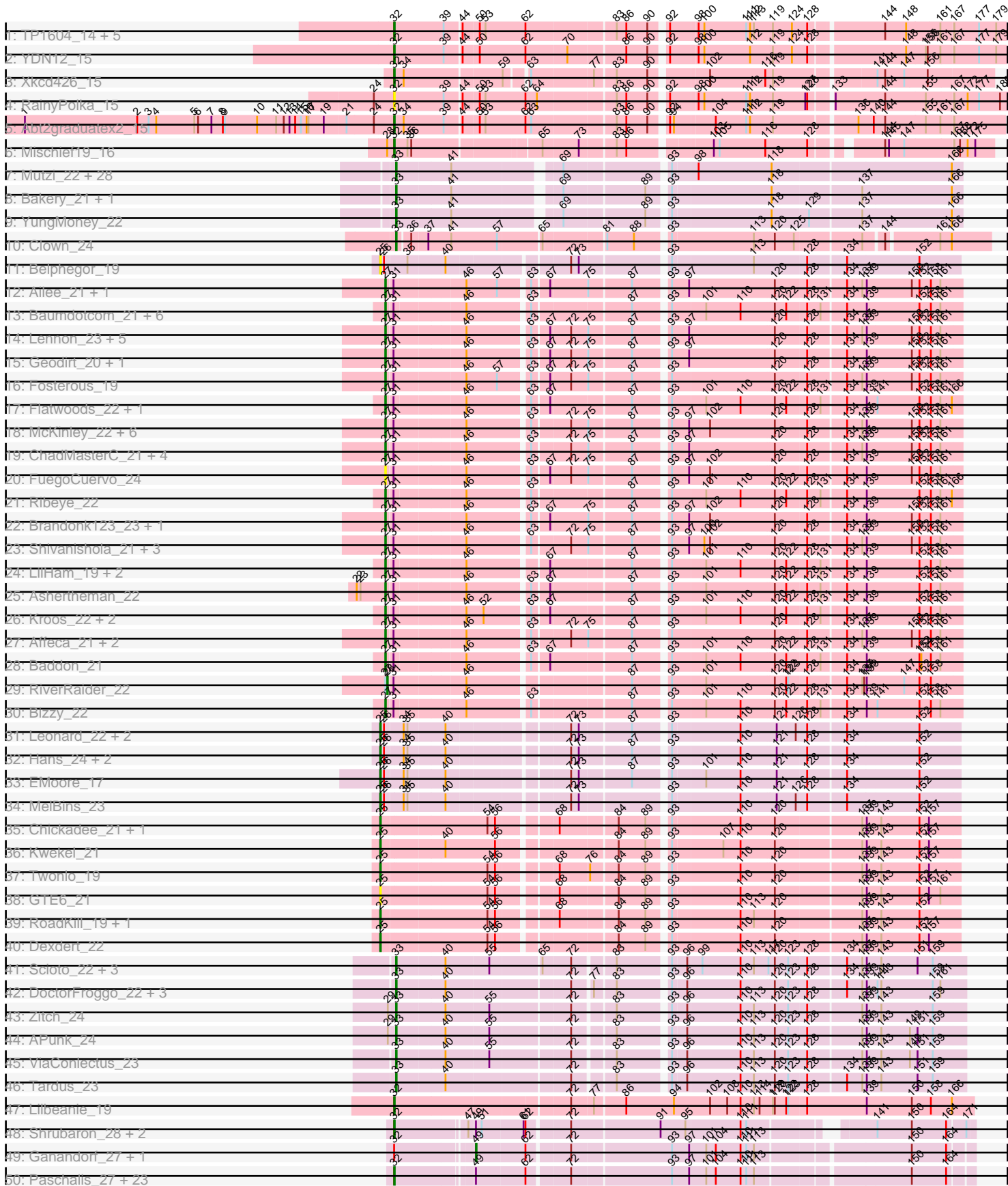
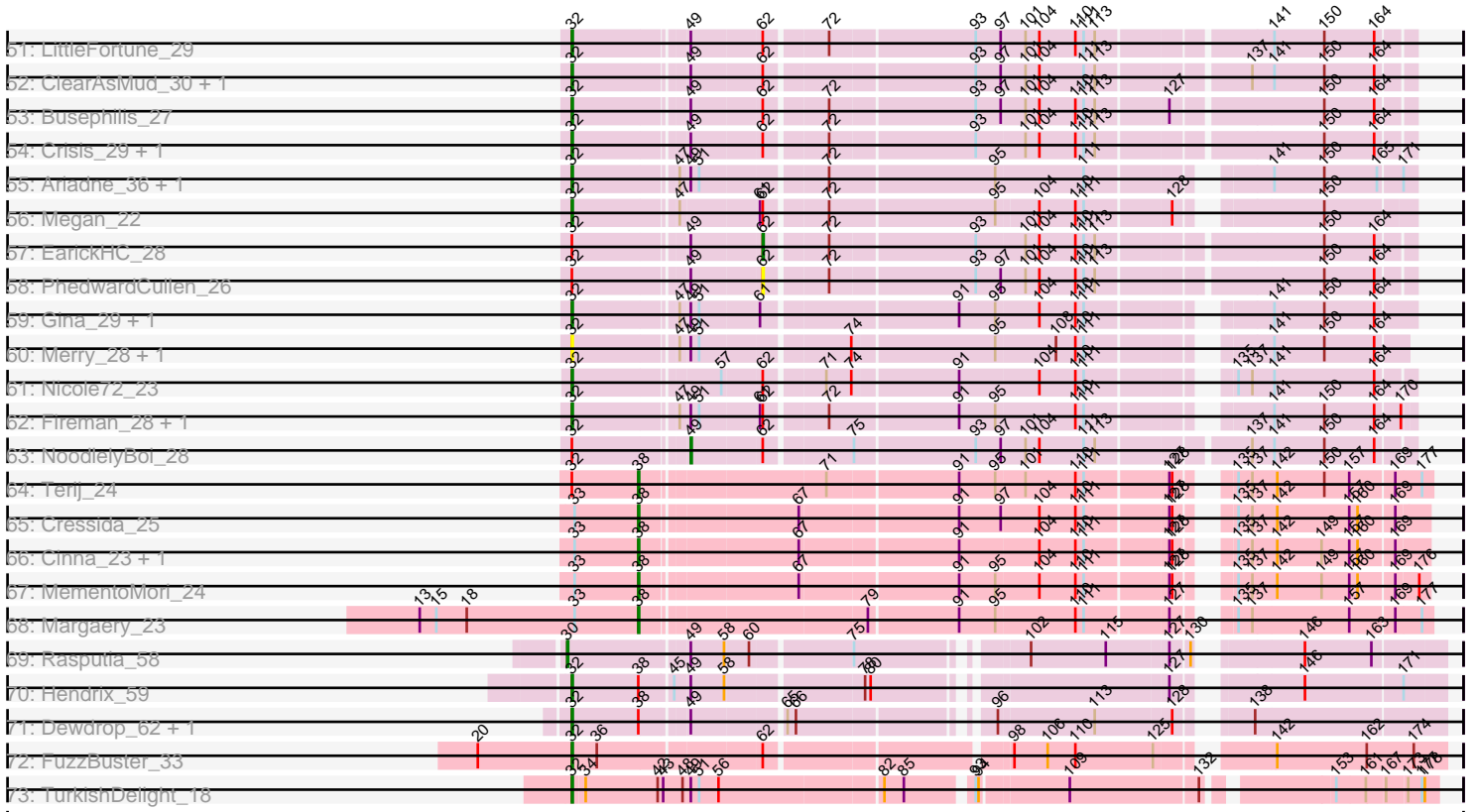


Pham 202707



Pham 202707



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 202707 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202707 has 187 members, 26 are drafts.

Phages represented in each track:

- Track 1 : TP1604\_14, BayC\_14, Salete\_14, BabyGotBac\_14, Maih\_14, Asis\_14
- Track 2 : YDN12\_15
- Track 3 : Xkcd426\_15
- Track 4 : RainyPolka\_15
- Track 5 : Abt2graduatex2\_15
- Track 6 : Mischief19\_16
- Track 7 : Mutzi\_22, Savbucketdawg\_20, Danyall\_22, Togo\_20, Wizard\_20, Jambalaya\_20, Nubi\_20, Phlop\_20, TillyBobJoe\_20, Gezellig\_21, KimmyK\_22, PullumCavea\_20, PinkCoffee\_22, ClamChowder\_22, RogerDodger\_23, Fugax\_22, CoveyB\_23, CherryCola\_24, Shinji\_20, Salvador\_20, Fireball\_21, Portcullis\_20, Evamon\_20, Arri\_23, Barb\_22, VanDeWege\_23, Twister6\_22, Valary\_23, SmokingBunny\_20
- Track 8 : Bakery\_21, Halo3\_21
- Track 9 : YungMoney\_22
- Track 10 : Clown\_24
- Track 11 : Belphegor\_19
- Track 12 : Ailee\_21, Keitabear\_23
- Track 13 : Baumdotcom\_21, Gaea\_21, Tycho\_21, Saronaya\_21, Kwobi\_22, YorkOnyx\_22, Gustavo\_21
- Track 14 : Lennon\_23, Bibwit\_22, Sedona\_23, Barsten\_22, Stultus\_21, Sitar\_23
- Track 15 : Geodirt\_20, Kewpiedoll\_22
- Track 16 : Fosterous\_19
- Track 17 : Flatwoods\_22, Derg\_19
- Track 18 : McKinley\_22, Love\_23, Galadriel\_23, Vivi2\_21, Rofo\_21, MoontowerMania\_20, Nordenberg\_16
- Track 19 : ChadMasterC\_21, Sanjuju\_19, Kamashten\_22, Thing3\_22, Jabberwocky\_19
- Track 20 : FuegoCuervo\_24
- Track 21 : Ribeye\_22
- Track 22 : Brandonk123\_23, Paries\_22
- Track 23 : Shivanishola\_21, BobBob\_19, Charming\_19, Tangent\_19
- Track 24 : LilHam\_19, SchottB\_20, JKSyngboy\_20
- Track 25 : Ashertheman\_22
- Track 26 : Kroos\_22, StorminNorm\_21, Tangerine\_21
- Track 27 : Affeca\_21, Angelicage\_21, Fitzgerald\_19
- Track 28 : Baddon\_21
- Track 29 : RiverRaider\_22

- Track 30 : Bizzy\_22
- Track 31 : Leonard\_22, Ali17\_20, Phinally\_22
- Track 32 : Hans\_24, Phauci\_15, Inspectinfecti\_23
- Track 33 : EMoore\_17
- Track 34 : MelBins\_23
- Track 35 : Chickadee\_21, Tiamoceli\_22
- Track 36 : Kwekel\_21
- Track 37 : Twonlo\_19
- Track 38 : GTE6\_21
- Track 39 : RoadKill\_19, EdmundFerry\_20
- Track 40 : Dextert\_22
- Track 41 : Scioto\_22, Natkenzie\_22, Sampson\_22, Abblin\_22
- Track 42 : DoctorFroggo\_22, Zipp\_22, Delrey21\_22, Verity\_22
- Track 43 : Zitch\_24
- Track 44 : APunk\_24
- Track 45 : ViaConlectus\_23
- Track 46 : Tardus\_23
- Track 47 : Lilbeanie\_19
- Track 48 : Shrubaron\_28, RobsFeet\_29, Metamorphoo\_28
- Track 49 : Ganandorf\_27, PierreOrion\_28
- Track 50 : Paschalis\_27, Jefe\_28, BrazzalePHS\_27, Savannah\_27, Cranjis\_29, Yeti\_28, PiperSansNom\_28, Jollipop\_28, Hermeonysus\_27, Onika\_27, Pulchra\_29, Selwyn23\_29, Ramiel05\_27, Glorp\_29, Phrancesco\_28, Quhwah\_31, Piperis\_28, Antares\_28, Scumberland\_29, Shotgun\_27, CrazyRich\_27, Phorgeous\_27, Honeyfin\_29, Kowalski\_27
- Track 51 : LittleFortune\_29
- Track 52 : ClearAsMud\_30, SirFrank\_27
- Track 53 : Busephilis\_27
- Track 54 : Crisis\_29, KaiHaiDragon\_28
- Track 55 : Ariadne\_36, Smarties\_36
- Track 56 : Megan\_22
- Track 57 : EarickHC\_28
- Track 58 : PhedwardCullen\_26
- Track 59 : Gina\_29, Teamocil\_29
- Track 60 : Merry\_28, Sunny\_28
- Track 61 : Nicole72\_23
- Track 62 : Fireman\_28, Tyrumbra\_26
- Track 63 : NoodlelyBoi\_28
- Track 64 : Terij\_24
- Track 65 : Cressida\_25
- Track 66 : Cinna\_23, Matzah\_24
- Track 67 : MementoMori\_24
- Track 68 : Margaery\_23
- Track 69 : Rasputia\_58
- Track 70 : Hendrix\_59
- Track 71 : Dewdrop\_62, Leaf\_62
- Track 72 : FuzzBuster\_33
- Track 73 : TurkishDelight\_18

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

The start number called the most often in the published annotations is 32, it was called in 54 of the 161 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abt2graduatex2\_15, Antares\_28, Ariadne\_36, Asis\_14, BabyGotBac\_14, BayC\_14, BrazzalePHS\_27, Busephilis\_27, ClearAsMud\_30, Cranjjs\_29, CrazyRich\_27, Crisis\_29, Dewdrop\_62, Fireman\_28, FuzzBuster\_33, Gina\_29, Glorp\_29, Hendrix\_59, Hermeonysus\_27, Honeyfin\_29, Jefe\_28, Jollipop\_28, KaiHaiDragon\_28, Kowalski\_27, Leaf\_62, Lilbeanie\_19, LittleFortune\_29, Maih\_14, Megan\_22, Merry\_28, Metamorphoo\_28, Mischief19\_16, Nicole72\_23, Onika\_27, Paschalis\_27, Phorgeous\_27, Phrancesco\_28, PiperSansNom\_28, Piperis\_28, Pulchra\_29, Quhwah\_31, RainyPolka\_15, Ramiel05\_27, RobsFeet\_29, Salete\_14, Savannah\_27, Scumberland\_29, Selwyn23\_29, Shotgun\_27, Shrubaron\_28, SirFrank\_27, Smarties\_36, Sunny\_28, TP1604\_14, Teamocil\_29, TurkishDelight\_18, Tyumbra\_26, Xkcd426\_15, YDN12\_15, Yeti\_28,

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

- EarickHC\_28, Ganandorf\_27, NoodlelyBoi\_28, PhedwardCullen\_26, PierreOrion\_28, Terij\_24,

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

- APunk\_24, Abblin\_22, Affeca\_21, Ailee\_21, Ali17\_20, Angelicage\_21, Arri\_23, Ashertheman\_22, Baddon\_21, Bakery\_21, Barb\_22, Barsten\_22, Baumdotcom\_21, Belphegor\_19, Bibwit\_22, Bizzy\_22, BobBob\_19, Brandonk123\_23, ChadMasterC\_21, Charming\_19, CherryCola\_24, Chickadee\_21, Cinna\_23, ClamChowder\_22, Clown\_24, CoveyB\_23, Cressida\_25, Danyall\_22, Delrey21\_22, Derg\_19, Dxdert\_22, DoctorFroggo\_22, EMOore\_17, EdmundFerry\_20, Evamon\_20, Fireball\_21, Fitzgerald\_19, Flatwoods\_22, Fosterous\_19, FuegoCuervo\_24, Fugax\_22, GTE6\_21, Gaea\_21, Galadriel\_23, Geodirt\_20, Gezellig\_21, Gustavo\_21, Halo3\_21, Hans\_24, Inspectinfecti\_23, JKSyngboy\_20, Jabberwocky\_19, Jambalaya\_20, Kamashten\_22, Keitabear\_23, Kewpiedoll\_22, KimmyK\_22, Kroos\_22, Kwekel\_21, Kwobi\_22, Lennon\_23, Leonard\_22, LilHam\_19, Love\_23, Margaery\_23, Matzah\_24, McKinley\_22, MelBins\_23, MementoMori\_24, MoontowerMania\_20, Mutzi\_22, Natkenzie\_22, Nordenberg\_16, Nubi\_20, Paries\_22, Phauci\_15, Phinally\_22, Phlop\_20, PinkCoffee\_22, Portcullis\_20, PullumCavea\_20, Rasputia\_58, Ribeye\_22, RiverRaider\_22, RoadKill\_19, Rofo\_21, RogerDodger\_23, Salvador\_20, Sampson\_22, Sanjuju\_19, Saronaya\_21, Savbucketdawg\_20, SchottB\_20, Scioto\_22, Sedona\_23, Shinji\_20, Shivanishola\_21, Sitar\_23, SmokingBunny\_20, StorminNorm\_21, Stultus\_21, Tangent\_19, Tangerine\_21, Tardus\_23, Thing3\_22, Tiamoceli\_22, TillyBobJoe\_20, Togo\_20, Twister6\_22, Twonlo\_19, Tycho\_21, Valary\_23, VanDeWege\_23, Verity\_22, ViaConlectus\_23, Vivi2\_21, Wizard\_20, YorkOnyx\_22, YungMoney\_22, Zipp\_22, Zitch\_24,

### Summary by start number:

Start 25:

- Found in 17 of 187 ( 9.1% ) of genes in pham
- Manual Annotations of this start: 15 of 161
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ali17\_20 (DE2), Belphegor\_19 (DE), Chickadee\_21 (DE3), Dxdert\_22 (DE3), EMOore\_17 (DE2), EdmundFerry\_20 (DE3), GTE6\_21 (DE3), Hans\_24 (DE2), Inspectinfecti\_23 (DE2), Kwekel\_21 (DE3),

Leonard\_22 (DE2), MelBins\_23 (DE2), Phauci\_15 (DE2), Phinally\_22 (DE2), RoadKill\_19 (DE3), Tiamoceli\_22 (DE3), Twonlo\_19 (DE3),

Start 27:

- Found in 53 of 187 ( 28.3% ) of genes in pham
- Manual Annotations of this start: 43 of 161
- Called 98.1% of time when present
- Phage (with cluster) where this start called: Affeca\_21 (DE1), Ailee\_21 (DE1), Angelicage\_21 (DE1), Ashertheman\_22 (DE1), Baddon\_21 (DE1), Barsten\_22 (DE1), Baumdotcom\_21 (DE1), Bibwit\_22 (DE1), Bizzy\_22 (DE1), BobBob\_19 (DE1), Brandonk123\_23 (DE1), ChadMasterC\_21 (DE1), Charming\_19 (DE1), Derg\_19 (DE1), Fitzgerald\_19 (DE1), Flatwoods\_22 (DE1), Fosterous\_19 (DE1), FuegoCuervo\_24 (DE1), Gaea\_21 (DE1), Galadriel\_23 (DE1), Geodirt\_20 (DE1), Gustavo\_21 (DE1), JKSyngboy\_20 (DE1), Jabberwocky\_19 (DE1), Kamashten\_22 (DE1), Keitabear\_23 (DE1), Kewpiedoll\_22 (DE1), Kroos\_22 (DE1), Kwobi\_22 (DE1), Lennon\_23 (DE1), LilHam\_19 (DE1), Love\_23 (DE1), McKinley\_22 (DE1), MoontowerMania\_20 (DE1), Nordenberg\_16 (DE1), Paries\_22 (DE1), Ribeye\_22 (DE1), Rofo\_21 (DE1), Sanjuju\_19 (DE1), Saronaya\_21 (DE1), SchottB\_20 (DE1), Sedona\_23 (DE1), Shivanishola\_21 (DE1), Sitar\_23 (DE1), StorminNorm\_21 (DE1), Stultus\_21 (DE1), Tangent\_19 (DE1), Tangerine\_21 (DE1), Thing3\_22 (DE1), Tycho\_21 (DE1), Vivi2\_21 (DE1), YorkOnyx\_22 (DE1),

Start 28:

- Found in 2 of 187 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 161
- Called 50.0% of time when present
- Phage (with cluster) where this start called: RiverRaider\_22 (DE1),

Start 30:

- Found in 1 of 187 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 161
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rasputia\_58 (GC),

Start 32:

- Found in 66 of 187 ( 35.3% ) of genes in pham
- Manual Annotations of this start: 54 of 161
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Abt2graduatex2\_15 (BG), Antares\_28 (EC), Ariadne\_36 (EC), Asis\_14 (BG), BabyGotBac\_14 (BG), BayC\_14 (BG), BrazzalePHS\_27 (EC), Busephilis\_27 (EC), ClearAsMud\_30 (EC), Cranjis\_29 (EC), CrazyRich\_27 (EC), Crisis\_29 (EC), Dewdrop\_62 (GC), Fireman\_28 (EC), FuzzBuster\_33 (singleton), Gina\_29 (EC), Glorp\_29 (EC), Hendrix\_59 (GC), Hermeonysus\_27 (EC), Honeyfin\_29 (EC), Jefe\_28 (EC), Jollipop\_28 (EC), KaiHaiDragon\_28 (EC), Kowalski\_27 (EC), Leaf\_62 (GC), Lilbeanie\_19 (DE5), LittleFortune\_29 (EC), Maih\_14 (BG), Megan\_22 (EC), Merry\_28 (EC), Metamorphoo\_28 (EC), Mischief19\_16 (BG), Nicole72\_23 (EC), Onika\_27 (EC), Paschalis\_27 (EC), Phorgeous\_27 (EC), Phrancesco\_28 (EC), PiperSansNom\_28 (EC), Piperis\_28 (EC), Pulchra\_29 (EC), Quhwah\_31 (EC), RainyPolka\_15 (BG), Ramiel05\_27 (EC), RobsFeet\_29 (EC), Salete\_14 (BG), Savannah\_27 (EC), Scumberland\_29 (EC), Selwyn23\_29 (EC), Shotgun\_27 (EC), Shrubaron\_28 (EC), SirFrank\_27 (EC), Smarties\_36 (EC), Sunny\_28 (EC), TP1604\_14 (BG), Teamocil\_29 (EC), TurkishDelight\_18 (singleton), Tyumbra\_26 (EC), Xkcd426\_15 (BG),

YDN12\_15 (BG), Yeti\_28 (EC),

Start 33:

- Found in 50 of 187 ( 26.7% ) of genes in pham
- Manual Annotations of this start: 38 of 161
- Called 90.0% of time when present
- Phage (with cluster) where this start called: APunk\_24 (DE4), Abblin\_22 (DE4), Arri\_23 (DC1), Bakery\_21 (DC1), Barb\_22 (DC1), CherryCola\_24 (DC1), ClamChowder\_22 (DC1), Clown\_24 (DC2), CoveyB\_23 (DC1), Danyall\_22 (DC1), Delrey21\_22 (DE4), DoctorFroggo\_22 (DE4), Evamon\_20 (DC1), Fireball\_21 (DC1), Fugax\_22 (DC1), Gezellig\_21 (DC1), Halo3\_21 (DC1), Jambalaya\_20 (DC1), KimmyK\_22 (DC1), Mutzi\_22 (DC1), Natkenzie\_22 (DE4), Nubi\_20 (DC1), Phlop\_20 (DC1), PinkCoffee\_22 (DC1), Portcullis\_20 (DC1), PullumCavea\_20 (DC1), RogerDodger\_23 (DC1), Salvador\_20 (DC1), Sampson\_22 (DE4), Savbucketdawg\_20 (DC1), Scioto\_22 (DE4), Shinji\_20 (DC1), SmokingBunny\_20 (DC1), Tardus\_23 (DE4), TillyBobJoe\_20 (DC1), Togo\_20 (DC1), Twister6\_22 (DC1), Valary\_23 (DC1), VanDeWege\_23 (DC1), Verity\_22 (DE4), ViaConlectus\_23 (DE4), Wizard\_20 (DC1), YungMoney\_22 (DC1), Zipp\_22 (DE4), Zitch\_24 (DE4),

Start 38:

- Found in 9 of 187 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 6 of 161
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Cinna\_23 (EI), Cressida\_25 (EI), Margaery\_23 (EI), Matzah\_24 (EI), MementoMori\_24 (EI), Terij\_24 (EI),

Start 49:

- Found in 51 of 187 ( 27.3% ) of genes in pham
- Manual Annotations of this start: 2 of 161
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Ganandorf\_27 (EC), NoodlelyBoi\_28 (EC), PierreOrion\_28 (EC),

Start 62:

- Found in 52 of 187 ( 27.8% ) of genes in pham
- Manual Annotations of this start: 1 of 161
- Called 3.8% of time when present
- Phage (with cluster) where this start called: EarickHC\_28 (EC), PhedwardCullen\_26 (EC),

### Summary by clusters:

There are 13 clusters represented in this pham: singleton, BG, EI, DE1, DE2, DE3, DE4, DE5, EC, DE, GC, DC2, DC1,

Info for manual annotations of cluster BG:

- Start number 32 was manually annotated 10 times for cluster BG.

Info for manual annotations of cluster DC1:

- Start number 33 was manually annotated 28 times for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 33 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DE1:

- Start number 27 was manually annotated 43 times for cluster DE1.
- Start number 28 was manually annotated 1 time for cluster DE1.

Info for manual annotations of cluster DE2:

- Start number 25 was manually annotated 8 times for cluster DE2.

Info for manual annotations of cluster DE3:

- Start number 25 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DE4:

- Start number 33 was manually annotated 9 times for cluster DE4.

Info for manual annotations of cluster DE5:

- Start number 32 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster EC:

- Start number 32 was manually annotated 38 times for cluster EC.
- Start number 49 was manually annotated 2 times for cluster EC.
- Start number 62 was manually annotated 1 time for cluster EC.

Info for manual annotations of cluster EI:

- Start number 38 was manually annotated 6 times for cluster EI.

Info for manual annotations of cluster GC:

- Start number 30 was manually annotated 1 time for cluster GC.
- Start number 32 was manually annotated 3 times for cluster GC.

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

Gene: APunk\_24 Start: 18327, Stop: 19151, Start Num: 33

Candidate Starts for APunk\_24:

(29, 18318), (Start: 33 @18327 has 38 MA's), (40, 18399), (55, 18465), (72, 18582), (83, 18639), (93, 18711), (96, 18732), (110, 18813), (113, 18834), (120, 18864), (123, 18885), (128, 18912), (137, 18993), (139, 18999), (143, 19020), (149, 19065), (151, 19077), (159, 19101),

Gene: Abblin\_22 Start: 17540, Stop: 18364, Start Num: 33

Candidate Starts for Abblin\_22:

(Start: 33 @17540 has 38 MA's), (40, 17612), (55, 17678), (65, 17753), (72, 17795), (83, 17852), (93, 17924), (96, 17945), (99, 17966), (110, 18026), (113, 18047), (117, 18068), (120, 18077), (123, 18098), (128, 18125), (134, 18182), (137, 18206), (139, 18212), (143, 18233), (151, 18290), (159, 18314),

Gene: Abt2graduatex2\_15 Start: 16020, Stop: 16913, Start Num: 32

Candidate Starts for Abt2graduatex2\_15:

(1, 15447), (2, 15624), (3, 15642), (4, 15654), (5, 15714), (6, 15720), (7, 15741), (8, 15759), (9, 15762), (10, 15813), (11, 15843), (12, 15855), (13, 15864), (14, 15873), (15, 15882), (16, 15891), (17, 15894), (19, 15918), (21, 15951), (24, 15993), (Start: 32 @16020 has 54 MA's), (34, 16035), (39, 16098), (44, 16122), (50, 16146), (53, 16155), (Start: 62 @16218 has 1 MA's), (63, 16227), (83, 16350), (86,



16365), (90, 16398), (92, 16419), (94, 16425), (104, 16485), (111, 16533), (112, 16539), (119, 16575), (136, 16692), (140, 16716), (144, 16734), (155, 16797), (161, 16818), (167, 16836),

Gene: Affeca\_21 Start: 17356, Stop: 18186, Start Num: 27

Candidate Starts for Affeca\_21:

(Start: 27 @17356 has 43 MA's), (31, 17365), (46, 17470), (63, 17560), (72, 17614), (75, 17638), (87, 17701), (93, 17749), (120, 17905), (128, 17953), (134, 18010), (137, 18034), (139, 18040), (150, 18109), (152, 18121), (158, 18139), (161, 18154),

Gene: Ailee\_21 Start: 17270, Stop: 18100, Start Num: 27

Candidate Starts for Ailee\_21:

(Start: 27 @17270 has 43 MA's), (31, 17279), (46, 17384), (57, 17432), (63, 17474), (67, 17498), (75, 17552), (87, 17615), (93, 17663), (97, 17690), (120, 17819), (128, 17867), (134, 17924), (137, 17948), (139, 17954), (150, 18023), (152, 18035), (158, 18053), (161, 18068),

Gene: Ali17\_20 Start: 16677, Stop: 17507, Start Num: 25

Candidate Starts for Ali17\_20:

(Start: 25 @16677 has 15 MA's), (26, 16683), (34, 16710), (35, 16716), (40, 16770), (72, 16941), (73, 16953), (87, 17028), (93, 17076), (110, 17178), (121, 17232), (126, 17262), (128, 17277), (134, 17334), (152, 17445),

Gene: Angelicage\_21 Start: 17779, Stop: 18609, Start Num: 27

Candidate Starts for Angelicage\_21:

(Start: 27 @17779 has 43 MA's), (31, 17788), (46, 17893), (63, 17983), (72, 18037), (75, 18061), (87, 18124), (93, 18172), (120, 18328), (128, 18376), (134, 18433), (137, 18457), (139, 18463), (150, 18532), (152, 18544), (158, 18562), (161, 18577),

Gene: Antares\_28 Start: 15892, Stop: 16722, Start Num: 32

Candidate Starts for Antares\_28:

(Start: 32 @15892 has 54 MA's), (Start: 49 @16003 has 2 MA's), (Start: 62 @16075 has 1 MA's), (72, 16135), (93, 16285), (97, 16312), (101, 16336), (104, 16351), (110, 16390), (111, 16399), (113, 16411), (150, 16633), (164, 16687),

Gene: Ariadne\_36 Start: 17634, Stop: 18449, Start Num: 32

Candidate Starts for Ariadne\_36:

(Start: 32 @17634 has 54 MA's), (47, 17736), (Start: 49 @17745 has 2 MA's), (51, 17754), (72, 17877), (95, 18051), (111, 18144), (141, 18300), (150, 18354), (165, 18411), (171, 18435),

Gene: Arri\_23 Start: 14513, Stop: 15325, Start Num: 33

Candidate Starts for Arri\_23:

(Start: 33 @14513 has 38 MA's), (41, 14594), (69, 14744), (93, 14891), (98, 14927), (118, 15041), (166, 15311),

Gene: Ashertheman\_22 Start: 16864, Stop: 17691, Start Num: 27

Candidate Starts for Ashertheman\_22:

(22, 16819), (23, 16825), (Start: 27 @16864 has 43 MA's), (31, 16873), (46, 16975), (63, 17065), (67, 17089), (87, 17206), (93, 17254), (101, 17305), (120, 17410), (122, 17428), (128, 17458), (131, 17479), (134, 17515), (139, 17545), (152, 17626), (158, 17644), (161, 17659),

Gene: Asis\_14 Start: 15544, Stop: 16440, Start Num: 32

Candidate Starts for Asis\_14:

(Start: 32 @15544 has 54 MA's), (39, 15622), (44, 15646), (50, 15670), (53, 15679), (Start: 62 @15742 has 1 MA's), (83, 15874), (86, 15889), (90, 15922), (92, 15943), (98, 15982), (100, 15991), (111,

16057), (112, 16063), (113, 16069), (119, 16099), (124, 16129), (128, 16153), (144, 16258), (148, 16291), (161, 16342), (167, 16360), (177, 16399), (179, 16426),

Gene: BabyGotBac\_14 Start: 15544, Stop: 16440, Start Num: 32

Candidate Starts for BabyGotBac\_14:

(Start: 32 @15544 has 54 MA's), (39, 15622), (44, 15646), (50, 15670), (53, 15679), (Start: 62 @15742 has 1 MA's), (83, 15874), (86, 15889), (90, 15922), (92, 15943), (98, 15982), (100, 15991), (111, 16057), (112, 16063), (113, 16069), (119, 16099), (124, 16129), (128, 16153), (144, 16258), (148, 16291), (161, 16342), (167, 16360), (177, 16399), (179, 16426),

Gene: Baddon\_21 Start: 17711, Stop: 18538, Start Num: 27

Candidate Starts for Baddon\_21:

(Start: 27 @17711 has 43 MA's), (31, 17720), (46, 17822), (63, 17912), (67, 17936), (87, 18053), (93, 18101), (101, 18152), (110, 18206), (120, 18257), (122, 18275), (128, 18305), (131, 18326), (134, 18362), (139, 18392), (152, 18473), (154, 18476), (158, 18491), (161, 18506),

Gene: Bakery\_21 Start: 13726, Stop: 14538, Start Num: 33

Candidate Starts for Bakery\_21:

(Start: 33 @13726 has 38 MA's), (41, 13807), (69, 13957), (89, 14077), (93, 14104), (118, 14254), (137, 14386), (166, 14524),

Gene: Barb\_22 Start: 14500, Stop: 15312, Start Num: 33

Candidate Starts for Barb\_22:

(Start: 33 @14500 has 38 MA's), (41, 14581), (69, 14731), (93, 14878), (98, 14914), (118, 15028), (166, 15298),

Gene: Barsten\_22 Start: 17286, Stop: 18116, Start Num: 27

Candidate Starts for Barsten\_22:

(Start: 27 @17286 has 43 MA's), (31, 17295), (46, 17400), (63, 17490), (67, 17514), (72, 17544), (75, 17568), (87, 17631), (93, 17679), (97, 17706), (120, 17835), (128, 17883), (134, 17940), (137, 17964), (139, 17970), (150, 18039), (152, 18051), (158, 18069), (161, 18084),

Gene: Baumdotcom\_21 Start: 16480, Stop: 17307, Start Num: 27

Candidate Starts for Baumdotcom\_21:

(Start: 27 @16480 has 43 MA's), (31, 16489), (46, 16591), (63, 16681), (87, 16822), (93, 16870), (101, 16921), (110, 16975), (120, 17026), (122, 17044), (128, 17074), (131, 17095), (134, 17131), (139, 17161), (152, 17242), (158, 17260), (161, 17275),

Gene: BayC\_14 Start: 15544, Stop: 16440, Start Num: 32

Candidate Starts for BayC\_14:

(Start: 32 @15544 has 54 MA's), (39, 15622), (44, 15646), (50, 15670), (53, 15679), (Start: 62 @15742 has 1 MA's), (83, 15874), (86, 15889), (90, 15922), (92, 15943), (98, 15982), (100, 15991), (111, 16057), (112, 16063), (113, 16069), (119, 16099), (124, 16129), (128, 16153), (144, 16258), (148, 16291), (161, 16342), (167, 16360), (177, 16399), (179, 16426),

Gene: Belphegor\_19 Start: 15791, Stop: 16621, Start Num: 25

Candidate Starts for Belphegor\_19:

(Start: 25 @15791 has 15 MA's), (26, 15797), (35, 15830), (40, 15884), (72, 16055), (73, 16067), (93, 16190), (113, 16313), (128, 16391), (134, 16448), (152, 16559),

Gene: Bibwit\_22 Start: 17521, Stop: 18351, Start Num: 27

Candidate Starts for Bibwit\_22:

(Start: 27 @17521 has 43 MA's), (31, 17530), (46, 17635), (63, 17725), (67, 17749), (72, 17779), (75, 17803), (87, 17866), (93, 17914), (97, 17941), (120, 18070), (128, 18118), (134, 18175), (137, 18199), (139, 18205), (150, 18274), (152, 18286), (158, 18304), (161, 18319),

Gene: Bizzy\_22 Start: 16765, Stop: 17592, Start Num: 27

Candidate Starts for Bizzy\_22:

(Start: 27 @16765 has 43 MA's), (31, 16774), (46, 16876), (63, 16966), (87, 17107), (93, 17155), (101, 17206), (110, 17260), (120, 17311), (122, 17329), (128, 17359), (131, 17380), (134, 17416), (139, 17446), (141, 17461), (152, 17527), (158, 17545), (161, 17560),

Gene: BobBob\_19 Start: 16143, Stop: 16973, Start Num: 27

Candidate Starts for BobBob\_19:

(Start: 27 @16143 has 43 MA's), (31, 16152), (46, 16257), (63, 16347), (72, 16401), (75, 16425), (87, 16488), (93, 16536), (97, 16563), (100, 16584), (102, 16593), (120, 16692), (128, 16740), (134, 16797), (137, 16821), (139, 16827), (150, 16896), (152, 16908), (158, 16926), (161, 16941),

Gene: Brandonk123\_23 Start: 16835, Stop: 17665, Start Num: 27

Candidate Starts for Brandonk123\_23:

(Start: 27 @16835 has 43 MA's), (31, 16844), (46, 16949), (63, 17039), (67, 17063), (75, 17117), (87, 17180), (93, 17228), (97, 17255), (102, 17285), (120, 17384), (128, 17432), (134, 17489), (139, 17519), (150, 17588), (152, 17600), (158, 17618), (161, 17633),

Gene: BrazzalePHS\_27 Start: 15687, Stop: 16517, Start Num: 32

Candidate Starts for BrazzalePHS\_27:

(Start: 32 @15687 has 54 MA's), (Start: 49 @15798 has 2 MA's), (Start: 62 @15870 has 1 MA's), (72, 15930), (93, 16080), (97, 16107), (101, 16131), (104, 16146), (110, 16185), (111, 16194), (113, 16206), (150, 16428), (164, 16482),

Gene: Busephilis\_27 Start: 15623, Stop: 16453, Start Num: 32

Candidate Starts for Busephilis\_27:

(Start: 32 @15623 has 54 MA's), (Start: 49 @15734 has 2 MA's), (Start: 62 @15806 has 1 MA's), (72, 15866), (93, 16016), (97, 16043), (101, 16067), (104, 16082), (110, 16121), (111, 16130), (113, 16142), (127, 16214), (150, 16364), (164, 16418),

Gene: ChadMasterC\_21 Start: 17242, Stop: 18072, Start Num: 27

Candidate Starts for ChadMasterC\_21:

(Start: 27 @17242 has 43 MA's), (31, 17251), (46, 17356), (63, 17446), (72, 17500), (75, 17524), (87, 17587), (93, 17635), (97, 17662), (120, 17791), (128, 17839), (134, 17896), (137, 17920), (139, 17926), (150, 17995), (152, 18007), (158, 18025), (161, 18040),

Gene: Charming\_19 Start: 16145, Stop: 16975, Start Num: 27

Candidate Starts for Charming\_19:

(Start: 27 @16145 has 43 MA's), (31, 16154), (46, 16259), (63, 16349), (72, 16403), (75, 16427), (87, 16490), (93, 16538), (97, 16565), (100, 16586), (102, 16595), (120, 16694), (128, 16742), (134, 16799), (137, 16823), (139, 16829), (150, 16898), (152, 16910), (158, 16928), (161, 16943),

Gene: CherryCola\_24 Start: 14709, Stop: 15521, Start Num: 33

Candidate Starts for CherryCola\_24:

(Start: 33 @14709 has 38 MA's), (41, 14790), (69, 14940), (93, 15087), (98, 15123), (118, 15237), (166, 15507),

Gene: Chickadee\_21 Start: 15725, Stop: 16555, Start Num: 25

Candidate Starts for Chickadee\_21:

(Start: 25 @15725 has 15 MA's), (54, 15881), (56, 15893), (68, 15971), (84, 16055), (89, 16097), (93, 16124), (110, 16226), (120, 16277), (137, 16406), (139, 16412), (143, 16433), (152, 16493), (157, 16508),

Gene: Cinna\_23 Start: 15247, Stop: 16008, Start Num: 38

Candidate Starts for Cinna\_23:

(Start: 33 @15178 has 38 MA's), (Start: 38 @15247 has 6 MA's), (67, 15400), (91, 15562), (104, 15646), (110, 15685), (111, 15694), (127, 15778), (128, 15781), (135, 15814), (137, 15829), (142, 15853), (149, 15901), (157, 15931), (160, 15940), (169, 15976),

Gene: ClamChowder\_22 Start: 14500, Stop: 15312, Start Num: 33

Candidate Starts for ClamChowder\_22:

(Start: 33 @14500 has 38 MA's), (41, 14581), (69, 14731), (93, 14878), (98, 14914), (118, 15028), (166, 15298),

Gene: ClearAsMud\_30 Start: 16413, Stop: 17243, Start Num: 32

Candidate Starts for ClearAsMud\_30:

(Start: 32 @16413 has 54 MA's), (Start: 49 @16524 has 2 MA's), (Start: 62 @16596 has 1 MA's), (93, 16806), (97, 16833), (101, 16857), (104, 16872), (111, 16920), (113, 16932), (137, 17079), (141, 17100), (150, 17154), (164, 17208),

Gene: Clown\_24 Start: 16474, Stop: 17325, Start Num: 33

Candidate Starts for Clown\_24:

(Start: 33 @16474 has 38 MA's), (36, 16492), (37, 16516), (41, 16549), (57, 16621), (65, 16684), (81, 16771), (88, 16813), (93, 16858), (113, 16984), (120, 17014), (125, 17044), (137, 17143), (144, 17170), (161, 17248), (166, 17266),

Gene: CoveyB\_23 Start: 14345, Stop: 15157, Start Num: 33

Candidate Starts for CoveyB\_23:

(Start: 33 @14345 has 38 MA's), (41, 14426), (69, 14576), (93, 14723), (98, 14759), (118, 14873), (166, 15143),

Gene: Cranjis\_29 Start: 15847, Stop: 16677, Start Num: 32

Candidate Starts for Cranjis\_29:

(Start: 32 @15847 has 54 MA's), (Start: 49 @15958 has 2 MA's), (Start: 62 @16030 has 1 MA's), (72, 16090), (93, 16240), (97, 16267), (101, 16291), (104, 16306), (110, 16345), (111, 16354), (113, 16366), (150, 16588), (164, 16642),

Gene: CrazyRich\_27 Start: 15657, Stop: 16487, Start Num: 32

Candidate Starts for CrazyRich\_27:

(Start: 32 @15657 has 54 MA's), (Start: 49 @15768 has 2 MA's), (Start: 62 @15840 has 1 MA's), (72, 15900), (93, 16050), (97, 16077), (101, 16101), (104, 16116), (110, 16155), (111, 16164), (113, 16176), (150, 16398), (164, 16452),

Gene: Cressida\_25 Start: 15291, Stop: 16052, Start Num: 38

Candidate Starts for Cressida\_25:

(Start: 33 @15222 has 38 MA's), (Start: 38 @15291 has 6 MA's), (67, 15444), (91, 15606), (97, 15651), (104, 15690), (110, 15729), (111, 15738), (127, 15822), (128, 15825), (135, 15858), (137, 15873), (142, 15897), (157, 15975), (160, 15984), (169, 16020),

Gene: Crisis\_29 Start: 15642, Stop: 16472, Start Num: 32

Candidate Starts for Crisis\_29:

(Start: 32 @15642 has 54 MA's), (Start: 49 @15753 has 2 MA's), (Start: 62 @15825 has 1 MA's), (72, 15885), (93, 16035), (101, 16086), (104, 16101), (110, 16140), (111, 16149), (113, 16161), (150, 16383), (164, 16437),

Gene: Danyall\_22 Start: 14345, Stop: 15157, Start Num: 33

Candidate Starts for Danyall\_22:

(Start: 33 @14345 has 38 MA's), (41, 14426), (69, 14576), (93, 14723), (98, 14759), (118, 14873), (166, 15143),

Gene: Delrey21\_22 Start: 17000, Stop: 17824, Start Num: 33

Candidate Starts for Delrey21\_22:

(Start: 33 @17000 has 38 MA's), (40, 17072), (72, 17255), (77, 17282), (83, 17312), (93, 17384), (96, 17405), (110, 17486), (120, 17537), (123, 17558), (128, 17585), (134, 17642), (137, 17666), (139, 17672), (141, 17687), (143, 17693), (159, 17774), (161, 17786),

Gene: Derg\_19 Start: 16357, Stop: 17184, Start Num: 27

Candidate Starts for Derg\_19:

(Start: 27 @16357 has 43 MA's), (31, 16366), (46, 16468), (63, 16558), (67, 16582), (87, 16699), (93, 16747), (101, 16798), (110, 16852), (120, 16903), (122, 16921), (128, 16951), (131, 16972), (134, 17008), (139, 17038), (141, 17053), (152, 17119), (158, 17137), (161, 17152), (166, 17170),

Gene: Dewdrop\_62 Start: 32410, Stop: 33225, Start Num: 32

Candidate Starts for Dewdrop\_62:

(Start: 32 @32410 has 54 MA's), (Start: 38 @32482 has 6 MA's), (Start: 49 @32524 has 2 MA's), (65, 32614), (66, 32623), (96, 32800), (113, 32899), (128, 32977), (138, 33028),

Gene: Dextert\_22 Start: 16169, Stop: 16999, Start Num: 25

Candidate Starts for Dextert\_22:

(Start: 25 @16169 has 15 MA's), (54, 16325), (56, 16337), (84, 16499), (89, 16541), (93, 16568), (110, 16670), (120, 16721), (137, 16850), (139, 16856), (143, 16877), (152, 16937), (157, 16952),

Gene: DoctorFroggo\_22 Start: 17000, Stop: 17824, Start Num: 33

Candidate Starts for DoctorFroggo\_22:

(Start: 33 @17000 has 38 MA's), (40, 17072), (72, 17255), (77, 17282), (83, 17312), (93, 17384), (96, 17405), (110, 17486), (120, 17537), (123, 17558), (128, 17585), (134, 17642), (137, 17666), (139, 17672), (141, 17687), (143, 17693), (159, 17774), (161, 17786),

Gene: EMoore\_17 Start: 15039, Stop: 15869, Start Num: 25

Candidate Starts for EMoore\_17:

(Start: 25 @15039 has 15 MA's), (26, 15045), (34, 15072), (35, 15078), (40, 15132), (72, 15303), (73, 15315), (87, 15390), (93, 15438), (101, 15486), (110, 15540), (121, 15594), (128, 15639), (134, 15696), (152, 15807),

Gene: EarickHC\_28 Start: 15751, Stop: 16398, Start Num: 62

Candidate Starts for EarickHC\_28:

(Start: 32 @15568 has 54 MA's), (Start: 49 @15679 has 2 MA's), (Start: 62 @15751 has 1 MA's), (72, 15811), (93, 15961), (101, 16012), (104, 16027), (110, 16066), (111, 16075), (113, 16087), (150, 16309), (164, 16363),

Gene: EdmundFerry\_20 Start: 15753, Stop: 16583, Start Num: 25

Candidate Starts for EdmundFerry\_20:

(Start: 25 @15753 has 15 MA's), (54, 15909), (56, 15921), (68, 15999), (84, 16083), (89, 16125), (93, 16152), (110, 16254), (113, 16275), (120, 16305), (137, 16434), (139, 16440), (143, 16461), (152,

16521),

Gene: Evamon\_20 Start: 13832, Stop: 14644, Start Num: 33

Candidate Starts for Evamon\_20:

(Start: 33 @13832 has 38 MA's), (41, 13913), (69, 14063), (93, 14210), (98, 14246), (118, 14360), (166, 14630),

Gene: Fireball\_21 Start: 13964, Stop: 14776, Start Num: 33

Candidate Starts for Fireball\_21:

(Start: 33 @13964 has 38 MA's), (41, 14045), (69, 14195), (93, 14342), (98, 14378), (118, 14492), (166, 14762),

Gene: Fireman\_28 Start: 15540, Stop: 16349, Start Num: 32

Candidate Starts for Fireman\_28:

(Start: 32 @15540 has 54 MA's), (47, 15642), (Start: 49 @15651 has 2 MA's), (51, 15660), (61, 15720), (Start: 62 @15723 has 1 MA's), (72, 15783), (91, 15918), (95, 15957), (110, 16041), (111, 16050), (141, 16206), (150, 16260), (164, 16314), (170, 16338),

Gene: Fitzgerald\_19 Start: 16571, Stop: 17401, Start Num: 27

Candidate Starts for Fitzgerald\_19:

(Start: 27 @16571 has 43 MA's), (31, 16580), (46, 16685), (63, 16775), (72, 16829), (75, 16853), (87, 16916), (93, 16964), (120, 17120), (128, 17168), (134, 17225), (137, 17249), (139, 17255), (150, 17324), (152, 17336), (158, 17354), (161, 17369),

Gene: Flatwoods\_22 Start: 16784, Stop: 17611, Start Num: 27

Candidate Starts for Flatwoods\_22:

(Start: 27 @16784 has 43 MA's), (31, 16793), (46, 16895), (63, 16985), (67, 17009), (87, 17126), (93, 17174), (101, 17225), (110, 17279), (120, 17330), (122, 17348), (128, 17378), (131, 17399), (134, 17435), (139, 17465), (141, 17480), (152, 17546), (158, 17564), (161, 17579), (166, 17597),

Gene: Fosterous\_19 Start: 17034, Stop: 17864, Start Num: 27

Candidate Starts for Fosterous\_19:

(Start: 27 @17034 has 43 MA's), (31, 17043), (46, 17148), (57, 17196), (63, 17238), (67, 17262), (72, 17292), (75, 17316), (87, 17379), (93, 17427), (120, 17583), (128, 17631), (134, 17688), (137, 17712), (139, 17718), (150, 17787), (152, 17799), (158, 17817), (161, 17832),

Gene: FuegoCuervo\_24 Start: 16323, Stop: 17153, Start Num: 27

Candidate Starts for FuegoCuervo\_24:

(Start: 27 @16323 has 43 MA's), (31, 16332), (46, 16437), (63, 16527), (67, 16551), (72, 16581), (75, 16605), (87, 16668), (93, 16716), (97, 16743), (102, 16773), (120, 16872), (128, 16920), (134, 16977), (139, 17007), (150, 17076), (152, 17088), (158, 17106), (161, 17121),

Gene: Fugax\_22 Start: 14500, Stop: 15312, Start Num: 33

Candidate Starts for Fugax\_22:

(Start: 33 @14500 has 38 MA's), (41, 14581), (69, 14731), (93, 14878), (98, 14914), (118, 15028), (166, 15298),

Gene: FuzzBuster\_33 Start: 16274, Stop: 17122, Start Num: 32

Candidate Starts for FuzzBuster\_33:

(20, 16175), (Start: 32 @16274 has 54 MA's), (36, 16301), (Start: 62 @16463 has 1 MA's), (98, 16700), (106, 16736), (110, 16766), (125, 16847), (142, 16940), (162, 17036), (174, 17087),

Gene: GTE6\_21 Start: 16242, Stop: 17072, Start Num: 25

Candidate Starts for GTE6\_21:

(Start: 25 @16242 has 15 MA's), (54, 16398), (56, 16410), (68, 16488), (84, 16572), (89, 16614), (93, 16641), (110, 16743), (120, 16794), (137, 16923), (139, 16929), (143, 16950), (152, 17010), (157, 17025), (161, 17043),

Gene: Gaea\_21 Start: 16472, Stop: 17299, Start Num: 27

Candidate Starts for Gaea\_21:

(Start: 27 @16472 has 43 MA's), (31, 16481), (46, 16583), (63, 16673), (87, 16814), (93, 16862), (101, 16913), (110, 16967), (120, 17018), (122, 17036), (128, 17066), (131, 17087), (134, 17123), (139, 17153), (152, 17234), (158, 17252), (161, 17267),

Gene: Galadriel\_23 Start: 16884, Stop: 17714, Start Num: 27

Candidate Starts for Galadriel\_23:

(Start: 27 @16884 has 43 MA's), (31, 16893), (46, 16998), (63, 17088), (72, 17142), (75, 17166), (87, 17229), (93, 17277), (97, 17304), (102, 17334), (120, 17433), (128, 17481), (134, 17538), (137, 17562), (139, 17568), (150, 17637), (152, 17649), (158, 17667), (161, 17682),

Gene: Ganandorf\_27 Start: 15815, Stop: 16534, Start Num: 49

Candidate Starts for Ganandorf\_27:

(Start: 32 @15704 has 54 MA's), (Start: 49 @15815 has 2 MA's), (Start: 62 @15887 has 1 MA's), (72, 15947), (93, 16097), (97, 16124), (101, 16148), (104, 16163), (110, 16202), (111, 16211), (113, 16223), (150, 16445), (164, 16499),

Gene: Geodirt\_20 Start: 17101, Stop: 17931, Start Num: 27

Candidate Starts for Geodirt\_20:

(Start: 27 @17101 has 43 MA's), (31, 17110), (46, 17215), (63, 17305), (67, 17329), (72, 17359), (75, 17383), (87, 17446), (93, 17494), (97, 17521), (120, 17650), (128, 17698), (134, 17755), (139, 17785), (150, 17854), (152, 17866), (158, 17884), (161, 17899),

Gene: Gezellig\_21 Start: 13964, Stop: 14776, Start Num: 33

Candidate Starts for Gezellig\_21:

(Start: 33 @13964 has 38 MA's), (41, 14045), (69, 14195), (93, 14342), (98, 14378), (118, 14492), (166, 14762),

Gene: Gina\_29 Start: 15204, Stop: 16019, Start Num: 32

Candidate Starts for Gina\_29:

(Start: 32 @15204 has 54 MA's), (47, 15306), (Start: 49 @15315 has 2 MA's), (51, 15324), (61, 15384), (91, 15582), (95, 15621), (104, 15666), (110, 15705), (111, 15714), (141, 15870), (150, 15924), (164, 15978),

Gene: Glorp\_29 Start: 15705, Stop: 16535, Start Num: 32

Candidate Starts for Glorp\_29:

(Start: 32 @15705 has 54 MA's), (Start: 49 @15816 has 2 MA's), (Start: 62 @15888 has 1 MA's), (72, 15948), (93, 16098), (97, 16125), (101, 16149), (104, 16164), (110, 16203), (111, 16212), (113, 16224), (150, 16446), (164, 16500),

Gene: Gustavo\_21 Start: 16571, Stop: 17398, Start Num: 27

Candidate Starts for Gustavo\_21:

(Start: 27 @16571 has 43 MA's), (31, 16580), (46, 16682), (63, 16772), (87, 16913), (93, 16961), (101, 17012), (110, 17066), (120, 17117), (122, 17135), (128, 17165), (131, 17186), (134, 17222), (139, 17252), (152, 17333), (158, 17351), (161, 17366),

Gene: Halo3\_21 Start: 14285, Stop: 15097, Start Num: 33

Candidate Starts for Halo3\_21:

(Start: 33 @14285 has 38 MA's), (41, 14366), (69, 14516), (89, 14636), (93, 14663), (118, 14813), (137, 14945), (166, 15083),

Gene: Hans\_24 Start: 17335, Stop: 18165, Start Num: 25

Candidate Starts for Hans\_24:

(Start: 25 @17335 has 15 MA's), (26, 17341), (34, 17368), (35, 17374), (40, 17428), (72, 17599), (73, 17611), (87, 17686), (93, 17734), (110, 17836), (121, 17890), (128, 17935), (134, 17992), (152, 18103),

Gene: Hendrix\_59 Start: 32358, Stop: 33179, Start Num: 32

Candidate Starts for Hendrix\_59:

(Start: 32 @32358 has 54 MA's), (Start: 38 @32430 has 6 MA's), (45, 32460), (Start: 49 @32475 has 2 MA's), (58, 32511), (78, 32646), (80, 32652), (127, 32931), (146, 33036), (171, 33138),

Gene: Hermeonysus\_27 Start: 15576, Stop: 16406, Start Num: 32

Candidate Starts for Hermeonysus\_27:

(Start: 32 @15576 has 54 MA's), (Start: 49 @15687 has 2 MA's), (Start: 62 @15759 has 1 MA's), (72, 15819), (93, 15969), (97, 15996), (101, 16020), (104, 16035), (110, 16074), (111, 16083), (113, 16095), (150, 16317), (164, 16371),

Gene: Honeyfin\_29 Start: 15892, Stop: 16722, Start Num: 32

Candidate Starts for Honeyfin\_29:

(Start: 32 @15892 has 54 MA's), (Start: 49 @16003 has 2 MA's), (Start: 62 @16075 has 1 MA's), (72, 16135), (93, 16285), (97, 16312), (101, 16336), (104, 16351), (110, 16390), (111, 16399), (113, 16411), (150, 16633), (164, 16687),

Gene: Inspectinfecti\_23 Start: 17760, Stop: 18590, Start Num: 25

Candidate Starts for Inspectinfecti\_23:

(Start: 25 @17760 has 15 MA's), (26, 17766), (34, 17793), (35, 17799), (40, 17853), (72, 18024), (73, 18036), (87, 18111), (93, 18159), (110, 18261), (121, 18315), (128, 18360), (134, 18417), (152, 18528),

Gene: JKSyngboy\_20 Start: 17230, Stop: 18057, Start Num: 27

Candidate Starts for JKSyngboy\_20:

(Start: 27 @17230 has 43 MA's), (31, 17239), (46, 17341), (67, 17455), (87, 17572), (93, 17620), (101, 17671), (110, 17725), (120, 17776), (122, 17794), (128, 17824), (131, 17845), (134, 17881), (139, 17911), (152, 17992), (158, 18010), (161, 18025),

Gene: Jabberwocky\_19 Start: 17005, Stop: 17835, Start Num: 27

Candidate Starts for Jabberwocky\_19:

(Start: 27 @17005 has 43 MA's), (31, 17014), (46, 17119), (63, 17209), (72, 17263), (75, 17287), (87, 17350), (93, 17398), (97, 17425), (120, 17554), (128, 17602), (134, 17659), (137, 17683), (139, 17689), (150, 17758), (152, 17770), (158, 17788), (161, 17803),

Gene: Jambalaya\_20 Start: 13611, Stop: 14423, Start Num: 33

Candidate Starts for Jambalaya\_20:

(Start: 33 @13611 has 38 MA's), (41, 13692), (69, 13842), (93, 13989), (98, 14025), (118, 14139), (166, 14409),

Gene: Jefe\_28 Start: 15629, Stop: 16459, Start Num: 32

Candidate Starts for Jefe\_28:



(Start: 32 @15629 has 54 MA's), (Start: 49 @15740 has 2 MA's), (Start: 62 @15812 has 1 MA's), (72, 15872), (93, 16022), (97, 16049), (101, 16073), (104, 16088), (110, 16127), (111, 16136), (113, 16148), (150, 16370), (164, 16424),

Gene: Jollipop\_28 Start: 15974, Stop: 16804, Start Num: 32

Candidate Starts for Jollipop\_28:

(Start: 32 @15974 has 54 MA's), (Start: 49 @16085 has 2 MA's), (Start: 62 @16157 has 1 MA's), (72, 16217), (93, 16367), (97, 16394), (101, 16418), (104, 16433), (110, 16472), (111, 16481), (113, 16493), (150, 16715), (164, 16769),

Gene: KaiHaiDragon\_28 Start: 15568, Stop: 16398, Start Num: 32

Candidate Starts for KaiHaiDragon\_28:

(Start: 32 @15568 has 54 MA's), (Start: 49 @15679 has 2 MA's), (Start: 62 @15751 has 1 MA's), (72, 15811), (93, 15961), (101, 16012), (104, 16027), (110, 16066), (111, 16075), (113, 16087), (150, 16309), (164, 16363),

Gene: Kamashten\_22 Start: 17689, Stop: 18519, Start Num: 27

Candidate Starts for Kamashten\_22:

(Start: 27 @17689 has 43 MA's), (31, 17698), (46, 17803), (63, 17893), (72, 17947), (75, 17971), (87, 18034), (93, 18082), (97, 18109), (120, 18238), (128, 18286), (134, 18343), (137, 18367), (139, 18373), (150, 18442), (152, 18454), (158, 18472), (161, 18487),

Gene: Keitabear\_23 Start: 19226, Stop: 20056, Start Num: 27

Candidate Starts for Keitabear\_23:

(Start: 27 @19226 has 43 MA's), (31, 19235), (46, 19340), (57, 19388), (63, 19430), (67, 19454), (75, 19508), (87, 19571), (93, 19619), (97, 19646), (120, 19775), (128, 19823), (134, 19880), (137, 19904), (139, 19910), (150, 19979), (152, 19991), (158, 20009), (161, 20024),

Gene: Kewpiedoll\_22 Start: 17077, Stop: 17907, Start Num: 27

Candidate Starts for Kewpiedoll\_22:

(Start: 27 @17077 has 43 MA's), (31, 17086), (46, 17191), (63, 17281), (67, 17305), (72, 17335), (75, 17359), (87, 17422), (93, 17470), (97, 17497), (120, 17626), (128, 17674), (134, 17731), (139, 17761), (150, 17830), (152, 17842), (158, 17860), (161, 17875),

Gene: KimmyK\_22 Start: 14500, Stop: 15312, Start Num: 33

Candidate Starts for KimmyK\_22:

(Start: 33 @14500 has 38 MA's), (41, 14581), (69, 14731), (93, 14878), (98, 14914), (118, 15028), (166, 15298),

Gene: Kowalski\_27 Start: 15684, Stop: 16514, Start Num: 32

Candidate Starts for Kowalski\_27:

(Start: 32 @15684 has 54 MA's), (Start: 49 @15795 has 2 MA's), (Start: 62 @15867 has 1 MA's), (72, 15927), (93, 16077), (97, 16104), (101, 16128), (104, 16143), (110, 16182), (111, 16191), (113, 16203), (150, 16425), (164, 16479),

Gene: Kroos\_22 Start: 17329, Stop: 18156, Start Num: 27

Candidate Starts for Kroos\_22:

(Start: 27 @17329 has 43 MA's), (31, 17338), (46, 17440), (52, 17467), (63, 17530), (67, 17554), (87, 17671), (93, 17719), (101, 17770), (110, 17824), (120, 17875), (122, 17893), (128, 17923), (131, 17944), (134, 17980), (139, 18010), (152, 18091), (158, 18109), (161, 18124),

Gene: Kwekel\_21 Start: 15688, Stop: 16518, Start Num: 25

Candidate Starts for Kwekel\_21:

(Start: 25 @15688 has 15 MA's), (40, 15778), (56, 15856), (84, 16018), (89, 16060), (93, 16087), (107, 16162), (110, 16189), (120, 16240), (137, 16369), (139, 16375), (143, 16396), (152, 16456), (157, 16471),

Gene: Kwobi\_22 Start: 17311, Stop: 18138, Start Num: 27

Candidate Starts for Kwobi\_22:

(Start: 27 @17311 has 43 MA's), (31, 17320), (46, 17422), (63, 17512), (87, 17653), (93, 17701), (101, 17752), (110, 17806), (120, 17857), (122, 17875), (128, 17905), (131, 17926), (134, 17962), (139, 17992), (152, 18073), (158, 18091), (161, 18106),

Gene: Leaf\_62 Start: 32410, Stop: 33225, Start Num: 32

Candidate Starts for Leaf\_62:

(Start: 32 @32410 has 54 MA's), (Start: 38 @32482 has 6 MA's), (Start: 49 @32524 has 2 MA's), (65, 32614), (66, 32623), (96, 32800), (113, 32899), (128, 32977), (138, 33028),

Gene: Lennon\_23 Start: 18329, Stop: 19159, Start Num: 27

Candidate Starts for Lennon\_23:

(Start: 27 @18329 has 43 MA's), (31, 18338), (46, 18443), (63, 18533), (67, 18557), (72, 18587), (75, 18611), (87, 18674), (93, 18722), (97, 18749), (120, 18878), (128, 18926), (134, 18983), (137, 19007), (139, 19013), (150, 19082), (152, 19094), (158, 19112), (161, 19127),

Gene: Leonard\_22 Start: 17355, Stop: 18185, Start Num: 25

Candidate Starts for Leonard\_22:

(Start: 25 @17355 has 15 MA's), (26, 17361), (34, 17388), (35, 17394), (40, 17448), (72, 17619), (73, 17631), (87, 17706), (93, 17754), (110, 17856), (121, 17910), (126, 17940), (128, 17955), (134, 18012), (152, 18123),

Gene: LilHam\_19 Start: 15890, Stop: 16717, Start Num: 27

Candidate Starts for LilHam\_19:

(Start: 27 @15890 has 43 MA's), (31, 15899), (46, 16001), (67, 16115), (87, 16232), (93, 16280), (101, 16331), (110, 16385), (120, 16436), (122, 16454), (128, 16484), (131, 16505), (134, 16541), (139, 16571), (152, 16652), (158, 16670), (161, 16685),

Gene: Lilbeanie\_19 Start: 12678, Stop: 13550, Start Num: 32

Candidate Starts for Lilbeanie\_19:

(Start: 32 @12678 has 54 MA's), (72, 12936), (77, 12969), (86, 13014), (94, 13089), (102, 13146), (108, 13173), (110, 13194), (113, 13215), (114, 13224), (119, 13242), (120, 13245), (122, 13263), (123, 13266), (128, 13293), (139, 13386), (150, 13455), (158, 13485), (166, 13518),

Gene: LittleFortune\_29 Start: 15934, Stop: 16764, Start Num: 32

Candidate Starts for LittleFortune\_29:

(Start: 32 @15934 has 54 MA's), (Start: 49 @16045 has 2 MA's), (Start: 62 @16117 has 1 MA's), (72, 16177), (93, 16327), (97, 16354), (101, 16378), (104, 16393), (110, 16432), (111, 16441), (113, 16453), (141, 16621), (150, 16675), (164, 16729),

Gene: Love\_23 Start: 17204, Stop: 18034, Start Num: 27

Candidate Starts for Love\_23:

(Start: 27 @17204 has 43 MA's), (31, 17213), (46, 17318), (63, 17408), (72, 17462), (75, 17486), (87, 17549), (93, 17597), (97, 17624), (102, 17654), (120, 17753), (128, 17801), (134, 17858), (137, 17882), (139, 17888), (150, 17957), (152, 17969), (158, 17987), (161, 18002),

Gene: Maih\_14 Start: 15543, Stop: 16439, Start Num: 32

Candidate Starts for Maih\_14:

(Start: 32 @15543 has 54 MA's), (39, 15621), (44, 15645), (50, 15669), (53, 15678), (Start: 62 @15741 has 1 MA's), (83, 15873), (86, 15888), (90, 15921), (92, 15942), (98, 15981), (100, 15990), (111, 16056), (112, 16062), (113, 16068), (119, 16098), (124, 16128), (128, 16152), (144, 16257), (148, 16290), (161, 16341), (167, 16359), (177, 16398), (179, 16425),

Gene: Margaery\_23 Start: 15201, Stop: 15968, Start Num: 38

Candidate Starts for Margaery\_23:

(13, 14967), (15, 14985), (18, 15018), (Start: 33 @15132 has 38 MA's), (Start: 38 @15201 has 6 MA's), (79, 15423), (91, 15516), (95, 15555), (110, 15639), (111, 15648), (127, 15732), (135, 15768), (137, 15783), (157, 15885), (169, 15930), (177, 15957),

Gene: Matzah\_24 Start: 15224, Stop: 15985, Start Num: 38

Candidate Starts for Matzah\_24:

(Start: 33 @15155 has 38 MA's), (Start: 38 @15224 has 6 MA's), (67, 15377), (91, 15539), (104, 15623), (110, 15662), (111, 15671), (127, 15755), (128, 15758), (135, 15791), (137, 15806), (142, 15830), (149, 15878), (157, 15908), (160, 15917), (169, 15953),

Gene: McKinley\_22 Start: 17230, Stop: 18060, Start Num: 27

Candidate Starts for McKinley\_22:

(Start: 27 @17230 has 43 MA's), (31, 17239), (46, 17344), (63, 17434), (72, 17488), (75, 17512), (87, 17575), (93, 17623), (97, 17650), (102, 17680), (120, 17779), (128, 17827), (134, 17884), (137, 17908), (139, 17914), (150, 17983), (152, 17995), (158, 18013), (161, 18028),

Gene: Megan\_22 Start: 16905, Stop: 17714, Start Num: 32

Candidate Starts for Megan\_22:

(Start: 32 @16905 has 54 MA's), (47, 17007), (61, 17085), (Start: 62 @17088 has 1 MA's), (72, 17148), (95, 17322), (104, 17364), (110, 17403), (111, 17412), (128, 17499), (150, 17622),

Gene: MelBins\_23 Start: 17556, Stop: 18386, Start Num: 25

Candidate Starts for MelBins\_23:

(Start: 25 @17556 has 15 MA's), (26, 17562), (34, 17589), (35, 17595), (40, 17649), (72, 17820), (73, 17832), (93, 17955), (110, 18057), (121, 18111), (126, 18141), (128, 18156), (134, 18213), (152, 18324),

Gene: MementoMori\_24 Start: 14946, Stop: 15707, Start Num: 38

Candidate Starts for MementoMori\_24:

(Start: 33 @14877 has 38 MA's), (Start: 38 @14946 has 6 MA's), (67, 15099), (91, 15261), (95, 15300), (104, 15345), (110, 15384), (111, 15393), (127, 15477), (128, 15480), (135, 15513), (137, 15528), (142, 15552), (149, 15600), (157, 15630), (160, 15639), (169, 15675), (176, 15696),

Gene: Merry\_28 Start: 15926, Stop: 16729, Start Num: 32

Candidate Starts for Merry\_28:

(Start: 32 @15926 has 54 MA's), (47, 16028), (Start: 49 @16037 has 2 MA's), (51, 16046), (74, 16193), (95, 16340), (108, 16403), (110, 16424), (111, 16433), (141, 16589), (150, 16643), (164, 16697),

Gene: Metamorphoo\_28 Start: 15526, Stop: 16338, Start Num: 32

Candidate Starts for Metamorphoo\_28:

(Start: 32 @15526 has 54 MA's), (47, 15628), (Start: 49 @15637 has 2 MA's), (51, 15646), (61, 15706), (Start: 62 @15709 has 1 MA's), (72, 15769), (91, 15904), (95, 15943), (110, 16027), (111, 16036), (141, 16192), (150, 16246), (164, 16300), (171, 16327),

Gene: Mischief19\_16 Start: 18095, Stop: 18940, Start Num: 32

Candidate Starts for Mischief19\_16:

(Start: 28 @18086 has 1 MA's), (Start: 32 @18095 has 54 MA's), (35, 18116), (36, 18122), (65, 18308), (73, 18362), (83, 18413), (86, 18428), (103, 18542), (105, 18551), (116, 18623), (128, 18689), (144, 18776), (145, 18782), (147, 18806), (167, 18878), (168, 18887), (172, 18899), (175, 18911),

Gene: MoontowerMania\_20 Start: 16210, Stop: 17040, Start Num: 27

Candidate Starts for MoontowerMania\_20:

(Start: 27 @16210 has 43 MA's), (31, 16219), (46, 16324), (63, 16414), (72, 16468), (75, 16492), (87, 16555), (93, 16603), (97, 16630), (102, 16660), (120, 16759), (128, 16807), (134, 16864), (137, 16888), (139, 16894), (150, 16963), (152, 16975), (158, 16993), (161, 17008),

Gene: Mutzi\_22 Start: 14224, Stop: 15036, Start Num: 33

Candidate Starts for Mutzi\_22:

(Start: 33 @14224 has 38 MA's), (41, 14305), (69, 14455), (93, 14602), (98, 14638), (118, 14752), (166, 15022),

Gene: Natkenzie\_22 Start: 17540, Stop: 18364, Start Num: 33

Candidate Starts for Natkenzie\_22:

(Start: 33 @17540 has 38 MA's), (40, 17612), (55, 17678), (65, 17753), (72, 17795), (83, 17852), (93, 17924), (96, 17945), (99, 17966), (110, 18026), (113, 18047), (117, 18068), (120, 18077), (123, 18098), (128, 18125), (134, 18182), (137, 18206), (139, 18212), (143, 18233), (151, 18290), (159, 18314),

Gene: Nicole72\_23 Start: 17288, Stop: 18094, Start Num: 32

Candidate Starts for Nicole72\_23:

(Start: 32 @17288 has 54 MA's), (57, 17432), (Start: 62 @17471 has 1 MA's), (71, 17528), (74, 17555), (91, 17663), (104, 17747), (110, 17786), (111, 17795), (135, 17915), (137, 17930), (141, 17951), (164, 18059),

Gene: NoodlelyBoi\_28 Start: 16131, Stop: 16853, Start Num: 49

Candidate Starts for NoodlelyBoi\_28:

(Start: 32 @16020 has 54 MA's), (Start: 49 @16131 has 2 MA's), (Start: 62 @16203 has 1 MA's), (75, 16290), (93, 16416), (97, 16443), (101, 16467), (104, 16482), (111, 16530), (113, 16542), (137, 16689), (141, 16710), (150, 16764), (164, 16818),

Gene: Nordenberg\_16 Start: 15524, Stop: 16354, Start Num: 27

Candidate Starts for Nordenberg\_16:

(Start: 27 @15524 has 43 MA's), (31, 15533), (46, 15638), (63, 15728), (72, 15782), (75, 15806), (87, 15869), (93, 15917), (97, 15944), (102, 15974), (120, 16073), (128, 16121), (134, 16178), (137, 16202), (139, 16208), (150, 16277), (152, 16289), (158, 16307), (161, 16322),

Gene: Nubi\_20 Start: 13852, Stop: 14664, Start Num: 33

Candidate Starts for Nubi\_20:

(Start: 33 @13852 has 38 MA's), (41, 13933), (69, 14083), (93, 14230), (98, 14266), (118, 14380), (166, 14650),

Gene: Onika\_27 Start: 15658, Stop: 16488, Start Num: 32

Candidate Starts for Onika\_27:

(Start: 32 @15658 has 54 MA's), (Start: 49 @15769 has 2 MA's), (Start: 62 @15841 has 1 MA's), (72, 15901), (93, 16051), (97, 16078), (101, 16102), (104, 16117), (110, 16156), (111, 16165), (113, 16177), (150, 16399), (164, 16453),

Gene: Paries\_22 Start: 16892, Stop: 17722, Start Num: 27

Candidate Starts for Paries\_22:

(Start: 27 @16892 has 43 MA's), (31, 16901), (46, 17006), (63, 17096), (67, 17120), (75, 17174), (87, 17237), (93, 17285), (97, 17312), (102, 17342), (120, 17441), (128, 17489), (134, 17546), (139, 17576), (150, 17645), (152, 17657), (158, 17675), (161, 17690),

Gene: Paschalis\_27 Start: 15672, Stop: 16502, Start Num: 32

Candidate Starts for Paschalis\_27:

(Start: 32 @15672 has 54 MA's), (Start: 49 @15783 has 2 MA's), (Start: 62 @15855 has 1 MA's), (72, 15915), (93, 16065), (97, 16092), (101, 16116), (104, 16131), (110, 16170), (111, 16179), (113, 16191), (150, 16413), (164, 16467),

Gene: Phauci\_15 Start: 13922, Stop: 14752, Start Num: 25

Candidate Starts for Phauci\_15:

(Start: 25 @13922 has 15 MA's), (26, 13928), (34, 13955), (35, 13961), (40, 14015), (72, 14186), (73, 14198), (87, 14273), (93, 14321), (110, 14423), (121, 14477), (128, 14522), (134, 14579), (152, 14690),

Gene: PhedwardCullen\_26 Start: 15600, Stop: 16247, Start Num: 62

Candidate Starts for PhedwardCullen\_26:

(Start: 32 @15417 has 54 MA's), (Start: 49 @15528 has 2 MA's), (Start: 62 @15600 has 1 MA's), (72, 15660), (93, 15810), (97, 15837), (101, 15861), (104, 15876), (110, 15915), (111, 15924), (113, 15936), (150, 16158), (164, 16212),

Gene: Phinally\_22 Start: 17352, Stop: 18182, Start Num: 25

Candidate Starts for Phinally\_22:

(Start: 25 @17352 has 15 MA's), (26, 17358), (34, 17385), (35, 17391), (40, 17445), (72, 17616), (73, 17628), (87, 17703), (93, 17751), (110, 17853), (121, 17907), (126, 17937), (128, 17952), (134, 18009), (152, 18120),

Gene: Phlop\_20 Start: 13916, Stop: 14728, Start Num: 33

Candidate Starts for Phlop\_20:

(Start: 33 @13916 has 38 MA's), (41, 13997), (69, 14147), (93, 14294), (98, 14330), (118, 14444), (166, 14714),

Gene: Phorgeous\_27 Start: 15525, Stop: 16355, Start Num: 32

Candidate Starts for Phorgeous\_27:

(Start: 32 @15525 has 54 MA's), (Start: 49 @15636 has 2 MA's), (Start: 62 @15708 has 1 MA's), (72, 15768), (93, 15918), (97, 15945), (101, 15969), (104, 15984), (110, 16023), (111, 16032), (113, 16044), (150, 16266), (164, 16320),

Gene: Phrancesco\_28 Start: 15803, Stop: 16633, Start Num: 32

Candidate Starts for Phrancesco\_28:

(Start: 32 @15803 has 54 MA's), (Start: 49 @15914 has 2 MA's), (Start: 62 @15986 has 1 MA's), (72, 16046), (93, 16196), (97, 16223), (101, 16247), (104, 16262), (110, 16301), (111, 16310), (113, 16322), (150, 16544), (164, 16598),

Gene: PierreOrion\_28 Start: 15938, Stop: 16657, Start Num: 49

Candidate Starts for PierreOrion\_28:

(Start: 32 @15827 has 54 MA's), (Start: 49 @15938 has 2 MA's), (Start: 62 @16010 has 1 MA's), (72, 16070), (93, 16220), (97, 16247), (101, 16271), (104, 16286), (110, 16325), (111, 16334), (113, 16346), (150, 16568), (164, 16622),

Gene: PinkCoffee\_22 Start: 14509, Stop: 15321, Start Num: 33

Candidate Starts for PinkCoffee\_22:

(Start: 33 @14509 has 38 MA's), (41, 14590), (69, 14740), (93, 14887), (98, 14923), (118, 15037), (166, 15307),

Gene: PiperSansNom\_28 Start: 15979, Stop: 16809, Start Num: 32

Candidate Starts for PiperSansNom\_28:

(Start: 32 @15979 has 54 MA's), (Start: 49 @16090 has 2 MA's), (Start: 62 @16162 has 1 MA's), (72, 16222), (93, 16372), (97, 16399), (101, 16423), (104, 16438), (110, 16477), (111, 16486), (113, 16498), (150, 16720), (164, 16774),

Gene: Piperis\_28 Start: 15649, Stop: 16479, Start Num: 32

Candidate Starts for Piperis\_28:

(Start: 32 @15649 has 54 MA's), (Start: 49 @15760 has 2 MA's), (Start: 62 @15832 has 1 MA's), (72, 15892), (93, 16042), (97, 16069), (101, 16093), (104, 16108), (110, 16147), (111, 16156), (113, 16168), (150, 16390), (164, 16444),

Gene: Portcullis\_20 Start: 13859, Stop: 14671, Start Num: 33

Candidate Starts for Portcullis\_20:

(Start: 33 @13859 has 38 MA's), (41, 13940), (69, 14090), (93, 14237), (98, 14273), (118, 14387), (166, 14657),

Gene: Pulchra\_29 Start: 16049, Stop: 16879, Start Num: 32

Candidate Starts for Pulchra\_29:

(Start: 32 @16049 has 54 MA's), (Start: 49 @16160 has 2 MA's), (Start: 62 @16232 has 1 MA's), (72, 16292), (93, 16442), (97, 16469), (101, 16493), (104, 16508), (110, 16547), (111, 16556), (113, 16568), (150, 16790), (164, 16844),

Gene: PullumCavea\_20 Start: 13916, Stop: 14728, Start Num: 33

Candidate Starts for PullumCavea\_20:

(Start: 33 @13916 has 38 MA's), (41, 13997), (69, 14147), (93, 14294), (98, 14330), (118, 14444), (166, 14714),

Gene: Quhwah\_31 Start: 16275, Stop: 17105, Start Num: 32

Candidate Starts for Quhwah\_31:

(Start: 32 @16275 has 54 MA's), (Start: 49 @16386 has 2 MA's), (Start: 62 @16458 has 1 MA's), (72, 16518), (93, 16668), (97, 16695), (101, 16719), (104, 16734), (110, 16773), (111, 16782), (113, 16794), (150, 17016), (164, 17070),

Gene: RainyPolka\_15 Start: 15874, Stop: 16773, Start Num: 32

Candidate Starts for RainyPolka\_15:

(24, 15847), (Start: 32 @15874 has 54 MA's), (39, 15952), (44, 15976), (50, 16000), (53, 16009), (Start: 62 @16072 has 1 MA's), (64, 16090), (83, 16204), (86, 16219), (90, 16252), (92, 16273), (98, 16312), (100, 16321), (111, 16387), (112, 16393), (119, 16429), (127, 16480), (128, 16483), (133, 16510), (144, 16588), (155, 16651), (167, 16690), (172, 16711), (177, 16729), (180, 16762),

Gene: Ramiel05\_27 Start: 15684, Stop: 16514, Start Num: 32

Candidate Starts for Ramiel05\_27:

(Start: 32 @15684 has 54 MA's), (Start: 49 @15795 has 2 MA's), (Start: 62 @15867 has 1 MA's), (72, 15927), (93, 16077), (97, 16104), (101, 16128), (104, 16143), (110, 16182), (111, 16191), (113, 16203), (150, 16425), (164, 16479),

Gene: Rasputia\_58 Start: 32048, Stop: 32869, Start Num: 30

Candidate Starts for Rasputia\_58:

(Start: 30 @32048 has 1 MA's), (Start: 49 @32165 has 2 MA's), (58, 32201), (60, 32225), (75, 32324), (102, 32477), (115, 32558), (127, 32621), (130, 32639), (146, 32726), (163, 32798),

Gene: Ribeye\_22 Start: 17792, Stop: 18619, Start Num: 27

Candidate Starts for Ribeye\_22:

(Start: 27 @17792 has 43 MA's), (31, 17801), (46, 17903), (63, 17993), (87, 18134), (93, 18182), (101, 18233), (110, 18287), (120, 18338), (122, 18356), (128, 18386), (131, 18407), (134, 18443), (139, 18473), (152, 18554), (158, 18572), (161, 18587), (166, 18605),

Gene: RiverRaider\_22 Start: 16175, Stop: 17002, Start Num: 28

Candidate Starts for RiverRaider\_22:

(Start: 27 @16172 has 43 MA's), (Start: 28 @16175 has 1 MA's), (31, 16181), (46, 16286), (87, 16517), (93, 16565), (101, 16616), (120, 16721), (122, 16739), (123, 16742), (128, 16769), (134, 16826), (137, 16850), (138, 16853), (139, 16856), (147, 16913), (152, 16937), (158, 16955),

Gene: RoadKill\_19 Start: 15230, Stop: 16060, Start Num: 25

Candidate Starts for RoadKill\_19:

(Start: 25 @15230 has 15 MA's), (54, 15386), (56, 15398), (68, 15476), (84, 15560), (89, 15602), (93, 15629), (110, 15731), (113, 15752), (120, 15782), (137, 15911), (139, 15917), (143, 15938), (152, 15998),

Gene: RobsFeet\_29 Start: 15807, Stop: 16619, Start Num: 32

Candidate Starts for RobsFeet\_29:

(Start: 32 @15807 has 54 MA's), (47, 15909), (Start: 49 @15918 has 2 MA's), (51, 15927), (61, 15987), (Start: 62 @15990 has 1 MA's), (72, 16050), (91, 16185), (95, 16224), (110, 16308), (111, 16317), (141, 16473), (150, 16527), (164, 16581), (171, 16608),

Gene: Rofo\_21 Start: 17144, Stop: 17974, Start Num: 27

Candidate Starts for Rofo\_21:

(Start: 27 @17144 has 43 MA's), (31, 17153), (46, 17258), (63, 17348), (72, 17402), (75, 17426), (87, 17489), (93, 17537), (97, 17564), (102, 17594), (120, 17693), (128, 17741), (134, 17798), (137, 17822), (139, 17828), (150, 17897), (152, 17909), (158, 17927), (161, 17942),

Gene: RogerDodger\_23 Start: 14709, Stop: 15521, Start Num: 33

Candidate Starts for RogerDodger\_23:

(Start: 33 @14709 has 38 MA's), (41, 14790), (69, 14940), (93, 15087), (98, 15123), (118, 15237), (166, 15507),

Gene: Salete\_14 Start: 15544, Stop: 16440, Start Num: 32

Candidate Starts for Salete\_14:

(Start: 32 @15544 has 54 MA's), (39, 15622), (44, 15646), (50, 15670), (53, 15679), (Start: 62 @15742 has 1 MA's), (83, 15874), (86, 15889), (90, 15922), (92, 15943), (98, 15982), (100, 15991), (111, 16057), (112, 16063), (113, 16069), (119, 16099), (124, 16129), (128, 16153), (144, 16258), (148, 16291), (161, 16342), (167, 16360), (177, 16399), (179, 16426),

Gene: Salvador\_20 Start: 13830, Stop: 14642, Start Num: 33

Candidate Starts for Salvador\_20:

(Start: 33 @13830 has 38 MA's), (41, 13911), (69, 14061), (93, 14208), (98, 14244), (118, 14358), (166, 14628),

Gene: Sampson\_22 Start: 17485, Stop: 18309, Start Num: 33

Candidate Starts for Sampson\_22:

(Start: 33 @17485 has 38 MA's), (40, 17557), (55, 17623), (65, 17698), (72, 17740), (83, 17797), (93, 17869), (96, 17890), (99, 17911), (110, 17971), (113, 17992), (117, 18013), (120, 18022), (123, 18043), (128, 18070), (134, 18127), (137, 18151), (139, 18157), (143, 18178), (151, 18235), (159, 18259),

Gene: Sanjuju\_19 Start: 16656, Stop: 17486, Start Num: 27

Candidate Starts for Sanjuju\_19:

(Start: 27 @16656 has 43 MA's), (31, 16665), (46, 16770), (63, 16860), (72, 16914), (75, 16938), (87, 17001), (93, 17049), (97, 17076), (120, 17205), (128, 17253), (134, 17310), (137, 17334), (139, 17340), (150, 17409), (152, 17421), (158, 17439), (161, 17454),

Gene: Saronaya\_21 Start: 16571, Stop: 17398, Start Num: 27

Candidate Starts for Saronaya\_21:

(Start: 27 @16571 has 43 MA's), (31, 16580), (46, 16682), (63, 16772), (87, 16913), (93, 16961), (101, 17012), (110, 17066), (120, 17117), (122, 17135), (128, 17165), (131, 17186), (134, 17222), (139, 17252), (152, 17333), (158, 17351), (161, 17366),

Gene: Savannah\_27 Start: 15711, Stop: 16541, Start Num: 32

Candidate Starts for Savannah\_27:

(Start: 32 @15711 has 54 MA's), (Start: 49 @15822 has 2 MA's), (Start: 62 @15894 has 1 MA's), (72, 15954), (93, 16104), (97, 16131), (101, 16155), (104, 16170), (110, 16209), (111, 16218), (113, 16230), (150, 16452), (164, 16506),

Gene: Savbucketdawg\_20 Start: 13611, Stop: 14423, Start Num: 33

Candidate Starts for Savbucketdawg\_20:

(Start: 33 @13611 has 38 MA's), (41, 13692), (69, 13842), (93, 13989), (98, 14025), (118, 14139), (166, 14409),

Gene: SchottB\_20 Start: 17572, Stop: 18399, Start Num: 27

Candidate Starts for SchottB\_20:

(Start: 27 @17572 has 43 MA's), (31, 17581), (46, 17683), (67, 17797), (87, 17914), (93, 17962), (101, 18013), (110, 18067), (120, 18118), (122, 18136), (128, 18166), (131, 18187), (134, 18223), (139, 18253), (152, 18334), (158, 18352), (161, 18367),

Gene: Scioto\_22 Start: 17540, Stop: 18364, Start Num: 33

Candidate Starts for Scioto\_22:

(Start: 33 @17540 has 38 MA's), (40, 17612), (55, 17678), (65, 17753), (72, 17795), (83, 17852), (93, 17924), (96, 17945), (99, 17966), (110, 18026), (113, 18047), (117, 18068), (120, 18077), (123, 18098), (128, 18125), (134, 18182), (137, 18206), (139, 18212), (143, 18233), (151, 18290), (159, 18314),

Gene: Scumberland\_29 Start: 15899, Stop: 16729, Start Num: 32

Candidate Starts for Scumberland\_29:

(Start: 32 @15899 has 54 MA's), (Start: 49 @16010 has 2 MA's), (Start: 62 @16082 has 1 MA's), (72, 16142), (93, 16292), (97, 16319), (101, 16343), (104, 16358), (110, 16397), (111, 16406), (113, 16418), (150, 16640), (164, 16694),

Gene: Sedona\_23 Start: 18961, Stop: 19791, Start Num: 27

Candidate Starts for Sedona\_23:

(Start: 27 @18961 has 43 MA's), (31, 18970), (46, 19075), (63, 19165), (67, 19189), (72, 19219), (75, 19243), (87, 19306), (93, 19354), (97, 19381), (120, 19510), (128, 19558), (134, 19615), (137, 19639), (139, 19645), (150, 19714), (152, 19726), (158, 19744), (161, 19759),



Gene: Selwyn23\_29 Start: 15877, Stop: 16707, Start Num: 32

Candidate Starts for Selwyn23\_29:

(Start: 32 @15877 has 54 MA's), (Start: 49 @15988 has 2 MA's), (Start: 62 @16060 has 1 MA's), (72, 16120), (93, 16270), (97, 16297), (101, 16321), (104, 16336), (110, 16375), (111, 16384), (113, 16396), (150, 16618), (164, 16672),

Gene: Shinji\_20 Start: 13800, Stop: 14612, Start Num: 33

Candidate Starts for Shinji\_20:

(Start: 33 @13800 has 38 MA's), (41, 13881), (69, 14031), (93, 14178), (98, 14214), (118, 14328), (166, 14598),

Gene: Shivanishola\_21 Start: 16950, Stop: 17780, Start Num: 27

Candidate Starts for Shivanishola\_21:

(Start: 27 @16950 has 43 MA's), (31, 16959), (46, 17064), (63, 17154), (72, 17208), (75, 17232), (87, 17295), (93, 17343), (97, 17370), (100, 17391), (102, 17400), (120, 17499), (128, 17547), (134, 17604), (137, 17628), (139, 17634), (150, 17703), (152, 17715), (158, 17733), (161, 17748),

Gene: Shotgun\_27 Start: 15509, Stop: 16339, Start Num: 32

Candidate Starts for Shotgun\_27:

(Start: 32 @15509 has 54 MA's), (Start: 49 @15620 has 2 MA's), (Start: 62 @15692 has 1 MA's), (72, 15752), (93, 15902), (97, 15929), (101, 15953), (104, 15968), (110, 16007), (111, 16016), (113, 16028), (150, 16250), (164, 16304),

Gene: Shrubaron\_28 Start: 15441, Stop: 16253, Start Num: 32

Candidate Starts for Shrubaron\_28:

(Start: 32 @15441 has 54 MA's), (47, 15543), (Start: 49 @15552 has 2 MA's), (51, 15561), (61, 15621), (Start: 62 @15624 has 1 MA's), (72, 15684), (91, 15819), (95, 15858), (110, 15942), (111, 15951), (141, 16107), (150, 16161), (164, 16215), (171, 16242),

Gene: SirFrank\_27 Start: 15623, Stop: 16453, Start Num: 32

Candidate Starts for SirFrank\_27:

(Start: 32 @15623 has 54 MA's), (Start: 49 @15734 has 2 MA's), (Start: 62 @15806 has 1 MA's), (93, 16016), (97, 16043), (101, 16067), (104, 16082), (111, 16130), (113, 16142), (137, 16289), (141, 16310), (150, 16364), (164, 16418),

Gene: Sitar\_23 Start: 18329, Stop: 19159, Start Num: 27

Candidate Starts for Sitar\_23:

(Start: 27 @18329 has 43 MA's), (31, 18338), (46, 18443), (63, 18533), (67, 18557), (72, 18587), (75, 18611), (87, 18674), (93, 18722), (97, 18749), (120, 18878), (128, 18926), (134, 18983), (137, 19007), (139, 19013), (150, 19082), (152, 19094), (158, 19112), (161, 19127),

Gene: Smarties\_36 Start: 17634, Stop: 18449, Start Num: 32

Candidate Starts for Smarties\_36:

(Start: 32 @17634 has 54 MA's), (47, 17736), (Start: 49 @17745 has 2 MA's), (51, 17754), (72, 17877), (95, 18051), (111, 18144), (141, 18300), (150, 18354), (165, 18411), (171, 18435),

Gene: SmokingBunny\_20 Start: 13830, Stop: 14642, Start Num: 33

Candidate Starts for SmokingBunny\_20:

(Start: 33 @13830 has 38 MA's), (41, 13911), (69, 14061), (93, 14208), (98, 14244), (118, 14358), (166, 14628),

Gene: StorminNorm\_21 Start: 16451, Stop: 17278, Start Num: 27

Candidate Starts for StorminNorm\_21:

(Start: 27 @16451 has 43 MA's), (31, 16460), (46, 16562), (52, 16589), (63, 16652), (67, 16676), (87, 16793), (93, 16841), (101, 16892), (110, 16946), (120, 16997), (122, 17015), (128, 17045), (131, 17066), (134, 17102), (139, 17132), (152, 17213), (158, 17231), (161, 17246),

Gene: Stultus\_21 Start: 16940, Stop: 17770, Start Num: 27

Candidate Starts for Stultus\_21:

(Start: 27 @16940 has 43 MA's), (31, 16949), (46, 17054), (63, 17144), (67, 17168), (72, 17198), (75, 17222), (87, 17285), (93, 17333), (97, 17360), (120, 17489), (128, 17537), (134, 17594), (137, 17618), (139, 17624), (150, 17693), (152, 17705), (158, 17723), (161, 17738),

Gene: Sunny\_28 Start: 15926, Stop: 16729, Start Num: 32

Candidate Starts for Sunny\_28:

(Start: 32 @15926 has 54 MA's), (47, 16028), (Start: 49 @16037 has 2 MA's), (51, 16046), (74, 16193), (95, 16340), (108, 16403), (110, 16424), (111, 16433), (141, 16589), (150, 16643), (164, 16697),

Gene: TP1604\_14 Start: 15544, Stop: 16440, Start Num: 32

Candidate Starts for TP1604\_14:

(Start: 32 @15544 has 54 MA's), (39, 15622), (44, 15646), (50, 15670), (53, 15679), (Start: 62 @15742 has 1 MA's), (83, 15874), (86, 15889), (90, 15922), (92, 15943), (98, 15982), (100, 15991), (111, 16057), (112, 16063), (113, 16069), (119, 16099), (124, 16129), (128, 16153), (144, 16258), (148, 16291), (161, 16342), (167, 16360), (177, 16399), (179, 16426),

Gene: Tangent\_19 Start: 16145, Stop: 16975, Start Num: 27

Candidate Starts for Tangent\_19:

(Start: 27 @16145 has 43 MA's), (31, 16154), (46, 16259), (63, 16349), (72, 16403), (75, 16427), (87, 16490), (93, 16538), (97, 16565), (100, 16586), (102, 16595), (120, 16694), (128, 16742), (134, 16799), (137, 16823), (139, 16829), (150, 16898), (152, 16910), (158, 16928), (161, 16943),

Gene: Tangerine\_21 Start: 16457, Stop: 17284, Start Num: 27

Candidate Starts for Tangerine\_21:

(Start: 27 @16457 has 43 MA's), (31, 16466), (46, 16568), (52, 16595), (63, 16658), (67, 16682), (87, 16799), (93, 16847), (101, 16898), (110, 16952), (120, 17003), (122, 17021), (128, 17051), (131, 17072), (134, 17108), (139, 17138), (152, 17219), (158, 17237), (161, 17252),

Gene: Tardus\_23 Start: 16820, Stop: 17644, Start Num: 33

Candidate Starts for Tardus\_23:

(Start: 33 @16820 has 38 MA's), (40, 16892), (72, 17075), (83, 17132), (93, 17204), (96, 17225), (110, 17306), (113, 17327), (120, 17357), (123, 17378), (128, 17405), (134, 17462), (137, 17486), (139, 17492), (143, 17513), (151, 17570), (159, 17594),

Gene: Teamocil\_29 Start: 15303, Stop: 16118, Start Num: 32

Candidate Starts for Teamocil\_29:

(Start: 32 @15303 has 54 MA's), (47, 15405), (Start: 49 @15414 has 2 MA's), (51, 15423), (61, 15483), (91, 15681), (95, 15720), (104, 15765), (110, 15804), (111, 15813), (141, 15969), (150, 16023), (164, 16077),

Gene: Terij\_24 Start: 15272, Stop: 16039, Start Num: 38

Candidate Starts for Terij\_24:

(Start: 32 @15203 has 54 MA's), (Start: 38 @15272 has 6 MA's), (71, 15452), (91, 15587), (95, 15626), (101, 15656), (110, 15710), (111, 15719), (127, 15803), (128, 15806), (135, 15839), (137, 15854), (142, 15878), (150, 15929), (157, 15956), (169, 16001), (177, 16028),

Gene: Thing3\_22 Start: 17689, Stop: 18519, Start Num: 27

Candidate Starts for Thing3\_22:

(Start: 27 @17689 has 43 MA's), (31, 17698), (46, 17803), (63, 17893), (72, 17947), (75, 17971), (87, 18034), (93, 18082), (97, 18109), (120, 18238), (128, 18286), (134, 18343), (137, 18367), (139, 18373), (150, 18442), (152, 18454), (158, 18472), (161, 18487),

Gene: Tiamoceli\_22 Start: 16582, Stop: 17412, Start Num: 25

Candidate Starts for Tiamoceli\_22:

(Start: 25 @16582 has 15 MA's), (54, 16738), (56, 16750), (68, 16828), (84, 16912), (89, 16954), (93, 16981), (110, 17083), (120, 17134), (137, 17263), (139, 17269), (143, 17290), (152, 17350), (157, 17365),

Gene: TillyBobJoe\_20 Start: 13614, Stop: 14426, Start Num: 33

Candidate Starts for TillyBobJoe\_20:

(Start: 33 @13614 has 38 MA's), (41, 13695), (69, 13845), (93, 13992), (98, 14028), (118, 14142), (166, 14412),

Gene: Togo\_20 Start: 13830, Stop: 14642, Start Num: 33

Candidate Starts for Togo\_20:

(Start: 33 @13830 has 38 MA's), (41, 13911), (69, 14061), (93, 14208), (98, 14244), (118, 14358), (166, 14628),

Gene: TurkishDelight\_18 Start: 14791, Stop: 15639, Start Num: 32

Candidate Starts for TurkishDelight\_18:

(Start: 32 @14791 has 54 MA's), (34, 14803), (42, 14881), (43, 14887), (48, 14908), (Start: 49 @14914 has 2 MA's), (51, 14923), (56, 14944), (82, 15112), (85, 15133), (93, 15196), (94, 15199), (109, 15286), (132, 15421), (153, 15538), (161, 15568), (167, 15586), (173, 15607), (177, 15622), (178, 15625),

Gene: Twister6\_22 Start: 14256, Stop: 15068, Start Num: 33

Candidate Starts for Twister6\_22:

(Start: 33 @14256 has 38 MA's), (41, 14337), (69, 14487), (93, 14634), (98, 14670), (118, 14784), (166, 15054),

Gene: Twonlo\_19 Start: 15199, Stop: 16029, Start Num: 25

Candidate Starts for Twonlo\_19:

(Start: 25 @15199 has 15 MA's), (54, 15355), (56, 15367), (68, 15445), (76, 15490), (84, 15529), (89, 15571), (93, 15598), (110, 15700), (120, 15751), (137, 15880), (139, 15886), (143, 15907), (152, 15967), (157, 15982),

Gene: Tycho\_21 Start: 16586, Stop: 17413, Start Num: 27

Candidate Starts for Tycho\_21:

(Start: 27 @16586 has 43 MA's), (31, 16595), (46, 16697), (63, 16787), (87, 16928), (93, 16976), (101, 17027), (110, 17081), (120, 17132), (122, 17150), (128, 17180), (131, 17201), (134, 17237), (139, 17267), (152, 17348), (158, 17366), (161, 17381),

Gene: Tyrumbra\_26 Start: 14883, Stop: 15692, Start Num: 32

Candidate Starts for Tyrumbra\_26:

(Start: 32 @14883 has 54 MA's), (47, 14985), (Start: 49 @14994 has 2 MA's), (51, 15003), (61, 15063), (Start: 62 @15066 has 1 MA's), (72, 15126), (91, 15261), (95, 15300), (110, 15384), (111, 15393), (141, 15549), (150, 15603), (164, 15657), (170, 15681),

Gene: Valary\_23 Start: 14709, Stop: 15521, Start Num: 33

Candidate Starts for Valary\_23:

(Start: 33 @14709 has 38 MA's), (41, 14790), (69, 14940), (93, 15087), (98, 15123), (118, 15237), (166, 15507),

Gene: VanDeWege\_23 Start: 14637, Stop: 15449, Start Num: 33

Candidate Starts for VanDeWege\_23:

(Start: 33 @14637 has 38 MA's), (41, 14718), (69, 14868), (93, 15015), (98, 15051), (118, 15165), (166, 15435),

Gene: Verity\_22 Start: 17000, Stop: 17824, Start Num: 33

Candidate Starts for Verity\_22:

(Start: 33 @17000 has 38 MA's), (40, 17072), (72, 17255), (77, 17282), (83, 17312), (93, 17384), (96, 17405), (110, 17486), (120, 17537), (123, 17558), (128, 17585), (134, 17642), (137, 17666), (139, 17672), (141, 17687), (143, 17693), (159, 17774), (161, 17786),

Gene: ViaConlectus\_23 Start: 17552, Stop: 18376, Start Num: 33

Candidate Starts for ViaConlectus\_23:

(Start: 33 @17552 has 38 MA's), (40, 17624), (55, 17690), (72, 17807), (83, 17864), (93, 17936), (96, 17957), (110, 18038), (113, 18059), (120, 18089), (123, 18110), (128, 18137), (137, 18218), (139, 18224), (143, 18245), (149, 18290), (151, 18302), (159, 18326),

Gene: Vivi2\_21 Start: 17307, Stop: 18137, Start Num: 27

Candidate Starts for Vivi2\_21:

(Start: 27 @17307 has 43 MA's), (31, 17316), (46, 17421), (63, 17511), (72, 17565), (75, 17589), (87, 17652), (93, 17700), (97, 17727), (102, 17757), (120, 17856), (128, 17904), (134, 17961), (137, 17985), (139, 17991), (150, 18060), (152, 18072), (158, 18090), (161, 18105),

Gene: Wizard\_20 Start: 13964, Stop: 14776, Start Num: 33

Candidate Starts for Wizard\_20:

(Start: 33 @13964 has 38 MA's), (41, 14045), (69, 14195), (93, 14342), (98, 14378), (118, 14492), (166, 14762),

Gene: Xkcd426\_15 Start: 16526, Stop: 17386, Start Num: 32

Candidate Starts for Xkcd426\_15:

(Start: 32 @16526 has 54 MA's), (34, 16541), (59, 16688), (63, 16718), (77, 16811), (83, 16841), (90, 16889), (102, 16967), (116, 17054), (119, 17066), (141, 17210), (144, 17222), (147, 17252), (156, 17288),

Gene: YDN12\_15 Start: 15481, Stop: 16377, Start Num: 32

Candidate Starts for YDN12\_15:

(Start: 32 @15481 has 54 MA's), (39, 15559), (44, 15583), (50, 15607), (Start: 62 @15679 has 1 MA's), (70, 15742), (86, 15826), (90, 15859), (92, 15880), (98, 15919), (100, 15928), (112, 16000), (119, 16036), (124, 16066), (128, 16090), (148, 16228), (155, 16258), (156, 16261), (161, 16279), (167, 16297), (177, 16336), (179, 16363),

Gene: Yeti\_28 Start: 15679, Stop: 16509, Start Num: 32

Candidate Starts for Yeti\_28:

(Start: 32 @15679 has 54 MA's), (Start: 49 @15790 has 2 MA's), (Start: 62 @15862 has 1 MA's), (72, 15922), (93, 16072), (97, 16099), (101, 16123), (104, 16138), (110, 16177), (111, 16186), (113, 16198), (150, 16420), (164, 16474),

Gene: YorkOnyx\_22 Start: 16855, Stop: 17682, Start Num: 27

Candidate Starts for YorkOnyx\_22:

(Start: 27 @16855 has 43 MA's), (31, 16864), (46, 16966), (63, 17056), (87, 17197), (93, 17245), (101, 17296), (110, 17350), (120, 17401), (122, 17419), (128, 17449), (131, 17470), (134, 17506), (139, 17536), (152, 17617), (158, 17635), (161, 17650),

Gene: YungMoney\_22 Start: 15274, Stop: 16086, Start Num: 33

Candidate Starts for YungMoney\_22:

(Start: 33 @15274 has 38 MA's), (41, 15355), (69, 15505), (89, 15625), (93, 15652), (118, 15802), (129, 15856), (137, 15934), (166, 16072),

Gene: Zipp\_22 Start: 17649, Stop: 18473, Start Num: 33

Candidate Starts for Zipp\_22:

(Start: 33 @17649 has 38 MA's), (40, 17721), (72, 17904), (77, 17931), (83, 17961), (93, 18033), (96, 18054), (110, 18135), (120, 18186), (123, 18207), (128, 18234), (134, 18291), (137, 18315), (139, 18321), (141, 18336), (143, 18342), (159, 18423), (161, 18435),

Gene: Zitch\_24 Start: 16782, Stop: 17606, Start Num: 33

Candidate Starts for Zitch\_24:

(29, 16773), (Start: 33 @16782 has 38 MA's), (40, 16854), (55, 16920), (72, 17037), (83, 17094), (93, 17166), (96, 17187), (110, 17268), (113, 17289), (120, 17319), (123, 17340), (128, 17367), (137, 17448), (139, 17454), (143, 17475), (159, 17556),