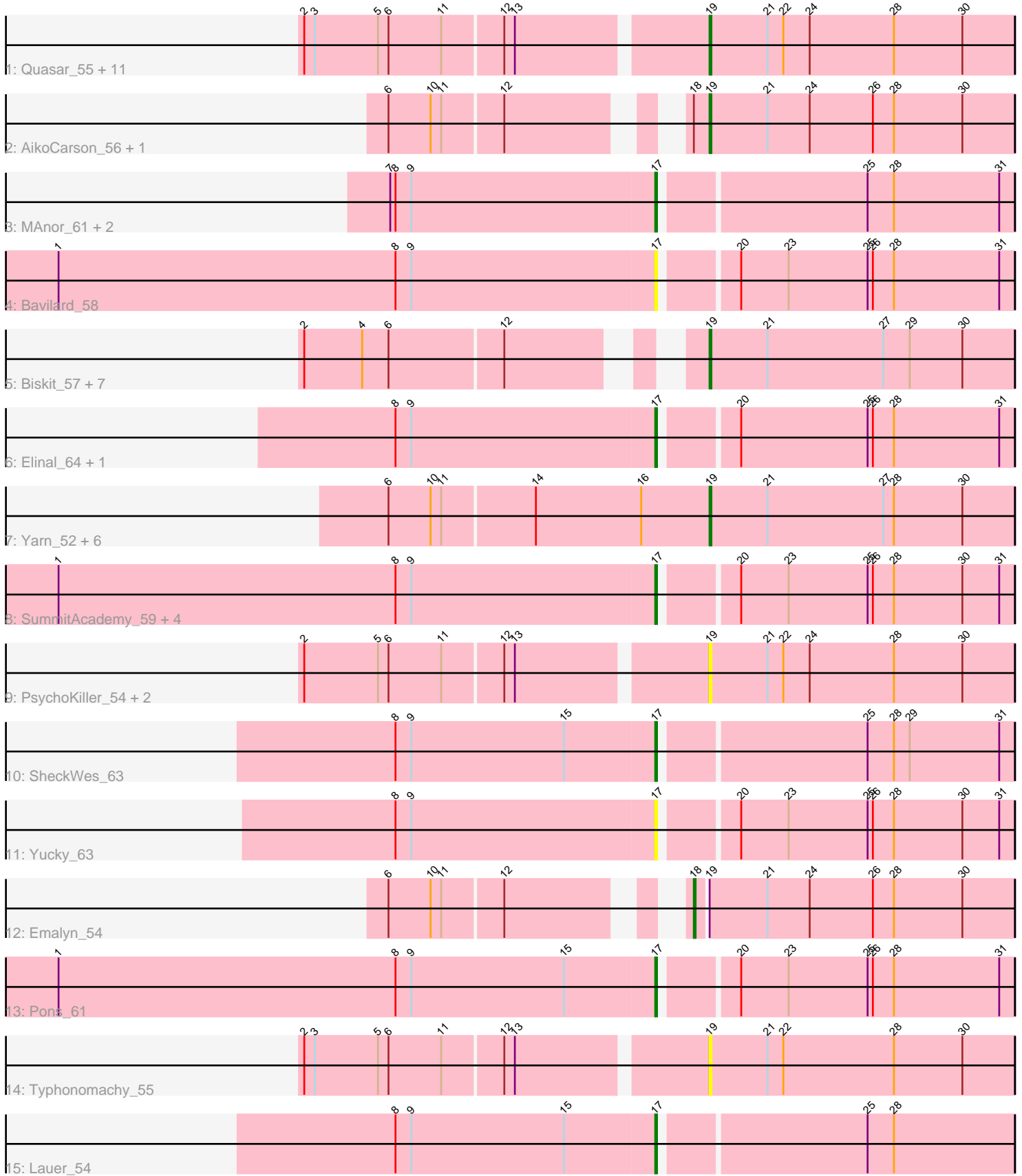


Pham 221509



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 221509 Report

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

Pham number 221509 has 49 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Quasar\_55, Starburst\_55, Agatha\_55, Nina\_55, Cozz\_53, Socotra\_56, MunkgeeRoachy\_53, Axym\_54, Carsonalex\_58, GoldHunter\_56, Burnsey\_55, SweatNTears\_57
- Track 2 : AikoCarson\_56, Amok\_56
- Track 3 : MAnor\_61, Mayweather\_63, CherryonLim\_60
- Track 4 : Bavidard\_58
- Track 5 : Biskit\_57, SketchMex\_55, Buttrmlkdreams\_57, Yummy\_57, Troje\_57, MScarn\_59, Horseradish\_57, Blondies\_57
- Track 6 : Elinal\_64, KayGee\_62
- Track 7 : Yarn\_52, CanesSauce\_54, SteamedHams\_56, Tolls\_56, ChocoMunchkin\_54, AndPeggy\_52, BillDoor\_55
- Track 8 : SummitAcademy\_59, BigChungus\_59, Vine\_62, PotPie\_59, Feastonyeet\_59
- Track 9 : PsychoKiller\_54, Sopespian\_52, Elliott\_55
- Track 10 : SheckWes\_63
- Track 11 : Yucky\_63
- Track 12 : Emalyn\_54
- Track 13 : Pons\_61
- Track 14 : Typhonomachy\_55
- Track 15 : Lauer\_54

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

The start number called the most often in the published annotations is 19, it was called in 22 of the 36 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha\_55, AikoCarson\_56, Amok\_56, AndPeggy\_52, Axym\_54, BillDoor\_55, Biskit\_57, Blondies\_57, Burnsey\_55, Buttrmlkdreams\_57, CanesSauce\_54, Carsonalex\_58, ChocoMunchkin\_54, Cozz\_53, Elliott\_55, GoldHunter\_56, Horseradish\_57, MScarn\_59, MunkgeeRoachy\_53, Nina\_55, PsychoKiller\_54, Quasar\_55, SketchMex\_55, Socotra\_56, Sopespian\_52, Starburst\_55, SteamedHams\_56, SweatNTears\_57, Tolls\_56, Troje\_57, Typhonomachy\_55, Yarn\_52, Yummy\_57,

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

- Emalyn\_54,

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

- Bavidard\_58, BigChungus\_59, CherryonLim\_60, Elinal\_64, Feastonyeet\_59, KayGee\_62, Lauer\_54, MAnor\_61, Mayweather\_63, Pons\_61, PotPie\_59, SheckWes\_63, SummitAcademy\_59, Vine\_62, Yucky\_63,

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

Start 17:

- Found in 15 of 49 ( 30.6% ) of genes in pham
- Manual Annotations of this start: 13 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bavidard\_58 (CT), BigChungus\_59 (CT), CherryonLim\_60 (CT), Elinal\_64 (CT), Feastonyeet\_59 (CT), KayGee\_62 (CT), Lauer\_54 (CT), MAnor\_61 (CT), Mayweather\_63 (CT), Pons\_61 (CT), PotPie\_59 (CT), SheckWes\_63 (CT), SummitAcademy\_59 (CT), Vine\_62 (CT), Yucky\_63 (CT),

Start 18:

- Found in 3 of 49 ( 6.1% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Emalyn\_54 (CT),

Start 19:

- Found in 34 of 49 ( 69.4% ) of genes in pham
- Manual Annotations of this start: 22 of 36
- Called 97.1% of time when present
- Phage (with cluster) where this start called: Agatha\_55 (CT), AikoCarson\_56 (CT), Amok\_56 (CT), AndPeggy\_52 (CT), Axym\_54 (CT), BillDoor\_55 (CT), Biskit\_57 (CT), Blondies\_57 (CT), Burnsey\_55 (CT), Buttrmlkdreams\_57 (CT), CanesSauce\_54 (CT), Carsonalex\_58 (CT), ChocoMunchkin\_54 (CT), Cozz\_53 (CT), Elliott\_55 (CT), GoldHunter\_56 (CT), Horseradish\_57 (CT), MScarn\_59 (CT), MunkgeeRoachy\_53 (CT), Nina\_55 (CT), PsychoKiller\_54 (CT), Quasar\_55 (CT), SketchMex\_55 (CT), Socotra\_56 (CT), Sopespian\_52 (CT), Starburst\_55 (CT), SteamedHams\_56 (CT), SweatNTears\_57 (CT), Tolls\_56 (CT), Troje\_57 (CT), Typhonmarchy\_55 (CT), Yarn\_52 (CT), Yummy\_57 (CT),

### **Summary by clusters:**

There is one cluster represented in this pham: CT

Info for manual annotations of cluster CT:

- Start number 17 was manually annotated 13 times for cluster CT.
- Start number 18 was manually annotated 1 time for cluster CT.
- Start number 19 was manually annotated 22 times for cluster CT.

### **Gene Information:**

Gene: Agatha\_55 Start: 39281, Stop: 39108, Start Num: 19

Candidate Starts for Agatha\_55:

(2, 39500), (3, 39494), (5, 39458), (6, 39452), (11, 39422), (12, 39389), (13, 39383), (Start: 19 @39281 has 22 MA's), (21, 39248), (22, 39239), (24, 39224), (28, 39176), (30, 39137),

Gene: AikoCarson\_56 Start: 39495, Stop: 39322, Start Num: 19

Candidate Starts for AikoCarson\_56:

(6, 39639), (10, 39615), (11, 39609), (12, 39576), (Start: 18 @39501 has 1 MA's), (Start: 19 @39495 has 22 MA's), (21, 39462), (24, 39438), (26, 39402), (28, 39390), (30, 39351),

Gene: Amok\_56 Start: 39423, Stop: 39250, Start Num: 19

Candidate Starts for Amok\_56:

(6, 39567), (10, 39543), (11, 39537), (12, 39504), (Start: 18 @39429 has 1 MA's), (Start: 19 @39423 has 22 MA's), (21, 39390), (24, 39366), (26, 39330), (28, 39318), (30, 39279),

Gene: AndPeggy\_52 Start: 38688, Stop: 38515, Start Num: 19

Candidate Starts for AndPeggy\_52:

(6, 38868), (10, 38844), (11, 38838), (14, 38787), (16, 38727), (Start: 19 @38688 has 22 MA's), (21, 38655), (27, 38589), (28, 38583), (30, 38544),

Gene: Axym\_54 Start: 39178, Stop: 39005, Start Num: 19

Candidate Starts for Axym\_54:

(2, 39397), (3, 39391), (5, 39355), (6, 39349), (11, 39319), (12, 39286), (13, 39280), (Start: 19 @39178 has 22 MA's), (21, 39145), (22, 39136), (24, 39121), (28, 39073), (30, 39034),

Gene: Bavilard\_58 Start: 40544, Stop: 40350, Start Num: 17

Candidate Starts for Bavilard\_58:

(1, 40883), (8, 40691), (9, 40682), (Start: 17 @40544 has 13 MA's), (20, 40505), (23, 40478), (25, 40433), (26, 40430), (28, 40418), (31, 40358),

Gene: BigChungus\_59 Start: 41075, Stop: 40881, Start Num: 17

Candidate Starts for BigChungus\_59:

(1, 41414), (8, 41222), (9, 41213), (Start: 17 @41075 has 13 MA's), (20, 41036), (23, 41009), (25, 40964), (26, 40961), (28, 40949), (30, 40910), (31, 40889),

Gene: BillDoor\_55 Start: 38364, Stop: 38191, Start Num: 19

Candidate Starts for BillDoor\_55:

(6, 38544), (10, 38520), (11, 38514), (14, 38463), (16, 38403), (Start: 19 @38364 has 22 MA's), (21, 38331), (27, 38265), (28, 38259), (30, 38220),

Gene: Biskit\_57 Start: 39090, Stop: 38917, Start Num: 19

Candidate Starts for Biskit\_57:

(2, 39282), (4, 39249), (6, 39234), (12, 39171), (Start: 19 @39090 has 22 MA's), (21, 39057), (27, 38991), (29, 38976), (30, 38946),

Gene: Blondies\_57 Start: 39407, Stop: 39234, Start Num: 19

Candidate Starts for Blondies\_57:

(2, 39599), (4, 39566), (6, 39551), (12, 39488), (Start: 19 @39407 has 22 MA's), (21, 39374), (27, 39308), (29, 39293), (30, 39263),

Gene: Burnsey\_55 Start: 39272, Stop: 39099, Start Num: 19

Candidate Starts for Burnsey\_55:

(2, 39491), (3, 39485), (5, 39449), (6, 39443), (11, 39413), (12, 39380), (13, 39374), (Start: 19 @39272 has 22 MA's), (21, 39239), (22, 39230), (24, 39215), (28, 39167), (30, 39128),

Gene: Buttrmlkdreams\_57 Start: 39537, Stop: 39364, Start Num: 19

Candidate Starts for Buttrmlkdreams\_57:

(2, 39729), (4, 39696), (6, 39681), (12, 39618), (Start: 19 @39537 has 22 MA's), (21, 39504), (27, 39438), (29, 39423), (30, 39393),

Gene: CanesSauce\_54 Start: 38849, Stop: 38676, Start Num: 19

Candidate Starts for CanesSauce\_54:

(6, 39029), (10, 39005), (11, 38999), (14, 38948), (16, 38888), (Start: 19 @38849 has 22 MA's), (21, 38816), (27, 38750), (28, 38744), (30, 38705),

Gene: Carsonalex\_58 Start: 39660, Stop: 39487, Start Num: 19

Candidate Starts for Carsonalex\_58:

(2, 39879), (3, 39873), (5, 39837), (6, 39831), (11, 39801), (12, 39768), (13, 39762), (Start: 19 @39660 has 22 MA's), (21, 39627), (22, 39618), (24, 39603), (28, 39555), (30, 39516),

Gene: CherryonLim\_60 Start: 42554, Stop: 42360, Start Num: 17

Candidate Starts for CherryonLim\_60:

(7, 42704), (8, 42701), (9, 42692), (Start: 17 @42554 has 13 MA's), (25, 42443), (28, 42428), (31, 42368),

Gene: ChocoMunchkin\_54 Start: 38849, Stop: 38676, Start Num: 19

Candidate Starts for ChocoMunchkin\_54:

(6, 39029), (10, 39005), (11, 38999), (14, 38948), (16, 38888), (Start: 19 @38849 has 22 MA's), (21, 38816), (27, 38750), (28, 38744), (30, 38705),

Gene: Cozz\_53 Start: 38869, Stop: 38696, Start Num: 19

Candidate Starts for Cozz\_53:

(2, 39088), (3, 39082), (5, 39046), (6, 39040), (11, 39010), (12, 38977), (13, 38971), (Start: 19 @38869 has 22 MA's), (21, 38836), (22, 38827), (24, 38812), (28, 38764), (30, 38725),

Gene: Elinal\_64 Start: 41883, Stop: 41689, Start Num: 17

Candidate Starts for Elinal\_64:

(8, 42030), (9, 42021), (Start: 17 @41883 has 13 MA's), (20, 41844), (25, 41772), (26, 41769), (28, 41757), (31, 41697),

Gene: Elliott\_55 Start: 39165, Stop: 38992, Start Num: 19

Candidate Starts for Elliott\_55:

(2, 39384), (5, 39342), (6, 39336), (11, 39306), (12, 39273), (13, 39267), (Start: 19 @39165 has 22 MA's), (21, 39132), (22, 39123), (24, 39108), (28, 39060), (30, 39021),

Gene: Emalyn\_54 Start: 38221, Stop: 38042, Start Num: 18

Candidate Starts for Emalyn\_54:

(6, 38359), (10, 38335), (11, 38329), (12, 38296), (Start: 18 @38221 has 1 MA's), (Start: 19 @38215 has 22 MA's), (21, 38182), (24, 38158), (26, 38122), (28, 38110), (30, 38071),

Gene: Feastonyeet\_59 Start: 41075, Stop: 40881, Start Num: 17

Candidate Starts for Feastonyeet\_59:

(1, 41414), (8, 41222), (9, 41213), (Start: 17 @41075 has 13 MA's), (20, 41036), (23, 41009), (25, 40964), (26, 40961), (28, 40949), (30, 40910), (31, 40889),

Gene: GoldHunter\_56 Start: 39282, Stop: 39109, Start Num: 19  
Candidate Starts for GoldHunter\_56:  
(2, 39501), (3, 39495), (5, 39459), (6, 39453), (11, 39423), (12, 39390), (13, 39384), (Start: 19 @39282 has 22 MA's), (21, 39249), (22, 39240), (24, 39225), (28, 39177), (30, 39138),

Gene: Horseradish\_57 Start: 39023, Stop: 38850, Start Num: 19  
Candidate Starts for Horseradish\_57:  
(2, 39215), (4, 39182), (6, 39167), (12, 39104), (Start: 19 @39023 has 22 MA's), (21, 38990), (27, 38924), (29, 38909), (30, 38879),

Gene: KayGee\_62 Start: 41883, Stop: 41689, Start Num: 17  
Candidate Starts for KayGee\_62:  
(8, 42030), (9, 42021), (Start: 17 @41883 has 13 MA's), (20, 41844), (25, 41772), (26, 41769), (28, 41757), (31, 41697),

Gene: Lauer\_54 Start: 42060, Stop: 41866, Start Num: 17  
Candidate Starts for Lauer\_54:  
(8, 42207), (9, 42198), (15, 42111), (Start: 17 @42060 has 13 MA's), (25, 41949), (28, 41934),

Gene: MAnor\_61 Start: 42014, Stop: 41820, Start Num: 17  
Candidate Starts for MAnor\_61:  
(7, 42164), (8, 42161), (9, 42152), (Start: 17 @42014 has 13 MA's), (25, 41903), (28, 41888), (31, 41828),

Gene: MScarn\_59 Start: 39205, Stop: 39032, Start Num: 19  
Candidate Starts for MScarn\_59:  
(2, 39397), (4, 39364), (6, 39349), (12, 39286), (Start: 19 @39205 has 22 MA's), (21, 39172), (27, 39106), (29, 39091), (30, 39061),

Gene: Mayweather\_63 Start: 42277, Stop: 42083, Start Num: 17  
Candidate Starts for Mayweather\_63:  
(7, 42427), (8, 42424), (9, 42415), (Start: 17 @42277 has 13 MA's), (25, 42166), (28, 42151), (31, 42091),

Gene: MunkgeeRoachy\_53 Start: 38628, Stop: 38455, Start Num: 19  
Candidate Starts for MunkgeeRoachy\_53:  
(2, 38847), (3, 38841), (5, 38805), (6, 38799), (11, 38769), (12, 38736), (13, 38730), (Start: 19 @38628 has 22 MA's), (21, 38595), (22, 38586), (24, 38571), (28, 38523), (30, 38484),

Gene: Nina\_55 Start: 39768, Stop: 39595, Start Num: 19  
Candidate Starts for Nina\_55:  
(2, 39987), (3, 39981), (5, 39945), (6, 39939), (11, 39909), (12, 39876), (13, 39870), (Start: 19 @39768 has 22 MA's), (21, 39735), (22, 39726), (24, 39711), (28, 39663), (30, 39624),

Gene: Pons\_61 Start: 41619, Stop: 41425, Start Num: 17  
Candidate Starts for Pons\_61:  
(1, 41958), (8, 41766), (9, 41757), (15, 41670), (Start: 17 @41619 has 13 MA's), (20, 41580), (23, 41553), (25, 41508), (26, 41505), (28, 41493), (31, 41433),

Gene: PotPie\_59 Start: 42110, Stop: 41916, Start Num: 17  
Candidate Starts for PotPie\_59:  
(1, 42449), (8, 42257), (9, 42248), (Start: 17 @42110 has 13 MA's), (20, 42071), (23, 42044), (25, 41999), (26, 41996), (28, 41984), (30, 41945), (31, 41924),

Gene: PsychoKiller\_54 Start: 39166, Stop: 38993, Start Num: 19

Candidate Starts for PsychoKiller\_54:

(2, 39385), (5, 39343), (6, 39337), (11, 39307), (12, 39274), (13, 39268), (Start: 19 @39166 has 22 MA's), (21, 39133), (22, 39124), (24, 39109), (28, 39061), (30, 39022),

Gene: Quasar\_55 Start: 39870, Stop: 39697, Start Num: 19

Candidate Starts for Quasar\_55:

(2, 40089), (3, 40083), (5, 40047), (6, 40041), (11, 40011), (12, 39978), (13, 39972), (Start: 19 @39870 has 22 MA's), (21, 39837), (22, 39828), (24, 39813), (28, 39765), (30, 39726),

Gene: SheckWes\_63 Start: 41150, Stop: 40956, Start Num: 17

Candidate Starts for SheckWes\_63:

(8, 41297), (9, 41288), (15, 41201), (Start: 17 @41150 has 13 MA's), (25, 41039), (28, 41024), (29, 41015), (31, 40964),

Gene: SketchMex\_55 Start: 39090, Stop: 38917, Start Num: 19

Candidate Starts for SketchMex\_55:

(2, 39282), (4, 39249), (6, 39234), (12, 39171), (Start: 19 @39090 has 22 MA's), (21, 39057), (27, 38991), (29, 38976), (30, 38946),

Gene: Socotra\_56 Start: 39278, Stop: 39105, Start Num: 19

Candidate Starts for Socotra\_56:

(2, 39497), (3, 39491), (5, 39455), (6, 39449), (11, 39419), (12, 39386), (13, 39380), (Start: 19 @39278 has 22 MA's), (21, 39245), (22, 39236), (24, 39221), (28, 39173), (30, 39134),

Gene: Sopespian\_52 Start: 39167, Stop: 38994, Start Num: 19

Candidate Starts for Sopespian\_52:

(2, 39386), (5, 39344), (6, 39338), (11, 39308), (12, 39275), (13, 39269), (Start: 19 @39167 has 22 MA's), (21, 39134), (22, 39125), (24, 39110), (28, 39062), (30, 39023),

Gene: Starburst\_55 Start: 39162, Stop: 38989, Start Num: 19

Candidate Starts for Starburst\_55:

(2, 39381), (3, 39375), (5, 39339), (6, 39333), (11, 39303), (12, 39270), (13, 39264), (Start: 19 @39162 has 22 MA's), (21, 39129), (22, 39120), (24, 39105), (28, 39057), (30, 39018),

Gene: SteamedHams\_56 Start: 38665, Stop: 38492, Start Num: 19

Candidate Starts for SteamedHams\_56:

(6, 38845), (10, 38821), (11, 38815), (14, 38764), (16, 38704), (Start: 19 @38665 has 22 MA's), (21, 38632), (27, 38566), (28, 38560), (30, 38521),

Gene: SummitAcademy\_59 Start: 41253, Stop: 41059, Start Num: 17

Candidate Starts for SummitAcademy\_59:

(1, 41592), (8, 41400), (9, 41391), (Start: 17 @41253 has 13 MA's), (20, 41214), (23, 41187), (25, 41142), (26, 41139), (28, 41127), (30, 41088), (31, 41067),

Gene: SweatNTears\_57 Start: 39409, Stop: 39236, Start Num: 19

Candidate Starts for SweatNTears\_57:

(2, 39628), (3, 39622), (5, 39586), (6, 39580), (11, 39550), (12, 39517), (13, 39511), (Start: 19 @39409 has 22 MA's), (21, 39376), (22, 39367), (24, 39352), (28, 39304), (30, 39265),

Gene: Tolls\_56 Start: 38936, Stop: 38763, Start Num: 19

Candidate Starts for Tolls\_56:

(6, 39116), (10, 39092), (11, 39086), (14, 39035), (16, 38975), (Start: 19 @38936 has 22 MA's), (21, 38903), (27, 38837), (28, 38831), (30, 38792),

Gene: Troje\_57 Start: 39428, Stop: 39255, Start Num: 19

Candidate Starts for Troje\_57:

(2, 39620), (4, 39587), (6, 39572), (12, 39509), (Start: 19 @39428 has 22 MA's), (21, 39395), (27, 39329), (29, 39314), (30, 39284),

Gene: Typhonomachy\_55 Start: 38991, Stop: 38818, Start Num: 19

Candidate Starts for Typhonomachy\_55:

(2, 39210), (3, 39204), (5, 39168), (6, 39162), (11, 39132), (12, 39099), (13, 39093), (Start: 19 @38991 has 22 MA's), (21, 38958), (22, 38949), (28, 38886), (30, 38847),

Gene: Vine\_62 Start: 41876, Stop: 41682, Start Num: 17

Candidate Starts for Vine\_62:

(1, 42215), (8, 42023), (9, 42014), (Start: 17 @41876 has 13 MA's), (20, 41837), (23, 41810), (25, 41765), (26, 41762), (28, 41750), (30, 41711), (31, 41690),

Gene: Yarn\_52 Start: 38693, Stop: 38520, Start Num: 19

Candidate Starts for Yarn\_52:

(6, 38873), (10, 38849), (11, 38843), (14, 38792), (16, 38732), (Start: 19 @38693 has 22 MA's), (21, 38660), (27, 38594), (28, 38588), (30, 38549),

Gene: Yucky\_63 Start: 41668, Stop: 41474, Start Num: 17

Candidate Starts for Yucky\_63:

(8, 41815), (9, 41806), (Start: 17 @41668 has 13 MA's), (20, 41629), (23, 41602), (25, 41557), (26, 41554), (28, 41542), (30, 41503), (31, 41482),

Gene: Yummy\_57 Start: 39137, Stop: 38964, Start Num: 19

Candidate Starts for Yummy\_57:

(2, 39329), (4, 39296), (6, 39281), (12, 39218), (Start: 19 @39137 has 22 MA's), (21, 39104), (27, 39038), (29, 39023), (30, 38993),