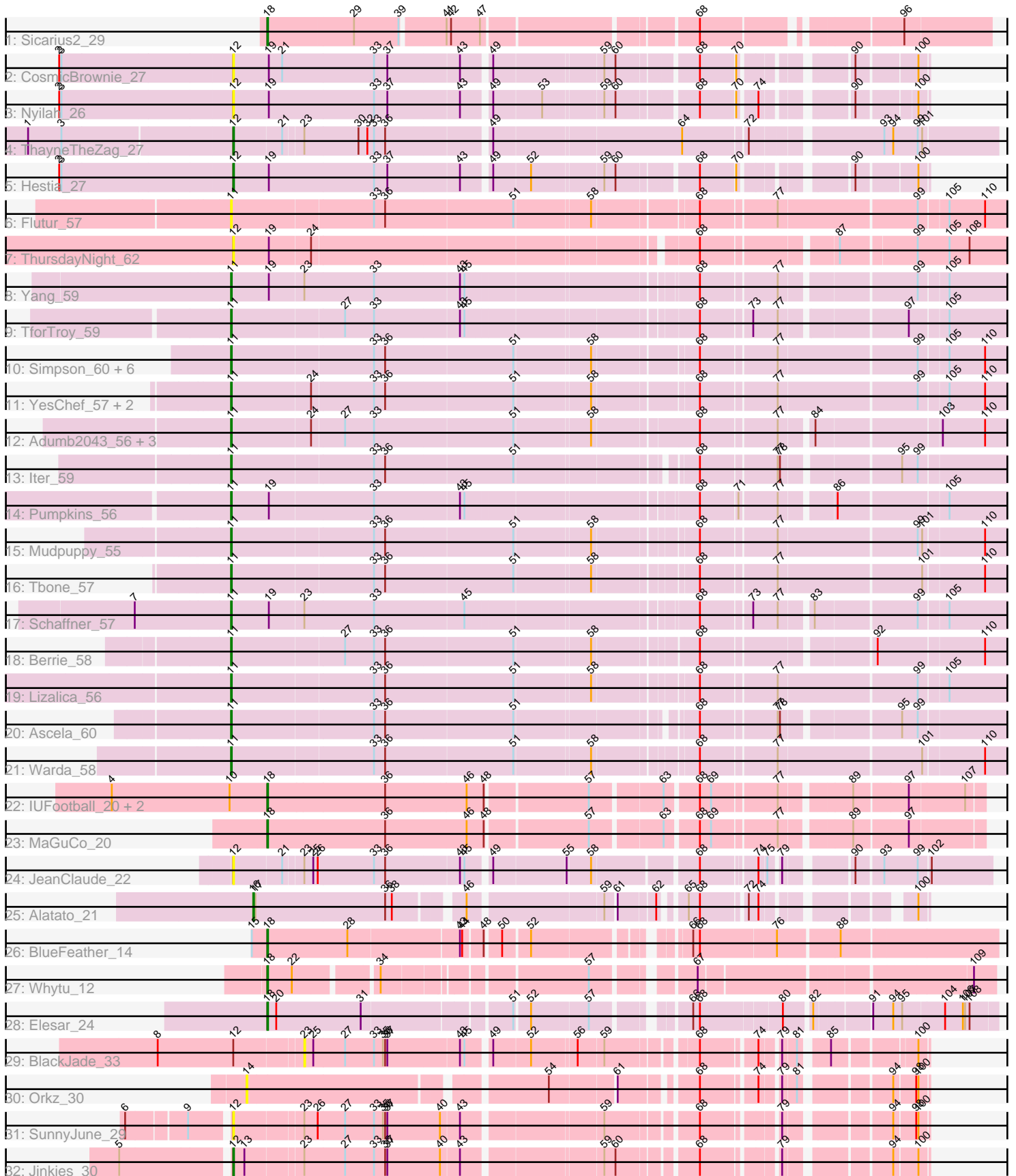


Pham 305118



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 305118 Report

This analysis was run 06/08/26 on database version 649.

Pham number 305118 has 45 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Sicarius2\_29
- Track 2 : CosmicBrownie\_27
- Track 3 : Nyilah\_26
- Track 4 : ThayneTheZag\_27
- Track 5 : Hestia\_27
- Track 6 : Flutur\_57
- Track 7 : ThursdayNight\_62
- Track 8 : Yang\_59
- Track 9 : TforTroy\_59
- Track 10 : Simpson\_60, Lego\_57, JohnDoe\_58, Cyan\_58, Kaylissa\_59, Tutumahutu\_59, Joemato\_58
- Track 11 : YesChef\_57, AGrandiflora\_59, Powerpuff\_59
- Track 12 : Adumb2043\_56, Amploria\_57, AEgle\_55, Turab\_56
- Track 13 : lter\_59
- Track 14 : Pumpkins\_56
- Track 15 : Mudpuppy\_55
- Track 16 : Tbone\_57
- Track 17 : Schaffner\_57
- Track 18 : Berrie\_58
- Track 19 : Lizalica\_56
- Track 20 : Ascela\_60
- Track 21 : Warda\_58
- Track 22 : IUFootball\_20, Liebe\_20, Maureen\_20
- Track 23 : MaGuCo\_20
- Track 24 : JeanClaude\_22
- Track 25 : Alatato\_21
- Track 26 : BlueFeather\_14
- Track 27 : Whytu\_12
- Track 28 : Elesar\_24
- Track 29 : BlackJade\_33
- Track 30 : Orkz\_30
- Track 31 : SunnyJune\_29
- Track 32 : Jinkies\_30

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

The start number called the most often in the published annotations is 11, it was called in 20 of the 31 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle\_55, AGrandiflora\_59, Adumb2043\_56, Amploria\_57, Ascela\_60, Berrie\_58, Cyan\_58, Flutur\_57, Iter\_59, Joemato\_58, JohnDoe\_58, Kaylissa\_59, Lego\_57, Lizalica\_56, Mudpuppy\_55, Powerpuff\_59, Pumpkins\_56, Schaffner\_57, Simpson\_60, Tbone\_57, TforTroy\_59, Turab\_56, Tutumahutu\_59, Warda\_58, Yang\_59, YesChef\_57,

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

- 

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

- Alatato\_21, BlackJade\_33, BlueFeather\_14, CosmicBrownie\_27, Elesar\_24, Hestia\_27, IUFootball\_20, JeanClaude\_22, Jinkies\_30, Liebe\_20, MaGuCo\_20, Maureen\_20, Nyilah\_26, Orkz\_30, Sicarius2\_29, SunnyJune\_29, ThayneTheZag\_27, ThursdayNight\_62, Whytu\_12,

### Summary by start number:

Start 11:

- Found in 26 of 45 ( 57.8% ) of genes in pham
- Manual Annotations of this start: 20 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle\_55 (AZ1), AGrandiflora\_59 (AZ1), Adumb2043\_56 (AZ1), Amploria\_57 (AZ1), Ascela\_60 (AZ1), Berrie\_58 (AZ1), Cyan\_58 (AZ1), Flutur\_57 (AZ), Iter\_59 (AZ1), Joemato\_58 (AZ1), JohnDoe\_58 (AZ1), Kaylissa\_59 (AZ1), Lego\_57 (AZ1), Lizalica\_56 (AZ1), Mudpuppy\_55 (AZ1), Powerpuff\_59 (AZ1), Pumpkins\_56 (AZ1), Schaffner\_57 (AZ1), Simpson\_60 (AZ1), Tbone\_57 (AZ1), TforTroy\_59 (AZ1), Turab\_56 (AZ1), Tutumahutu\_59 (AZ1), Warda\_58 (AZ1), Yang\_59 (AZ1), YesChef\_57 (AZ1),

Start 12:

- Found in 9 of 45 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 3 of 31
- Called 88.9% of time when present
- Phage (with cluster) where this start called: CosmicBrownie\_27 (AY), Hestia\_27 (AY), JeanClaude\_22 (FB), Jinkies\_30 (FL), Nyilah\_26 (AY), SunnyJune\_29 (FL), ThayneTheZag\_27 (AY), ThursdayNight\_62 (AZ),

Start 14:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Orkz\_30 (FL),

Start 16:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alatato\_21 (FB),

Start 18:

- Found in 8 of 45 ( 17.8% ) of genes in pham
- Manual Annotations of this start: 7 of 31
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueFeather\_14 (FE), Elesar\_24 (FF), IUFootball\_20 (AZ2), Liebe\_20 (AZ2), MaGuCo\_20 (AZ2), Maureen\_20 (AZ2), Sicarius2\_29 (AO2), Whytu\_12 (FE),

Start 23:

- Found in 7 of 45 ( 15.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: BlackJade\_33 (FL),

**Summary by clusters:**

There are 9 clusters represented in this pham: FB, FE, FF, AY, AZ1, AZ2, AZ, FL, AO2,

Info for manual annotations of cluster AO2:

- Start number 18 was manually annotated 1 time for cluster AO2.

Info for manual annotations of cluster AY:

- Start number 12 was manually annotated 2 times for cluster AY.

Info for manual annotations of cluster AZ1:

- Start number 11 was manually annotated 20 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 18 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster FB:

- Start number 16 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FE:

- Start number 18 was manually annotated 2 times for cluster FE.

Info for manual annotations of cluster FF:

- Start number 18 was manually annotated 1 time for cluster FF.

Info for manual annotations of cluster FL:

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

**Gene Information:**

Gene: AEgle\_55 Start: 38287, Stop: 39267, Start Num: 11

Candidate Starts for AEgle\_55:

(Start: 11 @38287 has 20 MA's), (24, 38392), (27, 38434), (33, 38473), (51, 38656), (58, 38752), (68, 38884), (77, 38980), (84, 39016), (103, 39172), (110, 39229),

Gene: AGrandiflora\_59 Start: 39228, Stop: 40220, Start Num: 11

Candidate Starts for AGrandiflora\_59:

(Start: 11 @39228 has 20 MA's), (24, 39333), (33, 39414), (36, 39429), (51, 39597), (58, 39693), (68, 39822), (77, 39918), (99, 40098), (105, 40134), (110, 40182),

Gene: Adumb2043\_56 Start: 38310, Stop: 39290, Start Num: 11

Candidate Starts for Adumb2043\_56:

(Start: 11 @38310 has 20 MA's), (24, 38415), (27, 38457), (33, 38496), (51, 38679), (58, 38775), (68, 38907), (77, 39003), (84, 39039), (103, 39195), (110, 39252),

Gene: Alatato\_21 Start: 16711, Stop: 17466, Start Num: 16

Candidate Starts for Alatato\_21:

(Start: 16 @16711 has 1 MA's), (17, 16714), (36, 16888), (38, 16897), (46, 16972), (59, 17140), (61, 17152), (62, 17197), (65, 17221), (68, 17236), (72, 17290), (74, 17302), (100, 17455),

Gene: Amploria\_57 Start: 38491, Stop: 39471, Start Num: 11

Candidate Starts for Amploria\_57:

(Start: 11 @38491 has 20 MA's), (24, 38596), (27, 38638), (33, 38677), (51, 38860), (58, 38956), (68, 39088), (77, 39184), (84, 39220), (103, 39376), (110, 39433),

Gene: Ascela\_60 Start: 39485, Stop: 40450, Start Num: 11

Candidate Starts for Ascela\_60:

(Start: 11 @39485 has 20 MA's), (33, 39671), (36, 39686), (51, 39854), (68, 40064), (77, 40160), (78, 40163), (95, 40304), (99, 40325),

Gene: Berrie\_58 Start: 39288, Stop: 40256, Start Num: 11

Candidate Starts for Berrie\_58:

(Start: 11 @39288 has 20 MA's), (27, 39435), (33, 39474), (36, 39489), (51, 39657), (58, 39753), (68, 39876), (92, 40083), (110, 40221),

Gene: BlackJade\_33 Start: 24154, Stop: 24873, Start Num: 23

Candidate Starts for BlackJade\_33:

(8, 23965), (Start: 12 @24067 has 3 MA's), (23, 24154), (25, 24166), (27, 24208), (33, 24247), (35, 24259), (36, 24262), (37, 24265), (43, 24358), (45, 24364), (49, 24391), (52, 24439), (56, 24496), (59, 24529), (68, 24631), (74, 24697), (79, 24718), (81, 24733), (85, 24763), (100, 24862),

Gene: BlueFeather\_14 Start: 10715, Stop: 11602, Start Num: 18

Candidate Starts for BlueFeather\_14:

(15, 10694), (Start: 18 @10715 has 7 MA's), (28, 10823), (43, 10967), (44, 10970), (48, 10994), (50, 11012), (52, 11045), (66, 11213), (68, 11222), (76, 11321), (88, 11399),

Gene: CosmicBrownie\_27 Start: 19359, Stop: 20186, Start Num: 12

Candidate Starts for CosmicBrownie\_27:

(2, 19131), (3, 19134), (Start: 12 @19359 has 3 MA's), (19, 19407), (21, 19425), (33, 19548), (37, 19566), (43, 19659), (49, 19692), (59, 19830), (60, 19845), (68, 19941), (70, 19986), (90, 20100), (100, 20175),

Gene: Cyan\_58 Start: 38971, Stop: 39963, Start Num: 11

Candidate Starts for Cyan\_58:

(Start: 11 @38971 has 20 MA's), (33, 39157), (36, 39172), (51, 39340), (58, 39436), (68, 39565), (77, 39661), (99, 39841), (105, 39877), (110, 39925),

Gene: Elesar\_24 Start: 18815, Stop: 19690, Start Num: 18

Candidate Starts for Elesar\_24:

(Start: 18 @18815 has 7 MA's), (20, 18827), (31, 18941), (51, 19127), (52, 19145), (57, 19220), (66, 19322), (68, 19331), (80, 19433), (82, 19463), (91, 19529), (94, 19556), (95, 19568), (104, 19622), (106, 19646), (107, 19649), (108, 19655),

Gene: Flutur\_57 Start: 39276, Stop: 40268, Start Num: 11

Candidate Starts for Flutur\_57:

(Start: 11 @39276 has 20 MA's), (33, 39462), (36, 39477), (51, 39645), (58, 39741), (68, 39870), (77, 39966), (99, 40146), (105, 40182), (110, 40230),

Gene: Hestia\_27 Start: 19579, Stop: 20406, Start Num: 12

Candidate Starts for Hestia\_27:

(2, 19351), (3, 19354), (Start: 12 @19579 has 3 MA's), (19, 19627), (33, 19768), (37, 19786), (43, 19879), (49, 19912), (52, 19960), (59, 20050), (60, 20065), (68, 20161), (70, 20206), (90, 20320), (100, 20395),

Gene: IUFootball\_20 Start: 17855, Stop: 18736, Start Num: 18

Candidate Starts for IUFootball\_20:

(4, 17645), (10, 17804), (Start: 18 @17855 has 7 MA's), (36, 18011), (46, 18116), (48, 18137), (57, 18266), (63, 18353), (68, 18392), (69, 18407), (77, 18488), (89, 18572), (97, 18641), (107, 18713),

Gene: Iter\_59 Start: 39256, Stop: 40221, Start Num: 11

Candidate Starts for Iter\_59:

(Start: 11 @39256 has 20 MA's), (33, 39442), (36, 39457), (51, 39625), (68, 39835), (77, 39931), (78, 39934), (95, 40075), (99, 40096),

Gene: JeanClaude\_22 Start: 17290, Stop: 18198, Start Num: 12

Candidate Starts for JeanClaude\_22:

(Start: 12 @17290 has 3 MA's), (21, 17353), (23, 17377), (25, 17389), (26, 17395), (33, 17470), (36, 17485), (43, 17581), (45, 17587), (49, 17614), (55, 17707), (58, 17737), (68, 17866), (74, 17932), (75, 17941), (79, 17953), (90, 18025), (93, 18058), (99, 18103), (102, 18118),

Gene: Jinkies\_30 Start: 23927, Stop: 24739, Start Num: 12

Candidate Starts for Jinkies\_30:

(5, 23789), (Start: 12 @23927 has 3 MA's), (13, 23942), (23, 24014), (27, 24068), (33, 24107), (36, 24122), (37, 24125), (40, 24194), (43, 24218), (59, 24389), (60, 24404), (68, 24494), (79, 24581), (94, 24698), (100, 24728),

Gene: Joemato\_58 Start: 39052, Stop: 40044, Start Num: 11

Candidate Starts for Joemato\_58:

(Start: 11 @39052 has 20 MA's), (33, 39238), (36, 39253), (51, 39421), (58, 39517), (68, 39646), (77, 39742), (99, 39922), (105, 39958), (110, 40006),

Gene: JohnDoe\_58 Start: 39032, Stop: 40024, Start Num: 11

Candidate Starts for JohnDoe\_58:

(Start: 11 @39032 has 20 MA's), (33, 39218), (36, 39233), (51, 39401), (58, 39497), (68, 39626), (77, 39722), (99, 39902), (105, 39938), (110, 39986),

Gene: Kaylissa\_59 Start: 39430, Stop: 40422, Start Num: 11

Candidate Starts for Kaylissa\_59:

(Start: 11 @39430 has 20 MA's), (33, 39616), (36, 39631), (51, 39799), (58, 39895), (68, 40024), (77, 40120), (99, 40300), (105, 40336), (110, 40384),

Gene: Lego\_57 Start: 38749, Stop: 39741, Start Num: 11

Candidate Starts for Lego\_57:

(Start: 11 @38749 has 20 MA's), (33, 38935), (36, 38950), (51, 39118), (58, 39214), (68, 39343), (77, 39439), (99, 39619), (105, 39655), (110, 39703),

Gene: Liebe\_20 Start: 17855, Stop: 18736, Start Num: 18

Candidate Starts for Liebe\_20:

(4, 17645), (10, 17804), (Start: 18 @17855 has 7 MA's), (36, 18011), (46, 18116), (48, 18137), (57, 18266), (63, 18353), (68, 18392), (69, 18407), (77, 18488), (89, 18572), (97, 18641), (107, 18713),

Gene: Lizalica\_56 Start: 38292, Stop: 39275, Start Num: 11

Candidate Starts for Lizalica\_56:

(Start: 11 @38292 has 20 MA's), (33, 38478), (36, 38493), (51, 38661), (58, 38757), (68, 38880), (77, 38976), (99, 39156), (105, 39192),

Gene: MaGuCo\_20 Start: 17788, Stop: 18669, Start Num: 18

Candidate Starts for MaGuCo\_20:

(Start: 18 @17788 has 7 MA's), (36, 17944), (46, 18049), (48, 18070), (57, 18199), (63, 18286), (68, 18325), (69, 18340), (77, 18421), (89, 18505), (97, 18574),

Gene: Maureen\_20 Start: 17855, Stop: 18736, Start Num: 18

Candidate Starts for Maureen\_20:

(4, 17645), (10, 17804), (Start: 18 @17855 has 7 MA's), (36, 18011), (46, 18116), (48, 18137), (57, 18266), (63, 18353), (68, 18392), (69, 18407), (77, 18488), (89, 18572), (97, 18641), (107, 18713),

Gene: Mudpuppy\_55 Start: 38904, Stop: 39890, Start Num: 11

Candidate Starts for Mudpuppy\_55:

(Start: 11 @38904 has 20 MA's), (33, 39090), (36, 39105), (51, 39273), (58, 39369), (68, 39492), (77, 39588), (99, 39768), (101, 39774), (110, 39852),

Gene: Nyilah\_26 Start: 19391, Stop: 20215, Start Num: 12

Candidate Starts for Nyilah\_26:

(2, 19163), (3, 19166), (Start: 12 @19391 has 3 MA's), (19, 19439), (33, 19580), (37, 19598), (43, 19691), (49, 19724), (53, 19787), (59, 19862), (60, 19877), (68, 19973), (70, 20018), (74, 20039), (90, 20132), (100, 20204),

Gene: Orkz\_30 Start: 20685, Stop: 21464, Start Num: 14

Candidate Starts for Orkz\_30:

(14, 20685), (54, 21051), (61, 21132), (68, 21219), (74, 21285), (79, 21306), (81, 21321), (94, 21423), (98, 21450), (100, 21453),

Gene: Powerpuff\_59 Start: 39951, Stop: 40943, Start Num: 11

Candidate Starts for Powerpuff\_59:

(Start: 11 @39951 has 20 MA's), (24, 40056), (33, 40137), (36, 40152), (51, 40320), (58, 40416), (68, 40545), (77, 40641), (99, 40821), (105, 40857), (110, 40905),

Gene: Pumpkins\_56 Start: 39599, Stop: 40567, Start Num: 11

Candidate Starts for Pumpkins\_56:

(Start: 11 @39599 has 20 MA's), (19, 39650), (33, 39788), (43, 39899), (45, 39905), (68, 40187), (71, 40235), (77, 40283), (86, 40346), (105, 40484),

Gene: Schaffner\_57 Start: 39442, Stop: 40410, Start Num: 11

Candidate Starts for Schaffner\_57:

(7, 39316), (Start: 11 @39442 has 20 MA's), (19, 39493), (23, 39538), (33, 39631), (45, 39748), (68, 40030), (73, 40093), (77, 40126), (83, 40162), (99, 40291), (105, 40327),

Gene: Sicarius2\_29 Start: 24015, Stop: 24896, Start Num: 18

Candidate Starts for Sicarius2\_29:

(Start: 18 @24015 has 7 MA's), (29, 24129), (39, 24189), (41, 24243), (42, 24249), (47, 24288), (68, 24549), (96, 24783),

Gene: Simpson\_60 Start: 39056, Stop: 40048, Start Num: 11

Candidate Starts for Simpson\_60:

(Start: 11 @39056 has 20 MA's), (33, 39242), (36, 39257), (51, 39425), (58, 39521), (68, 39650), (77, 39746), (99, 39926), (105, 39962), (110, 40010),

Gene: SunnyJune\_29 Start: 22626, Stop: 23438, Start Num: 12

Candidate Starts for SunnyJune\_29:

(6, 22503), (9, 22578), (Start: 12 @22626 has 3 MA's), (23, 22713), (26, 22731), (27, 22767), (33, 22806), (35, 22818), (36, 22821), (37, 22824), (40, 22893), (43, 22917), (59, 23088), (68, 23193), (79, 23280), (94, 23397), (98, 23424), (100, 23427),

Gene: Tbone\_57 Start: 39387, Stop: 40373, Start Num: 11

Candidate Starts for Tbone\_57:

(Start: 11 @39387 has 20 MA's), (33, 39573), (36, 39588), (51, 39756), (58, 39852), (68, 39975), (77, 40071), (101, 40257), (110, 40335),

Gene: TforTroy\_59 Start: 39527, Stop: 40492, Start Num: 11

Candidate Starts for TforTroy\_59:

(Start: 11 @39527 has 20 MA's), (27, 39674), (33, 39713), (43, 39824), (45, 39830), (68, 40112), (73, 40175), (77, 40208), (97, 40361), (105, 40409),

Gene: ThayneTheZag\_27 Start: 19570, Stop: 20526, Start Num: 12

Candidate Starts for ThayneTheZag\_27:

(1, 19303), (3, 19348), (Start: 12 @19570 has 3 MA's), (21, 19633), (23, 19657), (30, 19729), (32, 19741), (33, 19750), (36, 19765), (49, 19894), (64, 20137), (72, 20218), (93, 20377), (94, 20389), (99, 20422), (101, 20428),

Gene: ThursdayNight\_62 Start: 40518, Stop: 41483, Start Num: 12

Candidate Starts for ThursdayNight\_62:

(Start: 12 @40518 has 3 MA's), (19, 40566), (24, 40620), (68, 41100), (87, 41262), (99, 41358), (105, 41400), (108, 41427),

Gene: Turab\_56 Start: 38331, Stop: 39311, Start Num: 11

Candidate Starts for Turab\_56:

(Start: 11 @38331 has 20 MA's), (24, 38436), (27, 38478), (33, 38517), (51, 38700), (58, 38796), (68, 38928), (77, 39024), (84, 39060), (103, 39216), (110, 39273),

Gene: Tutumahutu\_59 Start: 39023, Stop: 40015, Start Num: 11

Candidate Starts for Tutumahutu\_59:

(Start: 11 @39023 has 20 MA's), (33, 39209), (36, 39224), (51, 39392), (58, 39488), (68, 39617), (77, 39713), (99, 39893), (105, 39929), (110, 39977),

Gene: Warda\_58 Start: 39113, Stop: 40099, Start Num: 11

Candidate Starts for Warda\_58:

(Start: 11 @39113 has 20 MA's), (33, 39299), (36, 39314), (51, 39482), (58, 39578), (68, 39701), (77, 39797), (101, 39983), (110, 40061),

Gene: Whytu\_12 Start: 10993, Stop: 11844, Start Num: 18

Candidate Starts for Whytu\_12:

(Start: 18 @10993 has 7 MA's), (22, 11026), (34, 11125), (57, 11371), (67, 11482), (109, 11815),

Gene: Yang\_59 Start: 39529, Stop: 40497, Start Num: 11

Candidate Starts for Yang\_59:

(Start: 11 @39529 has 20 MA's), (19, 39580), (23, 39625), (33, 39718), (43, 39829), (45, 39835), (68, 40117), (77, 40213), (99, 40378), (105, 40414),

Gene: YesChef\_57 Start: 38810, Stop: 39802, Start Num: 11

Candidate Starts for YesChef\_57:

(Start: 11 @38810 has 20 MA's), (24, 38915), (33, 38996), (36, 39011), (51, 39179), (58, 39275), (68, 39404), (77, 39500), (99, 39680), (105, 39716), (110, 39764),