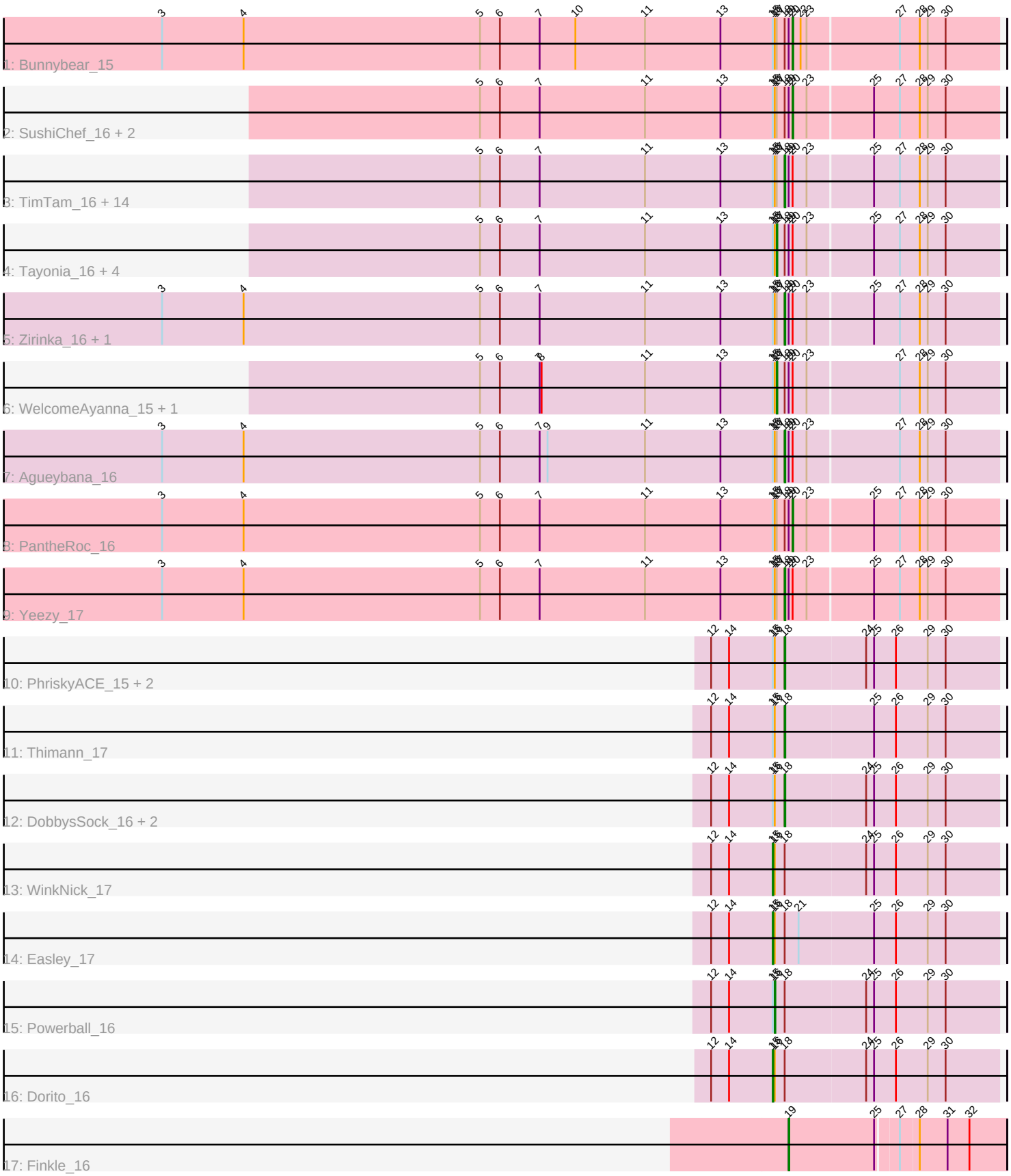
Zoomed Pham 347772



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 347772 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347772 has 43 members, 3 are drafts.

Phages represented in each track:
• Track 1 : Bunnybear_15
• Track 2 : SushiChef_16, Nymphadora_16, Dillpickles_17
• Track 3 : TimTam_16, Bosnia_16, Hugley_16, Neobush_16, Herod_16, Manasvini_16, Eviarto_16, BatStarr_16, BaxterFox_15, Maridalia_15, Kita_16, AlumE_16, BoyNamedSue_16, Eudoria_16, Trumpet_16
• Track 4 : Tayonia_16, Antonio_16, Zameen_16, Suscepit_16, Polly_16
• Track 5 : Zirinka_16, Bialota_16
• Track 6 : WelcomeAyanna_15, ThankyouJordi_15
• Track 7 : Agueybana_16
• Track 8 : PantheRoc_16
• Track 9 : Yeezy_17
• Track 10 : PhriskyACE_15, Clark_17, Annalisa_17
• Track 11 : Thimann_17
• Track 12 : DobbysSock_16, Samman98_17, Dolores_17
• Track 13 : WinkNick_17
• Track 14 : Easley_17
• Track 15 : Powerball_16
• Track 16 : Dorito_16
• Track 17 : Finkle_16

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

The start number called the most often in the published annotations is 18, it was called in 25 of the 40 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Agueybana_16, AlumE_16, Annalisa_17, BatStarr_16, BaxterFox_15, Bialota_16, Bosnia_16, BoyNamedSue_16, Clark_17, DobbysSock_16, Dolores_17, Eudoria_16, Eviarto_16, Herod_16, Hugley_16, Kita_16, Manasvini_16, Maridalia_15, Neobush_16, PhriskyACE_15, Samman98_17, Thimann_17, TimTam_16, Trumpet_16, Yeezy_17, Zirinka_16,

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

• Antonio_16, Bunnybear_15, Dillpickles_17, Dorito_16, Easley_17, Nymphadora_16, PantheRoc_16, Polly_16, Powerball_16, Suscepit_16, SushiChef_16, Tayonia_16, ThankyouJordi_15, WelcomeAyanna_15, WinkNick_17, Zameen_16,

Genes that do not have the "Most Annotated" start:
• Finkle_16,

Summary by start number:

Start 15:
• Found in 42 of 43 (97.7%) of genes in pham
• Manual Annotations of this start: 3 of 40
• Called 7.1% of time when present
• Phage (with cluster) where this start called: Dorito_16 (CZ4), Easley_17 (CZ4), WinkNick_17 (CZ4),

Start 16:
• Found in 42 of 43 (97.7%) of genes in pham
• Manual Annotations of this start: 1 of 40
• Called 2.4% of time when present
• Phage (with cluster) where this start called: Powerball_16 (CZ4),

Start 17:
• Found in 31 of 43 (72.1%) of genes in pham
• Manual Annotations of this start: 7 of 40
• Called 22.6% of time when present
• Phage (with cluster) where this start called: Antonio_16 (CZ1), Polly_16 (CZ1), Suscepit_16 (CZ1), Tayonia_16 (CZ1), ThankyouJordi_15 (CZ1), WelcomeAyanna_15 (CZ1), Zameen_16 (CZ1),

Start 18:
• Found in 42 of 43 (97.7%) of genes in pham
• Manual Annotations of this start: 25 of 40
• Called 61.9% of time when present
• Phage (with cluster) where this start called: Agueybana_16 (CZ1), AlumE_16 (CZ1), Annalisa_17 (CZ4), BatStarr_16 (CZ1), BaxterFox_15 (CZ3), Bialota_16 (CZ1), Bosnia_16 (CZ1), BoyNamedSue_16 (CZ1), Clark_17 (CZ4), DobbysSock_16 (CZ4), Dolores_17 (CZ4), Eudoria_16 (CZ1), Eviarto_16 (CZ1), Herod_16 (CZ1), Hugley_16 (CZ1), Kita_16 (CZ1), Manasvini_16 (CZ1), Maridalia_15 (CZ1), Neobush_16 (CZ1), PhriskyACE_15 (CZ4), Samman98_17 (CZ4), Thimann_17 (CZ4), TimTam_16 (CZ1), Trumpet_16 (CZ1), Yeezy_17 (CZ3), Zirinka_16 (CZ1),

Start 19:
• Found in 32 of 43 (74.4%) of genes in pham
• Manual Annotations of this start: 1 of 40
• Called 3.1% of time when present
• Phage (with cluster) where this start called: Finkle_16 (singleton),

Start 20:
• Found in 31 of 43 (72.1%) of genes in pham
• Manual Annotations of this start: 3 of 40
• Called 16.1% of time when present

• Phage (with cluster) where this start called: Bunnybear_15 (CZ), Dillpickles_17 (CZ1), Nymphadora_16 (CZ1), PantheRoc_16 (CZ3), SushiChef_16 (CZ),

Summary by clusters:

There are 5 clusters represented in this pham: CZ, singleton, CZ1, CZ4, CZ3,

Info for manual annotations of cluster CZ:
•Start number 20 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:
•Start number 17 was manually annotated 7 times for cluster CZ1.
•Start number 18 was manually annotated 16 times for cluster CZ1.
•Start number 20 was manually annotated 1 time for cluster CZ1.

Info for manual annotations of cluster CZ3:
•Start number 18 was manually annotated 2 times for cluster CZ3.
•Start number 20 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ4:
•Start number 15 was manually annotated 3 times for cluster CZ4.
•Start number 16 was manually annotated 1 time for cluster CZ4.
•Start number 18 was manually annotated 7 times for cluster CZ4.

Gene Information:

Gene: Agueybana_16 Start: 10479, Stop: 10162, Start Num: 18
Candidate Starts for Agueybana_16:
(1, 12438), (2, 11901), (3, 11418), (4, 11295), (5, 10938), (6, 10908), (7, 10848), (9, 10836), (11, 10689), (13, 10575), (Start: 15 @10497 has 3 MA's), (Start: 16 @10494 has 1 MA's), (Start: 17 @10491 has 7 MA's), (Start: 18 @10479 has 25 MA's), (Start: 19 @10473 has 1 MA's), (Start: 20 @10467 has 3 MA's), (23, 10446), (27, 10311), (28, 10281), (29, 10269), (30, 10242),

Gene: AlumE_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for AlumE_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Annalisa_17 Start: 10055, Stop: 9735, Start Num: 18
Candidate Starts for Annalisa_17:
(12, 10166), (14, 10139), (Start: 15 @10073 has 3 MA's), (Start: 16 @10070 has 1 MA's), (Start: 18 @10055 has 25 MA's), (24, 9935), (25, 9923), (26, 9890), (29, 9842), (30, 9815),

Gene: Antonio_16 Start: 10490, Stop: 10161, Start Num: 17
Candidate Starts for Antonio_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: BatStarr_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for BatStarr_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: BaxterFox_15 Start: 9826, Stop: 9509, Start Num: 18
Candidate Starts for BaxterFox_15:
(5, 10285), (6, 10255), (7, 10195), (11, 10036), (13, 9922), (Start: 15 @9844 has 3 MA's), (Start: 16 @9841 has 1 MA's), (Start: 17 @9838 has 7 MA's), (Start: 18 @9826 has 25 MA's), (Start: 19 @9820 has 1 MA's), (Start: 20 @9814 has 3 MA's), (23, 9793), (25, 9697), (27, 9658), (28, 9628), (29, 9616), (30, 9589),

Gene: Bialota_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Bialota_16:
(1, 12437), (2, 11900), (3, 11417), (4, 11294), (5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Bosnia_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Bosnia_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: BoyNamedSue_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for BoyNamedSue_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Bunnybear_15 Start: 10483, Stop: 10178, Start Num: 20
Candidate Starts for Bunnybear_15:
(3, 11434), (4, 11311), (5, 10954), (6, 10924), (7, 10864), (10, 10810), (11, 10705), (13, 10591), (Start: 15 @10513 has 3 MA's), (Start: 16 @10510 has 1 MA's), (Start: 17 @10507 has 7 MA's), (Start: 18 @10495 has 25 MA's), (Start: 19 @10489 has 1 MA's), (Start: 20 @10483 has 3 MA's), (22, 10471), (23, 10462), (27, 10327), (28, 10297), (29, 10285), (30, 10258),

Gene: Clark_17 Start: 10055, Stop: 9735, Start Num: 18
Candidate Starts for Clark_17:
(12, 10166), (14, 10139), (Start: 15 @10073 has 3 MA's), (Start: 16 @10070 has 1 MA's), (Start: 18 @10055 has 25 MA's), (24, 9935), (25, 9923), (26, 9890), (29, 9842), (30, 9815),

Gene: Dillpickles_17 Start: 10466, Stop: 10161, Start Num: 20
Candidate Starts for Dillpickles_17:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28,

10280), (29, 10268), (30, 10241),

Gene: DobbysSock_16 Start: 9538, Stop: 9218, Start Num: 18
Candidate Starts for DobbysSock_16:
(12, 9649), (14, 9622), (Start: 15 @9556 has 3 MA's), (Start: 16 @9553 has 1 MA's), (Start: 18 @9538 has 25 MA's), (24, 9418), (25, 9406), (26, 9373), (29, 9325), (30, 9298),

Gene: Dolores_17 Start: 10040, Stop: 9720, Start Num: 18
Candidate Starts for Dolores_17:
(12, 10151), (14, 10124), (Start: 15 @10058 has 3 MA's), (Start: 16 @10055 has 1 MA's), (Start: 18 @10040 has 25 MA's), (24, 9920), (25, 9908), (26, 9875), (29, 9827), (30, 9800),

Gene: Dorito_16 Start: 9555, Stop: 9217, Start Num: 15
Candidate Starts for Dorito_16:
(12, 9648), (14, 9621), (Start: 15 @9555 has 3 MA's), (Start: 16 @9552 has 1 MA's), (Start: 18 @9537 has 25 MA's), (24, 9417), (25, 9405), (26, 9372), (29, 9324), (30, 9297),

Gene: Easley_17 Start: 10062, Stop: 9724, Start Num: 15
Candidate Starts for Easley_17:
(12, 10155), (14, 10128), (Start: 15 @10062 has 3 MA's), (Start: 16 @10059 has 1 MA's), (Start: 18 @10044 has 25 MA's), (21, 10023), (25, 9912), (26, 9879), (29, 9831), (30, 9804),

Gene: Eudoria_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Eudoria_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Eviarto_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Eviarto_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Finkle_16 Start: 9885, Stop: 9568, Start Num: 19
Candidate Starts for Finkle_16:
(Start: 19 @9885 has 1 MA's), (25, 9756), (27, 9726), (28, 9699), (31, 9657), (32, 9624),

Gene: Herod_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Herod_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Hugley_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Hugley_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Kita_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Kita_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Manasvini_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Manasvini_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Maridalia_15 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Maridalia_15:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Neobush_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Neobush_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Nymphadora_16 Start: 10466, Stop: 10161, Start Num: 20
Candidate Starts for Nymphadora_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: PantheRoc_16 Start: 9800, Stop: 9495, Start Num: 20
Candidate Starts for PantheRoc_16:
(3, 10751), (4, 10628), (5, 10271), (6, 10241), (7, 10181), (11, 10022), (13, 9908), (Start: 15 @9830 has 3 MA's), (Start: 16 @9827 has 1 MA's), (Start: 17 @9824 has 7 MA's), (Start: 18 @9812 has 25 MA's), (Start: 19 @9806 has 1 MA's), (Start: 20 @9800 has 3 MA's), (23, 9779), (25, 9683), (27, 9644), (28, 9614), (29, 9602), (30, 9575),

Gene: PhriskyACE_15 Start: 9537, Stop: 9217, Start Num: 18
Candidate Starts for PhriskyACE_15:
(12, 9648), (14, 9621), (Start: 15 @9555 has 3 MA's), (Start: 16 @9552 has 1 MA's), (Start: 18 @9537 has 25 MA's), (24, 9417), (25, 9405), (26, 9372), (29, 9324), (30, 9297),

Gene: Polly_16 Start: 10490, Stop: 10161, Start Num: 17
Candidate Starts for Polly_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28,

10280), (29, 10268), (30, 10241),

Gene: Powerball_16 Start: 9561, Stop: 9226, Start Num: 16
Candidate Starts for Powerball_16:
(12, 9657), (14, 9630), (Start: 15 @9564 has 3 MA's), (Start: 16 @9561 has 1 MA's), (Start: 18 @9546 has 25 MA's), (24, 9426), (25, 9414), (26, 9381), (29, 9333), (30, 9306),

Gene: Samman98_17 Start: 10055, Stop: 9735, Start Num: 18
Candidate Starts for Samman98_17:
(12, 10166), (14, 10139), (Start: 15 @10073 has 3 MA's), (Start: 16 @10070 has 1 MA's), (Start: 18 @10055 has 25 MA's), (24, 9935), (25, 9923), (26, 9890), (29, 9842), (30, 9815),

Gene: Suscepit_16 Start: 10490, Stop: 10161, Start Num: 17
Candidate Starts for Suscepit_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: SushiChef_16 Start: 10466, Stop: 10161, Start Num: 20
Candidate Starts for SushiChef_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Tayonia_16 Start: 10490, Stop: 10161, Start Num: 17
Candidate Starts for Tayonia_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: ThankyouJordi_15 Start: 10517, Stop: 10188, Start Num: 17
Candidate Starts for ThankyouJordi_15:
(5, 10964), (6, 10934), (7, 10874), (8, 10871), (11, 10715), (13, 10601), (Start: 15 @10523 has 3 MA's), (Start: 16 @10520 has 1 MA's), (Start: 17 @10517 has 7 MA's), (Start: 18 @10505 has 25 MA's), (Start: 19 @10499 has 1 MA's), (Start: 20 @10493 has 3 MA's), (23, 10472), (27, 10337), (28, 10307), (29, 10295), (30, 10268),

Gene: Thimann_17 Start: 10025, Stop: 9705, Start Num: 18
Candidate Starts for Thimann_17:
(12, 10136), (14, 10109), (Start: 15 @10043 has 3 MA's), (Start: 16 @10040 has 1 MA's), (Start: 18 @10025 has 25 MA's), (25, 9893), (26, 9860), (29, 9812), (30, 9785),

Gene: TimTam_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for TimTam_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Trumpet_16 Start: 10478, Stop: 10161, Start Num: 18

Candidate Starts for Trumpet_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: WelcomeAyanna_15 Start: 10517, Stop: 10188, Start Num: 17
Candidate Starts for WelcomeAyanna_15:
(5, 10964), (6, 10934), (7, 10874), (8, 10871), (11, 10715), (13, 10601), (Start: 15 @10523 has 3 MA's), (Start: 16 @10520 has 1 MA's), (Start: 17 @10517 has 7 MA's), (Start: 18 @10505 has 25 MA's), (Start: 19 @10499 has 1 MA's), (Start: 20 @10493 has 3 MA's), (23, 10472), (27, 10337), (28, 10307), (29, 10295), (30, 10268),

Gene: WinkNick_17 Start: 10058, Stop: 9720, Start Num: 15
Candidate Starts for WinkNick_17:
(12, 10151), (14, 10124), (Start: 15 @10058 has 3 MA's), (Start: 16 @10055 has 1 MA's), (Start: 18 @10040 has 25 MA's), (24, 9920), (25, 9908), (26, 9875), (29, 9827), (30, 9800),

Gene: Yeezy_17 Start: 9836, Stop: 9519, Start Num: 18
Candidate Starts for Yeezy_17:
(3, 10775), (4, 10652), (5, 10295), (6, 10265), (7, 10205), (11, 10046), (13, 9932), (Start: 15 @9854 has 3 MA's), (Start: 16 @9851 has 1 MA's), (Start: 17 @9848 has 7 MA's), (Start: 18 @9836 has 25 MA's), (Start: 19 @9830 has 1 MA's), (Start: 20 @9824 has 3 MA's), (23, 9803), (25, 9707), (27, 9668), (28, 9638), (29, 9626), (30, 9599),

Gene: Zameen_16 Start: 10490, Stop: 10161, Start Num: 17
Candidate Starts for Zameen_16:
(5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),

Gene: Zirinka_16 Start: 10478, Stop: 10161, Start Num: 18
Candidate Starts for Zirinka_16:
(1, 12437), (2, 11900), (3, 11417), (4, 11294), (5, 10937), (6, 10907), (7, 10847), (11, 10688), (13, 10574), (Start: 15 @10496 has 3 MA's), (Start: 16 @10493 has 1 MA's), (Start: 17 @10490 has 7 MA's), (Start: 18 @10478 has 25 MA's), (Start: 19 @10472 has 1 MA's), (Start: 20 @10466 has 3 MA's), (23, 10445), (25, 10349), (27, 10310), (28, 10280), (29, 10268), (30, 10241),