6701, Start Num: 24

Candidate Starts for Elinal\_10:

(Start: 24 @6174 has 14 MA's), (43, 6249), (52, 6351), (54, 6363), (57, 6378), (60, 6408), (78, 6543), (85, 6567), (86, 6570), (91, 6594), (103, 6666),

Gene: Elliott\_9 Start: 6417, Stop: 6926, Start Num: 17

Candidate Starts for Elliott\_9:

(Start: 17 @6417 has 67 MA's), (Start: 24 @6429 has 14 MA's), (36, 6459), (43, 6504), (51, 6591), (76, 6768), (86, 6810),

Gene: Emalyn\_8 Start: 6146, Stop: 6655, Start Num: 17

Candidate Starts for Emalyn\_8:

(Start: 17 @6146 has 67 MA's), (36, 6188), (43, 6233), (75, 6470), (86, 6539), (103, 6623),

Gene: Enochoraptor\_7 Start: 5628, Stop: 6107, Start Num: 17

Candidate Starts for Enochoraptor\_7:

(Start: 17 @5628 has 67 MA's), (22, 5637), (Start: 23 @5640 has 1 MA's), (Start: 24 @5643 has 14 MA's), (Start: 26 @5646 has 4 MA's), (32, 5658), (43, 5715), (45, 5727), (47, 5736), (56, 5817), (57, 5820), (59, 5841), (60, 5853), (69, 5913), (71, 5916), (74, 5940), (89, 6027), (92, 6039), (102, 6093),

Gene: Enoki\_7 Start: 5613, Stop: 6092, Start Num: 17

Candidate Starts for Enoki\_7:

(Start: 17 @5613 has 67 MA's), (22, 5622), (Start: 23 @5625 has 1 MA's), (Start: 24 @5628 has 14 MA's), (Start: 26 @5631 has 4 MA's), (32, 5643), (43, 5700), (45, 5712), (47, 5721), (54, 5790), (56, 5802), (57, 5805), (59, 5826), (60, 5838), (69, 5898), (71, 5901), (74, 5925), (89, 6012), (92, 6024), (102, 6078),

Gene: Feastonyeet\_8 Start: 6193, Stop: 6720, Start Num: 24

Candidate Starts for Feastonyeet\_8:

(Start: 24 @6193 has 14 MA's), (43, 6268), (54, 6382), (57, 6397), (60, 6427), (78, 6562), (86, 6589), (91, 6613), (103, 6685),

Gene: FlagStaff\_9 Start: 8362, Stop: 8880, Start Num: 10

Candidate Starts for FlagStaff\_9:

(Start: 10 @8362 has 6 MA's), (36, 8428), (43, 8470), (68, 8671), (70, 8674), (99, 8845),

Gene: Fribs8\_10 Start: 7103, Stop: 7636, Start Num: 20

Candidate Starts for Fribs8\_10:

(Start: 20 @7103 has 7 MA's), (43, 7184), (49, 7217), (51, 7274), (75, 7424), (91, 7517),

Gene: Frickyeah\_9 Start: 6059, Stop: 6490, Start Num: 35

Candidate Starts for Frickyeah\_9:

(Start: 21 @6026 has 29 MA's), (35, 6059), (40, 6080), (50, 6173), (55, 6197), (60, 6239), (74, 6329), (82, 6383), (91, 6419), (97, 6455),

Gene: Frosty24\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Frosty24\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: GTE2\_07 Start: 6096, Stop: 6605, Start Num: 17

Candidate Starts for GTE2\_07:

(Start: 17 @6096 has 67 MA's), (36, 6138), (43, 6183), (49, 6216), (86, 6489), (100, 6555), (103, 6573),

Gene: Gaia\_6 Start: 6666, Stop: 7031, Start Num: 28

Candidate Starts for Gaia\_6:

(22, 6654), (Start: 28 @6666 has 2 MA's), (38, 6693), (43, 6735), (58, 6849), (61, 6879), (64, 6900), (70, 6930), (74, 6957), (77, 6996),

Gene: Getalong\_9 Start: 6026, Stop: 6490, Start Num: 21

Candidate Starts for Getalong\_9:

(Start: 21 @6026 has 29 MA's), (35, 6059), (40, 6080), (41, 6089), (50, 6173), (55, 6197), (60, 6239), (74, 6329), (82, 6383), (91, 6419), (97, 6455),

Gene: GiKK\_12 Start: 6737, Stop: 7246, Start Num: 17

Candidate Starts for GiKK\_12:

(Start: 17 @6737 has 67 MA's), (33, 6764), (34, 6770), (39, 6782), (43, 6818), (46, 6833), (55, 6932), (57, 6944),

Gene: Gibbous\_9 Start: 6546, Stop: 7073, Start Num: 20

Candidate Starts for Gibbous\_9:

(Start: 18 @6543 has 2 MA's), (Start: 20 @6546 has 7 MA's), (36, 6582), (43, 6627), (91, 6960), (95, 6993),

Gene: Gideon\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Gideon\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: GoldHunter\_10 Start: 6418, Stop: 6927, Start Num: 17

Candidate Starts for GoldHunter\_10:

(Start: 17 @6418 has 67 MA's), (Start: 24 @6430 has 14 MA's), (36, 6460), (43, 6505), (51, 6592), (76, 6769), (86, 6811),

Gene: GoldenAsh\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for GoldenAsh\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Gomashi\_9 Start: 8315, Stop: 8812, Start Num: 13

Candidate Starts for Gomashi\_9:



(Start: 13 @8315 has 58 MA's), (31, 8348), (36, 8366), (43, 8408), (47, 8429), (66, 8579), (70, 8606), (86, 8705), (99, 8777),

Gene: Grizzly\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Grizzly\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Halo\_9 Start: 8309, Stop: 8806, Start Num: 13

Candidate Starts for Halo\_9:

(Start: 13 @8309 has 58 MA's), (31, 8342), (36, 8360), (43, 8402), (47, 8423), (66, 8573), (70, 8600), (86, 8699), (99, 8771),

Gene: Hexbug\_11 Start: 7426, Stop: 7932, Start Num: 19

Candidate Starts for Hexbug\_11:

(Start: 19 @7426 has 3 MA's), (33, 7453), (37, 7465), (43, 7507), (44, 7516), (51, 7603), (57, 7630),

Gene: HippoPololi\_11 Start: 7195, Stop: 7725, Start Num: 18

Candidate Starts for HippoPololi\_11:

(Start: 18 @7195 has 2 MA's), (Start: 20 @7198 has 7 MA's), (43, 7279), (53, 7378), (54, 7381), (75, 7519), (84, 7582), (91, 7612), (95, 7645),

Gene: Holliday\_9 Start: 6031, Stop: 6495, Start Num: 21

Candidate Starts for Holliday\_9:

(Start: 21 @6031 has 29 MA's), (35, 6064), (40, 6085), (41, 6094), (50, 6178), (55, 6202), (60, 6244), (74, 6334), (82, 6388), (91, 6424), (97, 6460),

Gene: Hope\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Hope\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Horseradish\_10 Start: 6296, Stop: 6808, Start Num: 17

Candidate Starts for Horseradish\_10:

(Start: 17 @6296 has 67 MA's), (36, 6341), (43, 6386), (86, 6692), (94, 6728), (103, 6776),

Gene: Horus\_9 Start: 6026, Stop: 6490, Start Num: 21

Candidate Starts for Horus\_9:

(Start: 21 @6026 has 29 MA's), (35, 6059), (40, 6080), (50, 6173), (55, 6197), (60, 6239), (74, 6329), (82, 6383), (91, 6419), (97, 6455),

Gene: Hotshotbaby7\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Hotshotbaby7\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: IdentityCrisis\_8 Start: 6944, Stop: 7429, Start Num: 26

Candidate Starts for IdentityCrisis\_8:

(11, 6902), (Start: 26 @6944 has 4 MA's), (43, 7013), (45, 7025),

Gene: Jabbawokkie\_10 Start: 6509, Stop: 6964, Start Num: 21

Candidate Starts for Jabbawokkie\_10:

(Start: 21 @6509 has 29 MA's), (40, 6563), (41, 6572), (50, 6647), (56, 6680), (57, 6683), (62, 6728), (74, 6803), (82, 6857),

Gene: Jamzy\_12 Start: 6750, Stop: 7256, Start Num: 17

Candidate Starts for Jamzy\_12:

(Start: 17 @6750 has 67 MA's), (37, 6786), (39, 6792), (43, 6828), (44, 6837), (46, 6843), (60, 6984), (69, 7041), (79, 7122), (104, 7248),

Gene: Jane\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Jane\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Jolene\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Jolene\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Jolie2\_9 Start: 7539, Stop: 8054, Start Num: 10

Candidate Starts for Jolie2\_9:

(Start: 10 @7539 has 6 MA's), (36, 7599), (43, 7641), (56, 7749), (60, 7782), (63, 7800), (68, 7842), (70, 7845), (74, 7872), (96, 8004),

Gene: Jonghyun\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Jonghyun\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: JorRay\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for JorRay\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Kamaru\_9 Start: 6031, Stop: 6495, Start Num: 21

Candidate Starts for Kamaru\_9:

(Start: 21 @6031 has 29 MA's), (35, 6064), (40, 6085), (41, 6094), (50, 6178), (55, 6202), (60, 6244), (74, 6334), (82, 6388), (91, 6424), (97, 6460),

Gene: Kareem\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Kareem\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Kasen3\_9 Start: 8315, Stop: 8812, Start Num: 13

Candidate Starts for Kasen3\_9:

(Start: 13 @8315 has 58 MA's), (31, 8348), (36, 8366), (43, 8408), (47, 8429), (66, 8579), (70, 8606), (86, 8705), (99, 8777),

Gene: KayGee\_8 Start: 6174, Stop: 6701, Start Num: 24

Candidate Starts for KayGee\_8:

(Start: 24 @6174 has 14 MA's), (43, 6249), (52, 6351), (54, 6363), (57, 6378), (60, 6408), (78, 6543), (85, 6567), (86, 6570), (91, 6594), (103, 6666),

Gene: Keiki\_7 Start: 5625, Stop: 6104, Start Num: 17

Candidate Starts for Keiki\_7:

(Start: 17 @5625 has 67 MA's), (22, 5634), (Start: 23 @5637 has 1 MA's), (Start: 24 @5640 has 14 MA's), (Start: 26 @5643 has 4 MA's), (32, 5655), (43, 5712), (45, 5724), (47, 5733), (56, 5814), (57, 5817), (60, 5850), (69, 5910), (71, 5913), (74, 5937), (75, 5946), (83, 5997), (89, 6024), (92, 6036), (102, 6090),

Gene: Kenna\_9 Start: 6026, Stop: 6490, Start Num: 21

Candidate Starts for Kenna\_9:

(Start: 21 @6026 has 29 MA's), (35, 6059), (40, 6080), (50, 6173), (55, 6197), (60, 6239), (74, 6329), (82, 6383), (91, 6419), (97, 6455),

Gene: Kubed\_7 Start: 5615, Stop: 6094, Start Num: 17

Candidate Starts for Kubed\_7:

(Start: 17 @5615 has 67 MA's), (22, 5624), (Start: 23 @5627 has 1 MA's), (Start: 24 @5630 has 14 MA's), (Start: 26 @5633 has 4 MA's), (32, 5645), (43, 5702), (45, 5714), (47, 5723), (56, 5804), (57, 5807), (59, 5828), (60, 5840), (69, 5900), (71, 5903), (74, 5927), (83, 5987), (89, 6014), (92, 6026), (102, 6080),

Gene: Lauchelly\_7 Start: 5610, Stop: 6089, Start Num: 17

Candidate Starts for Lauchelly\_7:

(Start: 17 @5610 has 67 MA's), (22, 5619), (Start: 23 @5622 has 1 MA's), (Start: 24 @5625 has 14 MA's), (Start: 26 @5628 has 4 MA's), (32, 5640), (43, 5697), (45, 5709), (47, 5718), (56, 5799), (57, 5802), (59, 5823), (60, 5835), (69, 5895), (71, 5898), (74, 5922), (89, 6009), (92, 6021), (102, 6075),

Gene: Lauer\_8 Start: 6223, Stop: 6750, Start Num: 24

Candidate Starts for Lauer\_8:

(Start: 24 @6223 has 14 MA's), (43, 6298), (54, 6412), (57, 6427), (60, 6457), (78, 6592), (85, 6616), (86, 6619), (91, 6643), (103, 6715),

Gene: Lemuria\_9 Start: 7586, Stop: 8107, Start Num: 10

Candidate Starts for Lemuria\_9:

(Start: 10 @7586 has 6 MA's), (43, 7694), (56, 7802), (68, 7895), (70, 7898),

Gene: Leroy\_9 Start: 6027, Stop: 6491, Start Num: 21

Candidate Starts for Leroy\_9:

(Start: 21 @6027 has 29 MA's), (35, 6060), (40, 6081), (50, 6174), (55, 6198), (60, 6240), (74, 6330), (82, 6384), (91, 6420), (97, 6456),

Gene: Leviosa\_7 Start: 5631, Stop: 6110, Start Num: 17

Candidate Starts for Leviosa\_7:

(Start: 17 @5631 has 67 MA's), (22, 5640), (Start: 23 @5643 has 1 MA's), (Start: 24 @5646 has 14 MA's), (Start: 26 @5649 has 4 MA's), (32, 5661), (43, 5718), (45, 5730), (47, 5739), (56, 5820), (60, 5856), (69, 5916), (71, 5919), (74, 5943), (89, 6030), (92, 6042),

Gene: Liefie\_9 Start: 8313, Stop: 8810, Start Num: 13

Candidate Starts for Liefie\_9:

(Start: 13 @8313 has 58 MA's), (31, 8346), (36, 8364), (43, 8406), (47, 8427), (66, 8577), (70, 8604), (86, 8703), (99, 8775),

Gene: LilBandit\_7 Start: 5615, Stop: 6094, Start Num: 17

Candidate Starts for LilBandit\_7:

(Start: 17 @5615 has 67 MA's), (22, 5624), (Start: 23 @5627 has 1 MA's), (Start: 24 @5630 has 14 MA's), (Start: 26 @5633 has 4 MA's), (43, 5702), (45, 5714), (47, 5723), (56, 5804), (57, 5807), (59, 5828), (60, 5840), (69, 5900), (71, 5903), (74, 5927), (75, 5936), (83, 5987), (86, 5999), (89, 6014), (92, 6026), (102, 6080),

Gene: LitninMcQueen\_9 Start: 6031, Stop: 6495, Start Num: 21

Candidate Starts for LitninMcQueen\_9:

(Start: 21 @6031 has 29 MA's), (35, 6064), (40, 6085), (41, 6094), (50, 6178), (55, 6202), (60, 6244), (74, 6334), (82, 6388), (91, 6424), (97, 6460),

Gene: LouisV14\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for LouisV14\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Lucky10\_8 Start: 5542, Stop: 6003, Start Num: 24

Candidate Starts for Lucky10\_8:

(Start: 24 @5542 has 14 MA's), (30, 5551), (43, 5614), (53, 5701), (60, 5749), (67, 5788), (70, 5809), (74, 5836), (75, 5845), (86, 5905), (101, 5986),

Gene: Lutum\_9 Start: 6026, Stop: 6490, Start Num: 21

Candidate Starts for Lutum\_9:

(Start: 21 @6026 has 29 MA's), (35, 6059), (40, 6080), (50, 6173), (55, 6197), (60, 6239), (74, 6329), (82, 6383), (91, 6419), (97, 6455),

Gene: MAnor\_9 Start: 6164, Stop: 6691, Start Num: 24

Candidate Starts for MAnor\_9:

(Start: 24 @6164 has 14 MA's), (43, 6239), (54, 6353), (57, 6368), (60, 6398), (86, 6560), (91, 6584), (103, 6656),

Gene: MEAK\_7 Start: 5617, Stop: 6096, Start Num: 17

Candidate Starts for MEAK\_7:

(Start: 17 @5617 has 67 MA's), (22, 5626), (Start: 23 @5629 has 1 MA's), (Start: 24 @5632 has 14 MA's), (Start: 26 @5635 has 4 MA's), (43, 5704), (45, 5716), (47, 5725), (56, 5806), (57, 5809), (60, 5842), (69, 5902), (71, 5905), (74, 5929), (83, 5989), (89, 6016), (92, 6028), (102, 6082),

Gene: MOOREtheMARYer\_9 Start: 8480, Stop: 8995, Start Num: 14

Candidate Starts for MOOREtheMARYer\_9:

(Start: 12 @8477 has 1 MA's), (Start: 14 @8480 has 1 MA's), (29, 8510), (43, 8570), (56, 8672), (63, 8723), (70, 8768), (90, 8891),

Gene: MScarn\_11 Start: 6392, Stop: 6904, Start Num: 17

Candidate Starts for MScarn\_11:

(Start: 17 @6392 has 67 MA's), (36, 6437), (43, 6482), (86, 6788), (103, 6872),

Gene: MaVan\_11 Start: 7290, Stop: 7823, Start Num: 20

Candidate Starts for MaVan\_11:

(Start: 18 @7287 has 2 MA's), (Start: 20 @7290 has 7 MA's), (43, 7371), (49, 7404), (56, 7485), (84, 7674), (91, 7704), (95, 7737),

Gene: Malisha\_9 Start: 7076, Stop: 7540, Start Num: 21

Candidate Starts for Malisha\_9:

(Start: 21 @7076 has 29 MA's), (40, 7130), (55, 7247), (60, 7289), (74, 7379), (78, 7424), (91, 7469),

Gene: Margaret\_12 Start: 7126, Stop: 7641, Start Num: 17

Candidate Starts for Margaret\_12:

(16, 7123), (Start: 17 @7126 has 67 MA's), (27, 7144), (37, 7171), (39, 7177), (43, 7213), (46, 7228), (56, 7336), (60, 7369), (79, 7507),

Gene: Marmie\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Marmie\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Mayweather\_10 Start: 6797, Stop: 7324, Start Num: 24

Candidate Starts for Mayweather\_10:

(9, 6746), (Start: 24 @6797 has 14 MA's), (43, 6872), (54, 6986), (57, 7001), (60, 7031), (86, 7193), (91, 7217), (103, 7289),

Gene: Mercurio\_10 Start: 8220, Stop: 8741, Start Num: 10

Candidate Starts for Mercurio\_10:

(3, 8013), (Start: 10 @8220 has 6 MA's), (43, 8328), (56, 8436), (68, 8529), (70, 8532),

Gene: Morkie\_8 Start: 5504, Stop: 5965, Start Num: 24

Candidate Starts for Morkie\_8:

(7, 5435), (Start: 24 @5504 has 14 MA's), (30, 5513), (38, 5537), (43, 5576), (53, 5663), (60, 5711), (67, 5750), (70, 5771), (75, 5807), (98, 5939),

Gene: Mowgli\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Mowgli\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Moyashi\_7 Start: 5635, Stop: 6114, Start Num: 17

Candidate Starts for Moyashi\_7:

(Start: 14 @5626 has 1 MA's), (Start: 17 @5635 has 67 MA's), (22, 5644), (Start: 23 @5647 has 1 MA's), (Start: 24 @5650 has 14 MA's), (Start: 26 @5653 has 4 MA's), (32, 5665), (43, 5722), (45, 5734), (47, 5743), (56, 5824), (57, 5827), (59, 5848), (60, 5860), (69, 5920), (71, 5923), (74, 5947), (87, 6022), (89, 6034), (92, 6046), (102, 6100),

Gene: MrAK\_7 Start: 5644, Stop: 6123, Start Num: 17

Candidate Starts for MrAK\_7:

(Start: 14 @5635 has 1 MA's), (Start: 17 @5644 has 67 MA's), (22, 5653), (Start: 23 @5656 has 1 MA's), (Start: 24 @5659 has 14 MA's), (Start: 26 @5662 has 4 MA's), (32, 5674), (43, 5731), (45, 5743), (47, 5752), (57, 5836), (60, 5869), (69, 5929), (71, 5932), (74, 5956), (83, 6016), (86, 6028), (89, 6043), (92, 6055), (102, 6109),

Gene: MunkgeeRoachy\_10 Start: 6465, Stop: 6974, Start Num: 17

Candidate Starts for MunkgeeRoachy\_10:

(Start: 17 @6465 has 67 MA's), (Start: 24 @6477 has 14 MA's), (36, 6507), (43, 6552), (51, 6639), (76, 6816), (86, 6858),

Gene: Nebkiss\_6 Start: 6667, Stop: 7032, Start Num: 28

Candidate Starts for Nebkiss\_6:

(22, 6655), (Start: 28 @6667 has 2 MA's), (38, 6694), (43, 6736), (58, 6850), (61, 6880), (64, 6901), (70, 6931), (74, 6958), (77, 6997),

Gene: Nibbles\_11 Start: 7290, Stop: 7823, Start Num: 20

Candidate Starts for Nibbles\_11:

(Start: 18 @7287 has 2 MA's), (Start: 20 @7290 has 7 MA's), (43, 7371), (49, 7404), (56, 7485), (84, 7674), (91, 7704), (95, 7737),

Gene: Nina\_10 Start: 7451, Stop: 7960, Start Num: 17

Candidate Starts for Nina\_10:

(Start: 17 @7451 has 67 MA's), (Start: 24 @7463 has 14 MA's), (36, 7493), (43, 7538), (51, 7625), (76, 7802), (86, 7844),

Gene: Nodigi\_11 Start: 7419, Stop: 7925, Start Num: 19

Candidate Starts for Nodigi\_11:

(Start: 10 @7383 has 6 MA's), (Start: 19 @7419 has 3 MA's), (33, 7446), (37, 7458), (43, 7500), (44, 7509), (51, 7596), (57, 7623),

Gene: ODay\_9 Start: 6051, Stop: 6518, Start Num: 21

Candidate Starts for ODay\_9:

(Start: 21 @6051 has 29 MA's), (40, 6105), (55, 6222), (65, 6297), (66, 6300), (78, 6399), (82, 6408),

Gene: OctaviousRex\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for OctaviousRex\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Ogopogo\_10 Start: 6246, Stop: 6701, Start Num: 21

Candidate Starts for Ogopogo\_10:

(Start: 21 @6246 has 29 MA's), (40, 6300), (41, 6309), (50, 6384), (56, 6417), (57, 6420), (74, 6540),

Gene: Olga\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Olga\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Orla\_11 Start: 7423, Stop: 7929, Start Num: 19

Candidate Starts for Orla\_11:

(Start: 19 @7423 has 3 MA's), (33, 7450), (37, 7462), (43, 7504), (44, 7513), (51, 7600), (57, 7627),

Gene: Ouroboros\_7 Start: 5618, Stop: 6097, Start Num: 17

Candidate Starts for Ouroboros\_7:

(Start: 17 @5618 has 67 MA's), (22, 5627), (Start: 23 @5630 has 1 MA's), (Start: 24 @5633 has 14 MA's), (Start: 26 @5636 has 4 MA's), (32, 5648), (43, 5705), (45, 5717), (47, 5726), (56, 5807), (60, 5843), (69, 5903), (71, 5906), (74, 5930), (75, 5939), (83, 5990), (86, 6002), (89, 6017), (92, 6029),

Gene: P1.1\_7 Start: 5618, Stop: 6097, Start Num: 17

Candidate Starts for P1.1\_7:

(Start: 17 @5618 has 67 MA's), (22, 5627), (Start: 23 @5630 has 1 MA's), (Start: 24 @5633 has 14 MA's), (Start: 26 @5636 has 4 MA's), (32, 5648), (43, 5705), (45, 5717), (47, 5726), (56, 5807), (57, 5810), (59, 5831), (60, 5843), (69, 5903), (71, 5906), (74, 5930), (89, 6017), (92, 6029), (102, 6083),

Gene: P100.1\_7 Start: 5608, Stop: 6087, Start Num: 17

Candidate Starts for P100.1\_7:

(Start: 14 @5599 has 1 MA's), (Start: 17 @5608 has 67 MA's), (22, 5617), (Start: 23 @5620 has 1 MA's), (Start: 24 @5623 has 14 MA's), (Start: 26 @5626 has 4 MA's), (32, 5638), (43, 5695), (45, 5707), (57, 5800), (60, 5833), (69, 5893), (71, 5896), (74, 5920), (75, 5929), (83, 5980), (86, 5992), (89, 6007), (92, 6019), (102, 6073),

Gene: P100A\_7 Start: 5630, Stop: 6109, Start Num: 17

Candidate Starts for P100A\_7:

(Start: 17 @5630 has 67 MA's), (22, 5639), (Start: 23 @5642 has 1 MA's), (Start: 24 @5645 has 14 MA's), (Start: 26 @5648 has 4 MA's), (32, 5660), (43, 5717), (45, 5729), (47, 5738), (54, 5807), (56, 5819), (60, 5855), (69, 5915), (71, 5918), (74, 5942), (83, 6002), (89, 6029), (92, 6041), (102, 6095),

Gene: P100D\_7 Start: 5612, Stop: 6091, Start Num: 17

Candidate Starts for P100D\_7:

(Start: 17 @5612 has 67 MA's), (22, 5621), (Start: 23 @5624 has 1 MA's), (Start: 24 @5627 has 14 MA's), (Start: 26 @5630 has 4 MA's), (32, 5642), (43, 5699), (45, 5711), (47, 5720), (56, 5801), (57, 5804), (59, 5825), (60, 5837), (69, 5897), (71, 5900), (74, 5924), (83, 5984), (86, 5996), (89, 6011), (92, 6023), (102, 6077),

Gene: P101A\_7 Start: 5611, Stop: 6090, Start Num: 17

Candidate Starts for P101A\_7:

(Start: 17 @5611 has 67 MA's), (22, 5620), (Start: 23 @5623 has 1 MA's), (Start: 24 @5626 has 14 MA's), (Start: 26 @5629 has 4 MA's), (32, 5641), (43, 5698), (45, 5710), (47, 5719), (56, 5800), (57, 5803), (59, 5824), (60, 5836), (69, 5896), (71, 5899), (74, 5923), (75, 5932), (89, 6010), (92, 6022), (102, 6076),

Gene: P104A\_7 Start: 5613, Stop: 6092, Start Num: 17

Candidate Starts for P104A\_7:

(Start: 17 @5613 has 67 MA's), (22, 5622), (Start: 23 @5625 has 1 MA's), (Start: 24 @5628 has 14 MA's), (Start: 26 @5631 has 4 MA's), (32, 5643), (43, 5700), (45, 5712), (47, 5721), (56, 5802), (57, 5805), (59, 5826), (60, 5838), (69, 5898), (71, 5901), (74, 5925), (75, 5934), (83, 5985), (86, 5997), (89, 6012), (92, 6024), (102, 6078),

Gene: P104B\_7 Start: 5617, Stop: 6096, Start Num: 17

Candidate Starts for P104B\_7:

(Start: 17 @5617 has 67 MA's), (22, 5626), (Start: 23 @5629 has 1 MA's), (Start: 24 @5632 has 14 MA's), (Start: 26 @5635 has 4 MA's), (32, 5647), (43, 5704), (45, 5716), (47, 5725), (56, 5806), (57, 5809), (60, 5842), (69, 5902), (71, 5905), (74, 5929), (83, 5989), (86, 6001), (89, 6016), (92, 6028), (102, 6082),

Gene: P105\_7 Start: 5607, Stop: 6086, Start Num: 17

Candidate Starts for P105\_7:

(Start: 17 @5607 has 67 MA's), (22, 5616), (Start: 23 @5619 has 1 MA's), (Start: 24 @5622 has 14 MA's), (Start: 26 @5625 has 4 MA's), (32, 5637), (43, 5694), (45, 5706), (47, 5715), (57, 5799), (60, 5832), (69, 5892), (71, 5895), (74, 5919), (75, 5928), (83, 5979), (86, 5991), (89, 6006), (92, 6018), (102, 6072),

Gene: P106A\_7 Start: 5635, Stop: 6114, Start Num: 17

Candidate Starts for P106A\_7:

(Start: 14 @5626 has 1 MA's), (Start: 17 @5635 has 67 MA's), (22, 5644), (Start: 23 @5647 has 1 MA's), (Start: 24 @5650 has 14 MA's), (Start: 26 @5653 has 4 MA's), (32, 5665), (43, 5722), (45, 5734), (47, 5743), (56, 5824), (57, 5827), (59, 5848), (60, 5860), (69, 5920), (71, 5923), (74, 5947), (75, 5956), (87, 6022), (89, 6034), (92, 6046), (102, 6100),

Gene: P106C\_7 Start: 5635, Stop: 6114, Start Num: 17

Candidate Starts for P106C\_7:

(Start: 14 @5626 has 1 MA's), (Start: 17 @5635 has 67 MA's), (22, 5644), (Start: 23 @5647 has 1 MA's), (Start: 24 @5650 has 14 MA's), (Start: 26 @5653 has 4 MA's), (32, 5665), (43, 5722), (45, 5734), (47, 5743), (56, 5824), (57, 5827), (59, 5848), (60, 5860), (69, 5920), (71, 5923), (74, 5947), (75, 5956), (87, 6022), (89, 6034), (92, 6046), (102, 6100),

Gene: P106I\_7 Start: 5635, Stop: 6114, Start Num: 17

Candidate Starts for P106I\_7:

(Start: 14 @5626 has 1 MA's), (Start: 17 @5635 has 67 MA's), (22, 5644), (Start: 23 @5647 has 1 MA's), (Start: 24 @5650 has 14 MA's), (Start: 26 @5653 has 4 MA's), (32, 5665), (43, 5722), (45, 5734), (47, 5743), (56, 5824), (57, 5827), (59, 5848), (60, 5860), (69, 5920), (71, 5923), (74, 5947), (75, 5956), (87, 6022), (89, 6034), (92, 6046), (102, 6100),

Gene: P106L\_7 Start: 5635, Stop: 6114, Start Num: 17

Candidate Starts for P106L\_7:

(Start: 14 @5626 has 1 MA's), (Start: 17 @5635 has 67 MA's), (22, 5644), (Start: 23 @5647 has 1 MA's), (Start: 24 @5650 has 14 MA's), (Start: 26 @5653 has 4 MA's), (32, 5665), (43, 5722), (45, 5734), (47, 5743), (56, 5824), (57, 5827), (59, 5848), (60, 5860), (69, 5920), (71, 5923), (74, 5947), (75, 5956), (87, 6022), (89, 6034), (92, 6046), (102, 6100),

Gene: P106M\_7 Start: 5635, Stop: 6114, Start Num: 17

Candidate Starts for P106M\_7:

(Start: 14 @5626 has 1 MA's), (Start: 17 @5635 has 67 MA's), (22, 5644), (Start: 23 @5647 has 1 MA's), (Start: 24 @5650 has 14 MA's), (Start: 26 @5653 has 4 MA's), (32, 5665), (43, 5722), (45, 5734), (47, 5743), (56, 5824), (57, 5827), (59, 5848), (60, 5860), (69, 5920), (71, 5923), (74, 5947), (75, 5956), (87, 6022), (89, 6034), (92, 6046), (102, 6100),

Gene: P107A\_7 Start: 5639, Stop: 6100, Start Num: 26

Candidate Starts for P107A\_7:

(Start: 17 @5621 has 67 MA's), (22, 5630), (Start: 23 @5633 has 1 MA's), (Start: 24 @5636 has 14 MA's), (Start: 26 @5639 has 4 MA's), (32, 5651), (43, 5708), (45, 5720), (47, 5729), (56, 5810), (57, 5813), (60, 5846), (69, 5906), (71, 5909), (74, 5933), (75, 5942), (83, 5993), (86, 6005), (89, 6020), (92, 6032), (102, 6086),

Gene: P107C\_7 Start: 5635, Stop: 6096, Start Num: 26

Candidate Starts for P107C\_7:

(Start: 17 @5617 has 67 MA's), (22, 5626), (Start: 23 @5629 has 1 MA's), (Start: 24 @5632 has 14 MA's), (Start: 26 @5635 has 4 MA's), (32, 5647), (43, 5704), (45, 5716), (47, 5725), (56, 5806), (57, 5809), (59, 5830), (60, 5842), (69, 5902), (71, 5905), (74, 5929), (83, 5989), (86, 6001), (92, 6028), (102, 6082),

Gene: P108C\_7 Start: 5621, Stop: 6100, Start Num: 17

Candidate Starts for P108C\_7:

(Start: 17 @5621 has 67 MA's), (22, 5630), (Start: 23 @5633 has 1 MA's), (Start: 24 @5636 has 14 MA's), (Start: 26 @5639 has 4 MA's), (32, 5651), (43, 5708), (45, 5720), (47, 5729), (56, 5810), (57, 5813), (59, 5834), (60, 5846), (69, 5906), (71, 5909), (74, 5933), (83, 5993), (86, 6005), (89, 6020), (92, 6032), (102, 6086),

Gene: P14.4\_7 Start: 5612, Stop: 6091, Start Num: 17

Candidate Starts for P14.4\_7:

(Start: 17 @5612 has 67 MA's), (22, 5621), (Start: 23 @5624 has 1 MA's), (Start: 24 @5627 has 14 MA's), (Start: 26 @5630 has 4 MA's), (32, 5642), (43, 5699), (45, 5711), (47, 5720), (56, 5801), (57,



5804), (59, 5825), (60, 5837), (69, 5897), (71, 5900), (74, 5924), (75, 5933), (83, 5984), (86, 5996), (89, 6011), (92, 6023), (102, 6077),

Gene: P3MA\_9 Start: 6610, Stop: 7107, Start Num: 23

Candidate Starts for P3MA\_9:

(6, 6499), (Start: 23 @6610 has 1 MA's), (43, 6682), (46, 6697), (47, 6703), (48, 6709), (70, 6898), (81, 6982), (89, 7015), (93, 7030),

Gene: P9.1\_7 Start: 5610, Stop: 6089, Start Num: 17

Candidate Starts for P9.1\_7:

(Start: 17 @5610 has 67 MA's), (22, 5619), (Start: 23 @5622 has 1 MA's), (Start: 24 @5625 has 14 MA's), (Start: 26 @5628 has 4 MA's), (32, 5640), (43, 5697), (45, 5709), (47, 5718), (56, 5799), (57, 5802), (60, 5835), (69, 5895), (71, 5898), (74, 5922), (75, 5931), (83, 5982), (86, 5994), (89, 6009), (92, 6021), (102, 6075),

Gene: PA6\_7 Start: 5638, Stop: 6099, Start Num: 26

Candidate Starts for PA6\_7:

(Start: 17 @5620 has 67 MA's), (22, 5629), (Start: 23 @5632 has 1 MA's), (Start: 24 @5635 has 14 MA's), (Start: 26 @5638 has 4 MA's), (32, 5650), (43, 5707), (45, 5719), (47, 5728), (57, 5812), (60, 5845), (69, 5905), (71, 5908), (74, 5932), (75, 5941), (83, 5992), (86, 6004), (89, 6019), (92, 6031), (102, 6085),

Gene: PAD20\_7 Start: 5636, Stop: 6097, Start Num: 26

Candidate Starts for PAD20\_7:

(Start: 17 @5618 has 67 MA's), (22, 5627), (Start: 23 @5630 has 1 MA's), (Start: 24 @5633 has 14 MA's), (Start: 26 @5636 has 4 MA's), (32, 5648), (43, 5705), (45, 5717), (47, 5726), (56, 5807), (57, 5810), (59, 5831), (60, 5843), (69, 5903), (71, 5906), (74, 5930), (83, 5990), (86, 6002), (89, 6017), (92, 6029), (102, 6083),

Gene: PAS50\_7 Start: 5633, Stop: 6094, Start Num: 26

Candidate Starts for PAS50\_7:

(Start: 17 @5615 has 67 MA's), (22, 5624), (Start: 23 @5627 has 1 MA's), (Start: 24 @5630 has 14 MA's), (Start: 26 @5633 has 4 MA's), (32, 5645), (43, 5702), (45, 5714), (47, 5723), (56, 5804), (57, 5807), (59, 5828), (60, 5840), (69, 5900), (71, 5903), (74, 5927), (83, 5987), (86, 5999), (89, 6014), (92, 6026), (102, 6080),

Gene: PHL010M04\_07 Start: 5628, Stop: 6089, Start Num: 26

Candidate Starts for PHL010M04\_07:

(Start: 17 @5610 has 67 MA's), (22, 5619), (Start: 23 @5622 has 1 MA's), (Start: 24 @5625 has 14 MA's), (Start: 26 @5628 has 4 MA's), (32, 5640), (43, 5697), (45, 5709), (56, 5799), (57, 5802), (59, 5823), (60, 5835), (69, 5895), (71, 5898), (74, 5922), (89, 6009), (92, 6021), (102, 6075),

Gene: PHL037M02\_07 Start: 5634, Stop: 6095, Start Num: 26

Candidate Starts for PHL037M02\_07:

(Start: 17 @5616 has 67 MA's), (22, 5625), (Start: 23 @5628 has 1 MA's), (Start: 24 @5631 has 14 MA's), (Start: 26 @5634 has 4 MA's), (32, 5646), (43, 5703), (45, 5715), (56, 5805), (69, 5901), (71, 5904), (74, 5928), (83, 5988), (86, 6000), (89, 6015), (92, 6027), (102, 6081),

Gene: PHL060L00\_07 Start: 5626, Stop: 6087, Start Num: 26

Candidate Starts for PHL060L00\_07:

(Start: 17 @5608 has 67 MA's), (22, 5617), (Start: 23 @5620 has 1 MA's), (Start: 24 @5623 has 14 MA's), (Start: 26 @5626 has 4 MA's), (32, 5638), (43, 5695), (45, 5707), (47, 5716), (56, 5797), (57, 5800), (59, 5821), (60, 5833), (69, 5893), (71, 5896), (74, 5920), (75, 5929), (89, 6007), (92, 6019),

(102, 6073),

Gene: PHL067M10\_07 Start: 5630, Stop: 6091, Start Num: 26

Candidate Starts for PHL067M10\_07:

(Start: 17 @5612 has 67 MA's), (22, 5621), (Start: 23 @5624 has 1 MA's), (Start: 24 @5627 has 14 MA's), (Start: 26 @5630 has 4 MA's), (32, 5642), (43, 5699), (45, 5711), (47, 5720), (57, 5804), (60, 5837), (69, 5897), (71, 5900), (74, 5924), (83, 5984), (86, 5996), (89, 6011), (92, 6023), (102, 6077),

Gene: PHL071N05\_07 Start: 5632, Stop: 6093, Start Num: 26

Candidate Starts for PHL071N05\_07:

(Start: 17 @5614 has 67 MA's), (22, 5623), (Start: 23 @5626 has 1 MA's), (Start: 24 @5629 has 14 MA's), (Start: 26 @5632 has 4 MA's), (32, 5644), (43, 5701), (45, 5713), (47, 5722), (56, 5803), (57, 5806), (60, 5839), (69, 5899), (71, 5902), (74, 5926), (75, 5935), (83, 5986), (86, 5998), (89, 6013), (92, 6025), (102, 6079),

Gene: PHL111M01\_07 Start: 5636, Stop: 6097, Start Num: 26

Candidate Starts for PHL111M01\_07:

(Start: 17 @5618 has 67 MA's), (22, 5627), (Start: 23 @5630 has 1 MA's), (Start: 24 @5633 has 14 MA's), (Start: 26 @5636 has 4 MA's), (32, 5648), (43, 5705), (45, 5717), (47, 5726), (56, 5807), (57, 5810), (59, 5831), (60, 5843), (69, 5903), (71, 5906), (74, 5930), (75, 5939), (83, 5990), (86, 6002), (89, 6017), (92, 6029), (102, 6083),

Gene: PHL112N00\_07 Start: 5636, Stop: 6097, Start Num: 26

Candidate Starts for PHL112N00\_07:

(Start: 17 @5618 has 67 MA's), (22, 5627), (Start: 23 @5630 has 1 MA's), (Start: 24 @5633 has 14 MA's), (Start: 26 @5636 has 4 MA's), (32, 5648), (43, 5705), (45, 5717), (47, 5726), (56, 5807), (59, 5831), (60, 5843), (69, 5903), (71, 5906), (74, 5930), (83, 5990), (86, 6002), (89, 6017), (92, 6029), (102, 6083),

Gene: PHL113M01\_07 Start: 5636, Stop: 6097, Start Num: 26

Candidate Starts for PHL113M01\_07:

(Start: 17 @5618 has 67 MA's), (22, 5627), (Start: 23 @5630 has 1 MA's), (Start: 24 @5633 has 14 MA's), (Start: 26 @5636 has 4 MA's), (32, 5648), (43, 5705), (45, 5717), (47, 5726), (56, 5807), (57, 5810), (59, 5831), (60, 5843), (69, 5903), (71, 5906), (74, 5930), (83, 5990), (86, 6002), (89, 6017), (92, 6029), (102, 6083),

Gene: PHL114L00\_07 Start: 5635, Stop: 6096, Start Num: 26

Candidate Starts for PHL114L00\_07:

(Start: 17 @5617 has 67 MA's), (22, 5626), (Start: 23 @5629 has 1 MA's), (Start: 24 @5632 has 14 MA's), (Start: 26 @5635 has 4 MA's), (32, 5647), (43, 5704), (45, 5716), (54, 5794), (56, 5806), (57, 5809), (59, 5830), (60, 5842), (69, 5902), (71, 5905), (74, 5929), (75, 5938), (89, 6016), (92, 6028), (102, 6082),

Gene: Pace1224\_9 Start: 8362, Stop: 8880, Start Num: 10

Candidate Starts for Pace1224\_9:

(Start: 10 @8362 has 6 MA's), (36, 8428), (43, 8470), (68, 8671), (70, 8674), (99, 8845),

Gene: Paito\_9 Start: 8413, Stop: 8910, Start Num: 13

Candidate Starts for Paito\_9:

(Start: 13 @8413 has 58 MA's), (42, 8503), (43, 8506), (47, 8527), (66, 8677), (70, 8704), (86, 8803), (99, 8875),

Gene: Peeb\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Peeb\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Periodt\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Periodt\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Periwinkle\_9 Start: 6026, Stop: 6490, Start Num: 21

Candidate Starts for Periwinkle\_9:

(Start: 21 @6026 has 29 MA's), (35, 6059), (40, 6080), (41, 6089), (50, 6173), (55, 6197), (60, 6239), (74, 6329), (82, 6383), (91, 6419), (97, 6455),

Gene: Phabuloso\_9 Start: 6031, Stop: 6495, Start Num: 21

Candidate Starts for Phabuloso\_9:

(Start: 21 @6031 has 29 MA's), (35, 6064), (40, 6085), (41, 6094), (50, 6178), (55, 6202), (60, 6244), (74, 6334), (82, 6388), (91, 6424), (97, 6460),

Gene: Phish\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Phish\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Phistory\_9 Start: 6015, Stop: 6479, Start Num: 21

Candidate Starts for Phistory\_9:

(Start: 21 @6015 has 29 MA's), (35, 6048), (40, 6069), (41, 6078), (50, 6162), (55, 6186), (60, 6228), (74, 6318), (82, 6372), (91, 6408), (97, 6444),

Gene: PhorbesPhlower\_8 Start: 5504, Stop: 5965, Start Num: 24

Candidate Starts for PhorbesPhlower\_8:

(7, 5435), (Start: 24 @5504 has 14 MA's), (30, 5513), (38, 5537), (43, 5576), (53, 5663), (60, 5711), (67, 5750), (70, 5771), (75, 5807), (98, 5939),

Gene: Phreak\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Phreak\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: PinkYoshi\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for PinkYoshi\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Pinnie\_10 Start: 8943, Stop: 9461, Start Num: 12

Candidate Starts for Pinnie\_10:

(Start: 12 @8943 has 1 MA's), (Start: 14 @8946 has 1 MA's), (29, 8976), (43, 9036), (56, 9138), (63, 9189), (70, 9234),

Gene: Pirate\_7 Start: 5610, Stop: 6089, Start Num: 17

Candidate Starts for Pirate\_7:

(Start: 17 @5610 has 67 MA's), (22, 5619), (Start: 23 @5622 has 1 MA's), (Start: 24 @5625 has 14 MA's), (Start: 26 @5628 has 4 MA's), (32, 5640), (43, 5697), (45, 5709), (47, 5718), (56, 5799), (57,

5802), (60, 5835), (69, 5895), (71, 5898), (74, 5922), (83, 5982), (86, 5994), (89, 6009), (92, 6021), (102, 6075),

Gene: Plagueis\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Plagueis\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Pons\_9 Start: 6176, Stop: 6703, Start Num: 24

Candidate Starts for Pons\_9:

(9, 6125), (Start: 24 @6176 has 14 MA's), (43, 6251), (54, 6365), (57, 6380), (60, 6410), (86, 6572), (91, 6596), (103, 6668),

Gene: PotPie\_9 Start: 7027, Stop: 7554, Start Num: 24

Candidate Starts for PotPie\_9:

(Start: 24 @7027 has 14 MA's), (43, 7102), (54, 7216), (57, 7231), (60, 7261), (78, 7396), (85, 7420), (86, 7423), (91, 7447), (103, 7519),

Gene: Procrass1\_7 Start: 5617, Stop: 6096, Start Num: 17

Candidate Starts for Procrass1\_7:

(Start: 17 @5617 has 67 MA's), (22, 5626), (Start: 23 @5629 has 1 MA's), (Start: 24 @5632 has 14 MA's), (Start: 26 @5635 has 4 MA's), (32, 5647), (43, 5704), (45, 5716), (47, 5725), (56, 5806), (57, 5809), (60, 5842), (69, 5902), (71, 5905), (74, 5929), (83, 5989), (86, 6001), (89, 6016), (92, 6028), (102, 6082),

Gene: PsychoKiller\_9 Start: 6417, Stop: 6926, Start Num: 17

Candidate Starts for PsychoKiller\_9:

(Start: 17 @6417 has 67 MA's), (Start: 24 @6429 has 14 MA's), (36, 6459), (43, 6504), (51, 6591), (76, 6768), (86, 6810),

Gene: Quasar\_9 Start: 7032, Stop: 7541, Start Num: 17

Candidate Starts for Quasar\_9:

(Start: 17 @7032 has 67 MA's), (36, 7074), (43, 7119), (51, 7206), (57, 7233), (76, 7383), (86, 7425),

Gene: QueenBey\_7 Start: 5611, Stop: 6090, Start Num: 17

Candidate Starts for QueenBey\_7:

(Start: 17 @5611 has 67 MA's), (22, 5620), (Start: 23 @5623 has 1 MA's), (Start: 24 @5626 has 14 MA's), (Start: 26 @5629 has 4 MA's), (32, 5641), (43, 5698), (45, 5710), (56, 5800), (60, 5836), (69, 5896), (71, 5899), (74, 5923), (75, 5932), (89, 6010), (92, 6022), (102, 6076),

Gene: Rabbs\_9 Start: 8297, Stop: 8794, Start Num: 13

Candidate Starts for Rabbs\_9:

(Start: 13 @8297 has 58 MA's), (36, 8348), (43, 8390), (47, 8411), (70, 8588), (99, 8759),

Gene: RedBaron\_10 Start: 6462, Stop: 6971, Start Num: 17

Candidate Starts for RedBaron\_10:

(Start: 17 @6462 has 67 MA's), (Start: 24 @6474 has 14 MA's), (36, 6504), (43, 6549), (51, 6636), (76, 6813), (86, 6855),

Gene: Remy19\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Remy19\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Renaissance\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Renaissance\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Rileysaurus\_7 Start: 5606, Stop: 6085, Start Num: 17

Candidate Starts for Rileysaurus\_7:

(Start: 17 @5606 has 67 MA's), (22, 5615), (Start: 23 @5618 has 1 MA's), (Start: 24 @5621 has 14 MA's), (Start: 26 @5624 has 4 MA's), (32, 5636), (43, 5693), (45, 5705), (47, 5714), (56, 5795), (57, 5798), (59, 5819), (60, 5831), (69, 5891), (71, 5894), (74, 5918), (89, 6005), (92, 6017), (102, 6071),

Gene: SKKY\_7 Start: 5642, Stop: 6121, Start Num: 17

Candidate Starts for SKKY\_7:

(Start: 14 @5633 has 1 MA's), (Start: 17 @5642 has 67 MA's), (22, 5651), (Start: 23 @5654 has 1 MA's), (Start: 24 @5657 has 14 MA's), (Start: 26 @5660 has 4 MA's), (32, 5672), (43, 5729), (45, 5741), (47, 5750), (56, 5831), (57, 5834), (60, 5867), (69, 5927), (71, 5930), (74, 5954), (75, 5963), (89, 6041), (92, 6053), (102, 6107),

Gene: Schiebel\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Schiebel\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: ShaboiShabazz\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for ShaboiShabazz\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: SheckWes\_8 Start: 6164, Stop: 6691, Start Num: 24

Candidate Starts for SheckWes\_8:

(Start: 24 @6164 has 14 MA's), (43, 6239), (54, 6353), (57, 6368), (60, 6398), (86, 6560), (91, 6584),

Gene: Sizemore\_9 Start: 8315, Stop: 8812, Start Num: 13

Candidate Starts for Sizemore\_9:

(Start: 13 @8315 has 58 MA's), (31, 8348), (36, 8366), (43, 8408), (47, 8429), (66, 8579), (70, 8606), (86, 8705), (99, 8777),

Gene: SketchMex\_8 Start: 6398, Stop: 6910, Start Num: 17

Candidate Starts for SketchMex\_8:

(Start: 17 @6398 has 67 MA's), (36, 6443), (43, 6488), (86, 6794), (103, 6878),

Gene: Sneeze\_9 Start: 8296, Stop: 8793, Start Num: 13

Candidate Starts for Sneeze\_9:

(Start: 13 @8296 has 58 MA's), (36, 8347), (43, 8389), (47, 8410), (70, 8587), (99, 8758),

Gene: Solid\_7 Start: 5618, Stop: 6097, Start Num: 17

Candidate Starts for Solid\_7:

(Start: 17 @5618 has 67 MA's), (22, 5627), (Start: 23 @5630 has 1 MA's), (Start: 24 @5633 has 14 MA's), (Start: 26 @5636 has 4 MA's), (32, 5648), (43, 5705), (45, 5717), (47, 5726), (56, 5807), (57, 5810), (59, 5831), (60, 5843), (69, 5903), (71, 5906), (74, 5930), (83, 5990), (86, 6002), (89, 6017), (92, 6029), (102, 6083),

Gene: Sopespian\_9 Start: 6417, Stop: 6926, Start Num: 17

Candidate Starts for Sopespian\_9:

(Start: 17 @6417 has 67 MA's), (Start: 24 @6429 has 14 MA's), (36, 6459), (43, 6504), (51, 6591), (76, 6768), (86, 6810),

Gene: Soul22\_9 Start: 5985, Stop: 6440, Start Num: 21

Candidate Starts for Soul22\_9:

(Start: 21 @5985 has 29 MA's), (40, 6039), (41, 6048), (50, 6123), (56, 6156), (57, 6159), (62, 6204), (74, 6279), (82, 6333),

Gene: Spooky\_9 Start: 6024, Stop: 6488, Start Num: 21

Candidate Starts for Spooky\_9:

(Start: 21 @6024 has 29 MA's), (40, 6078), (55, 6195), (74, 6327), (78, 6372), (91, 6417),

Gene: Squiddly\_10 Start: 6711, Stop: 7175, Start Num: 21

Candidate Starts for Squiddly\_10:

(Start: 21 @6711 has 29 MA's), (35, 6744), (40, 6765), (41, 6774), (50, 6858), (55, 6882), (60, 6924), (74, 7014), (82, 7068), (91, 7104), (97, 7140),

Gene: Stargaze\_9 Start: 8534, Stop: 9064, Start Num: 10

Candidate Starts for Stargaze\_9:

(4, 8378), (5, 8426), (Start: 10 @8534 has 6 MA's), (31, 8594), (40, 8630), (43, 8654), (60, 8795), (63, 8813), (68, 8855), (70, 8858), (72, 8864),

Gene: SteamedHams\_11 Start: 6436, Stop: 6945, Start Num: 17

Candidate Starts for SteamedHams\_11:

(Start: 17 @6436 has 67 MA's), (36, 6478), (43, 6523), (49, 6556), (86, 6829), (100, 6895),

Gene: Stormborn\_7 Start: 5614, Stop: 6093, Start Num: 17

Candidate Starts for Stormborn\_7:

(Start: 17 @5614 has 67 MA's), (22, 5623), (Start: 23 @5626 has 1 MA's), (Start: 24 @5629 has 14 MA's), (Start: 26 @5632 has 4 MA's), (32, 5644), (43, 5701), (45, 5713), (47, 5722), (56, 5803), (57, 5806), (60, 5839), (69, 5899), (71, 5902), (74, 5926), (75, 5935), (83, 5986), (86, 5998), (89, 6013), (92, 6025), (102, 6079),

Gene: SummitAcademy\_8 Start: 6242, Stop: 6769, Start Num: 24

Candidate Starts for SummitAcademy\_8:

(Start: 24 @6242 has 14 MA's), (43, 6317), (54, 6431), (57, 6446), (60, 6476), (78, 6611), (85, 6635), (86, 6638), (91, 6662), (103, 6734),

Gene: Supernova\_7 Start: 5610, Stop: 6089, Start Num: 17

Candidate Starts for Supernova\_7:

(Start: 14 @5601 has 1 MA's), (Start: 17 @5610 has 67 MA's), (22, 5619), (Start: 23 @5622 has 1 MA's), (Start: 24 @5625 has 14 MA's), (Start: 26 @5628 has 4 MA's), (43, 5697), (45, 5709), (47, 5718), (57, 5802), (60, 5835), (69, 5895), (71, 5898), (74, 5922), (75, 5931), (83, 5982), (86, 5994), (89, 6009), (92, 6021), (102, 6075),

Gene: Survivors\_11 Start: 7144, Stop: 7677, Start Num: 20

Candidate Starts for Survivors\_11:

(Start: 18 @7141 has 2 MA's), (Start: 20 @7144 has 7 MA's), (43, 7225), (49, 7258), (56, 7339), (84, 7528), (91, 7558), (95, 7591),

Gene: SweatNTears\_11 Start: 6918, Stop: 7430, Start Num: 17

Candidate Starts for SweatNTears\_11:

(Start: 17 @6918 has 67 MA's), (36, 6963), (43, 7008), (86, 7314), (103, 7398),

Gene: Sweets\_9 Start: 8309, Stop: 8806, Start Num: 13

Candidate Starts for Sweets\_9:

(Start: 13 @8309 has 58 MA's), (31, 8342), (36, 8360), (43, 8402), (47, 8423), (66, 8573), (70, 8600), (86, 8699), (99, 8771),

Gene: Taheera\_9 Start: 8306, Stop: 8803, Start Num: 13

Candidate Starts for Taheera\_9:

(Start: 13 @8306 has 58 MA's), (36, 8357), (43, 8399), (47, 8420), (70, 8597), (99, 8768),

Gene: Terror\_9 Start: 8306, Stop: 8803, Start Num: 13

Candidate Starts for Terror\_9:

(Start: 13 @8306 has 58 MA's), (36, 8357), (43, 8399), (47, 8420), (70, 8597), (99, 8768),

Gene: Tolls\_11 Start: 6439, Stop: 6948, Start Num: 17

Candidate Starts for Tolls\_11:

(1, 6154), (2, 6163), (7, 6385), (8, 6394), (Start: 17 @6439 has 67 MA's), (36, 6481), (43, 6526), (49, 6559), (86, 6832), (100, 6898),

Gene: TomBrady\_9 Start: 8315, Stop: 8812, Start Num: 13

Candidate Starts for TomBrady\_9:

(Start: 13 @8315 has 58 MA's), (31, 8348), (36, 8366), (43, 8408), (47, 8429), (66, 8579), (70, 8606), (86, 8705), (99, 8777),

Gene: Troje\_9 Start: 6392, Stop: 6904, Start Num: 17

Candidate Starts for Troje\_9:

(Start: 17 @6392 has 67 MA's), (36, 6437), (43, 6482), (86, 6788), (103, 6872),

Gene: Typhonomachy\_10 Start: 6417, Stop: 6926, Start Num: 17

Candidate Starts for Typhonomachy\_10:

(Start: 17 @6417 has 67 MA's), (Start: 24 @6429 has 14 MA's), (36, 6459), (43, 6504), (51, 6591), (76, 6768), (86, 6810),

Gene: Vine\_10 Start: 7171, Stop: 7698, Start Num: 24

Candidate Starts for Vine\_10:

(Start: 24 @7171 has 14 MA's), (43, 7246), (52, 7348), (54, 7360), (57, 7375), (60, 7405), (78, 7540), (85, 7564), (86, 7567), (91, 7591), (103, 7663),

Gene: Whitney\_9 Start: 6026, Stop: 6490, Start Num: 21

Candidate Starts for Whitney\_9:

(Start: 21 @6026 has 29 MA's), (35, 6059), (40, 6080), (41, 6089), (50, 6173), (55, 6197), (60, 6239), (74, 6329), (82, 6383), (91, 6419), (97, 6455),

Gene: Wizzo\_7 Start: 5622, Stop: 6101, Start Num: 17

Candidate Starts for Wizzo\_7:

(Start: 17 @5622 has 67 MA's), (22, 5631), (Start: 23 @5634 has 1 MA's), (Start: 24 @5637 has 14 MA's), (Start: 26 @5640 has 4 MA's), (32, 5652), (43, 5709), (45, 5721), (47, 5730), (56, 5811), (57, 5814), (59, 5835), (60, 5847), (69, 5907), (71, 5910), (74, 5934), (83, 5994), (86, 6006), (89, 6021), (92, 6033), (102, 6087),

Gene: Yakult\_10 Start: 6322, Stop: 6834, Start Num: 17

Candidate Starts for Yakult\_10:

(Start: 17 @6322 has 67 MA's), (25, 6334), (43, 6406), (46, 6421), (51, 6502), (53, 6511), (57, 6529), (69, 6619), (79, 6700), (88, 6739),

Gene: Yarn\_8 Start: 6429, Stop: 6938, Start Num: 17

Candidate Starts for Yarn\_8:

(Start: 17 @6429 has 67 MA's), (36, 6471), (43, 6516), (49, 6549), (86, 6822), (100, 6888),

Gene: Yoshi\_9 Start: 5985, Stop: 6440, Start Num: 21

Candidate Starts for Yoshi\_9:

(Start: 21 @5985 has 29 MA's), (40, 6039), (41, 6048), (50, 6123), (56, 6156), (57, 6159), (62, 6204), (74, 6279), (82, 6333),

Gene: Yummy\_10 Start: 6296, Stop: 6808, Start Num: 17

Candidate Starts for Yummy\_10:

(Start: 17 @6296 has 67 MA's), (36, 6341), (43, 6386), (86, 6692), (94, 6728), (103, 6776),

Gene: Zapner\_10 Start: 6510, Stop: 6965, Start Num: 21

Candidate Starts for Zapner\_10:

(Start: 21 @6510 has 29 MA's), (40, 6564), (41, 6573), (50, 6648), (56, 6681), (57, 6684), (62, 6729), (74, 6804), (82, 6858),

Gene: Zareef\_13 Start: 7291, Stop: 7824, Start Num: 20

Candidate Starts for Zareef\_13:

(Start: 18 @7288 has 2 MA's), (Start: 20 @7291 has 7 MA's), (43, 7372), (49, 7405), (56, 7486), (84, 7675), (91, 7705), (95, 7738),

Gene: ZoMa\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for ZoMa\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),

Gene: Zombie\_9 Start: 8314, Stop: 8811, Start Num: 13

Candidate Starts for Zombie\_9:

(Start: 13 @8314 has 58 MA's), (31, 8347), (36, 8365), (43, 8407), (47, 8428), (66, 8578), (70, 8605), (86, 8704), (99, 8776),