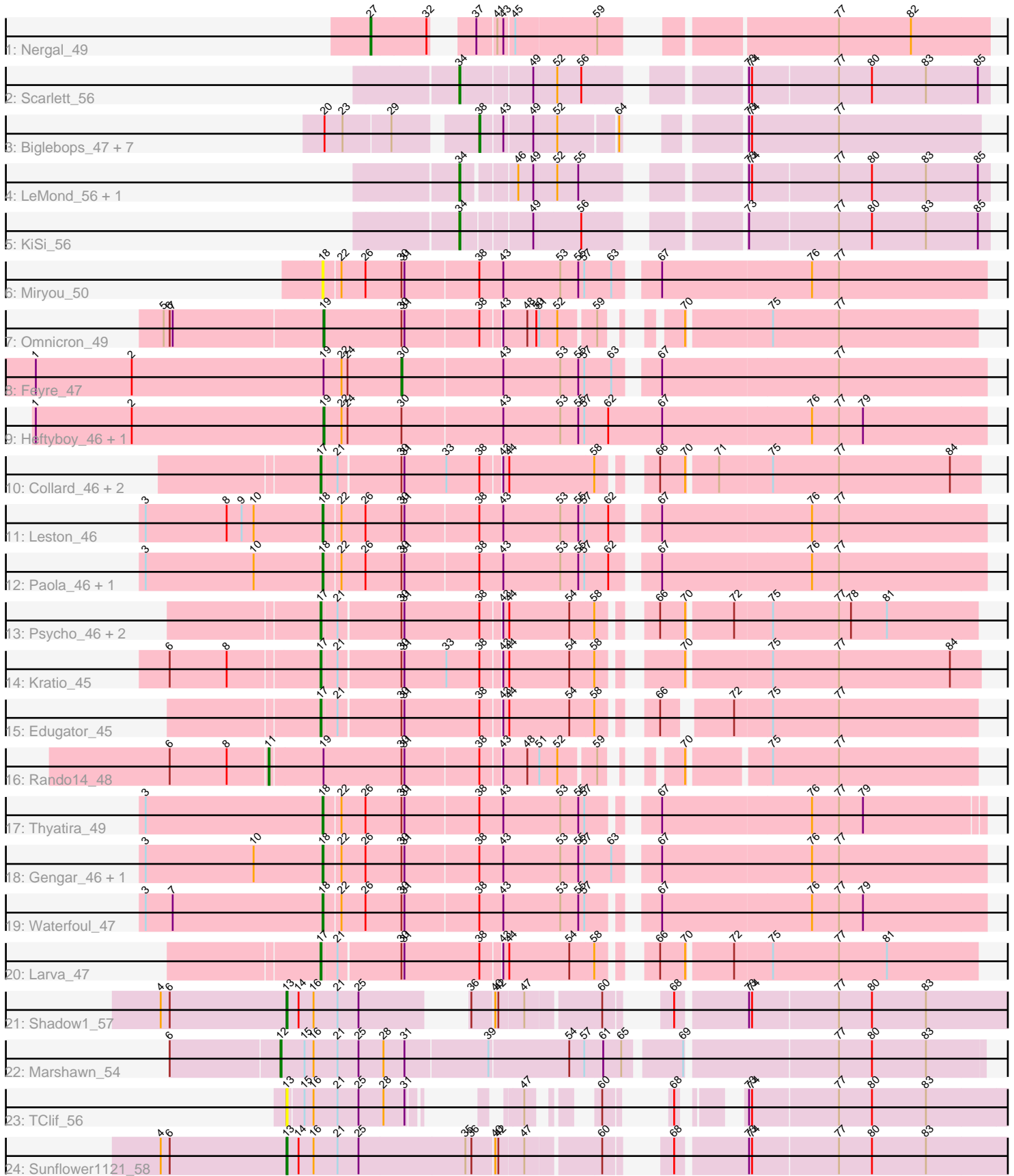


# Pham 158013



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 158013 Report

This analysis was run 04/13/24 on database version 558.

Pham number 158013 has 39 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Nergal\_49
- Track 2 : Scarlett\_56
- Track 3 : Biglebops\_47, LilPharaoh\_47, Nikao\_50, Nutello\_47, Enkosi\_49, SgtBeansprout\_47, Mdavu\_48, Amelie\_47
- Track 4 : LeMond\_56, Oscar\_56
- Track 5 : KiSi\_56
- Track 6 : Miryou\_50
- Track 7 : Omnicron\_49
- Track 8 : Feyre\_47
- Track 9 : Heftyboy\_46, SoSeph\_46
- Track 10 : Collard\_46, Agent47\_46, InvictusManeo\_46
- Track 11 : Leston\_46
- Track 12 : Paola\_46, Guillsminger\_47
- Track 13 : Psycho\_46, AlleyCat\_48, Dadosky\_48
- Track 14 : Kratio\_45
- Track 15 : Edugator\_45
- Track 16 : Rando14\_48
- Track 17 : Thyatira\_49
- Track 18 : Gengar\_46, OkiRoe\_46
- Track 19 : Waterfoul\_47
- Track 20 : Larva\_47
- Track 21 : Shadow1\_57
- Track 22 : Marshawn\_54
- Track 23 : TClif\_56
- Track 24 : Sunflower1121\_58

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

The start number called the most often in the published annotations is 38, it was called in 8 of the 36 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amelie\_47, Biglebops\_47, Enkosi\_49, LilPharaoh\_47, Mdavu\_48, Nikao\_50, Nutello\_47, SgtBeansprout\_47,

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

- Agent47\_46, AlleyCat\_48, Collard\_46, Dadosky\_48, Edugator\_45, Gengar\_46, Guillsminger\_47, InvictusManeo\_46, Kratio\_45, Larva\_47, Leston\_46, Miryou\_50, OkiRoe\_46, Omnicron\_49, Paola\_46, Psycho\_46, Rando14\_48, Thyatira\_49, Waterfoul\_47,

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

- Feyre\_47, Heftyboy\_46, KiSi\_56, LeMond\_56, Marshawn\_54, Nergal\_49, Oscar\_56, Scarlett\_56, Shadow1\_57, SoSeph\_46, Sunflower1121\_58, TClif\_56,

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

Start 11:

- Found in 1 of 39 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rando14\_48 (K5),

Start 12:

- Found in 1 of 39 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Marshawn\_54 (K6),

Start 13:

- Found in 3 of 39 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 2 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shadow1\_57 (K6), Sunflower1121\_58 (K6), TClif\_56 (K6),

Start 17:

- Found in 9 of 39 ( 23.1% ) of genes in pham
- Manual Annotations of this start: 8 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Agent47\_46 (K5), AlleyCat\_48 (K5), Collard\_46 (K5), Dadosky\_48 (K5), Edugator\_45 (K5), InvictusManeo\_46 (K5), Kratio\_45 (K5), Larva\_47 (K5), Psycho\_46 (K5),

Start 18:

- Found in 8 of 39 ( 20.5% ) of genes in pham
- Manual Annotations of this start: 7 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gengar\_46 (K5), Guillsminger\_47 (K5), Leston\_46 (K5), Miryou\_50 (K5), OkiRoe\_46 (K5), Paola\_46 (K5), Thyatira\_49 (K5), Waterfoul\_47 (K5),

Start 19:

- Found in 5 of 39 ( 12.8% ) of genes in pham
- Manual Annotations of this start: 3 of 36
- Called 60.0% of time when present

- Phage (with cluster) where this start called: Heftyboy\_46 (K5), Omnicron\_49 (K5), SoSeph\_46 (K5),

Start 27:

- Found in 1 of 39 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nergal\_49 (AG),

Start 30:

- Found in 22 of 39 ( 56.4% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Feyre\_47 (K5),

Start 34:

- Found in 4 of 39 ( 10.3% ) of genes in pham
- Manual Annotations of this start: 4 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KiSi\_56 (K1), LeMond\_56 (K1), Oscar\_56 (K1), Scarlett\_56 (K1),

Start 38:

- Found in 27 of 39 ( 69.2% ) of genes in pham
- Manual Annotations of this start: 8 of 36
- Called 29.6% of time when present
- Phage (with cluster) where this start called: Amelie\_47 (K1), Binglebops\_47 (K1), Enkosi\_49 (K1), LilPharaoh\_47 (K1), Mdavu\_48 (K1), Nikao\_50 (K1), Nutello\_47 (K1), SgtBeansprout\_47 (K1),

### **Summary by clusters:**

There are 4 clusters represented in this pham: AG, K1, K6, K5,

Info for manual annotations of cluster AG:

- Start number 27 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster K1:

- Start number 34 was manually annotated 4 times for cluster K1.
- Start number 38 was manually annotated 8 times for cluster K1.

Info for manual annotations of cluster K5:

- Start number 11 was manually annotated 1 time for cluster K5.
- Start number 17 was manually annotated 8 times for cluster K5.
- Start number 18 was manually annotated 7 times for cluster K5.
- Start number 19 was manually annotated 3 times for cluster K5.
- Start number 30 was manually annotated 1 time for cluster K5.

Info for manual annotations of cluster K6:

- Start number 12 was manually annotated 1 time for cluster K6.
- Start number 13 was manually annotated 2 times for cluster K6.

**Gene Information:**

Gene: Agent47\_46 Start: 36423, Stop: 37028, Start Num: 17

Candidate Starts for Agent47\_46:

(Start: 17 @36423 has 8 MA's), (21, 36438), (Start: 30 @36498 has 1 MA's), (31, 36501), (33, 36543), (Start: 38 @36576 has 8 MA's), (43, 36594), (44, 36600), (58, 36684), (66, 36720), (70, 36744), (71, 36771), (75, 36822), (77, 36888), (84, 36999),

Gene: AlleyCat\_48 Start: 36277, Stop: 36879, Start Num: 17

Candidate Starts for AlleyCat\_48:

(Start: 17 @36277 has 8 MA's), (21, 36292), (Start: 30 @36352 has 1 MA's), (31, 36355), (Start: 38 @36430 has 8 MA's), (43, 36448), (44, 36454), (54, 36514), (58, 36538), (66, 36574), (70, 36598), (72, 36640), (75, 36676), (77, 36742), (78, 36754), (81, 36790),

Gene: Amelie\_47 Start: 37306, Stop: 37731, Start Num: 38

Candidate Starts for Amelie\_47:

(20, 37171), (23, 37189), (29, 37234), (Start: 38 @37306 has 8 MA's), (43, 37327), (49, 37354), (52, 37375), (64, 37429), (73, 37501), (74, 37504), (77, 37591),

Gene: Binglebops\_47 Start: 37306, Stop: 37731, Start Num: 38

Candidate Starts for Binglebops\_47:

(20, 37171), (23, 37189), (29, 37234), (Start: 38 @37306 has 8 MA's), (43, 37327), (49, 37354), (52, 37375), (64, 37429), (73, 37501), (74, 37504), (77, 37591),

Gene: Collard\_46 Start: 36384, Stop: 36989, Start Num: 17

Candidate Starts for Collard\_46:

(Start: 17 @36384 has 8 MA's), (21, 36399), (Start: 30 @36459 has 1 MA's), (31, 36462), (33, 36504), (Start: 38 @36537 has 8 MA's), (43, 36555), (44, 36561), (58, 36645), (66, 36681), (70, 36705), (71, 36732), (75, 36783), (77, 36849), (84, 36960),

Gene: Dadosky\_48 Start: 36279, Stop: 36881, Start Num: 17

Candidate Starts for Dadosky\_48:

(Start: 17 @36279 has 8 MA's), (21, 36294), (Start: 30 @36354 has 1 MA's), (31, 36357), (Start: 38 @36432 has 8 MA's), (43, 36450), (44, 36456), (54, 36516), (58, 36540), (66, 36576), (70, 36600), (72, 36642), (75, 36678), (77, 36744), (78, 36756), (81, 36792),

Gene: Edugator\_45 Start: 36704, Stop: 37297, Start Num: 17

Candidate Starts for Edugator\_45:

(Start: 17 @36704 has 8 MA's), (21, 36719), (Start: 30 @36779 has 1 MA's), (31, 36782), (Start: 38 @36857 has 8 MA's), (43, 36875), (44, 36881), (54, 36941), (58, 36965), (66, 37001), (72, 37058), (75, 37094), (77, 37160),

Gene: Enkosi\_49 Start: 39919, Stop: 40344, Start Num: 38

Candidate Starts for Enkosi\_49:

(20, 39784), (23, 39802), (29, 39847), (Start: 38 @39919 has 8 MA's), (43, 39940), (49, 39967), (52, 39988), (64, 40042), (73, 40114), (74, 40117), (77, 40204),

Gene: Feyre\_47 Start: 37611, Stop: 38171, Start Num: 30

Candidate Starts for Feyre\_47:

(1, 37245), (2, 37341), (Start: 19 @37533 has 3 MA's), (22, 37551), (24, 37557), (Start: 30 @37611 has 1 MA's), (43, 37710), (53, 37767), (55, 37785), (57, 37791), (63, 37818), (67, 37851), (77, 38025),

Gene: Gengar\_46 Start: 36147, Stop: 36782, Start Num: 18

Candidate Starts for Gengar\_46:

(3, 35970), (10, 36078), (Start: 18 @36147 has 7 MA's), (22, 36162), (26, 36186), (Start: 30 @36222 has 1 MA's), (31, 36225), (Start: 38 @36297 has 8 MA's), (43, 36321), (53, 36378), (55, 36396), (57, 36402), (63, 36429), (67, 36462), (76, 36609), (77, 36636),

Gene: Guillsminger\_47 Start: 36118, Stop: 36753, Start Num: 18

Candidate Starts for Guillsminger\_47:

(3, 35941), (10, 36049), (Start: 18 @36118 has 7 MA's), (22, 36133), (26, 36157), (Start: 30 @36193 has 1 MA's), (31, 36196), (Start: 38 @36268 has 8 MA's), (43, 36292), (53, 36349), (55, 36367), (57, 36373), (62, 36397), (67, 36433), (76, 36580), (77, 36607),

Gene: Heftyboy\_46 Start: 36269, Stop: 36925, Start Num: 19

Candidate Starts for Heftyboy\_46:

(1, 35981), (2, 36077), (Start: 19 @36269 has 3 MA's), (22, 36287), (24, 36293), (Start: 30 @36347 has 1 MA's), (43, 36446), (53, 36503), (55, 36521), (57, 36527), (62, 36551), (67, 36605), (76, 36752), (77, 36779), (79, 36803),

Gene: InvictusManeo\_46 Start: 36427, Stop: 37032, Start Num: 17

Candidate Starts for InvictusManeo\_46:

(Start: 17 @36427 has 8 MA's), (21, 36442), (Start: 30 @36502 has 1 MA's), (31, 36505), (33, 36547), (Start: 38 @36580 has 8 MA's), (43, 36598), (44, 36604), (58, 36688), (66, 36724), (70, 36748), (71, 36775), (75, 36826), (77, 36892), (84, 37003),

Gene: KiSi\_56 Start: 38953, Stop: 39420, Start Num: 34

Candidate Starts for KiSi\_56:

(Start: 34 @38953 has 4 MA's), (49, 39016), (56, 39061), (73, 39184), (77, 39271), (80, 39304), (83, 39358), (85, 39409),

Gene: Kratio\_45 Start: 35977, Stop: 36582, Start Num: 17

Candidate Starts for Kratio\_45:

(6, 35833), (8, 35890), (Start: 17 @35977 has 8 MA's), (21, 35992), (Start: 30 @36052 has 1 MA's), (31, 36055), (33, 36097), (Start: 38 @36130 has 8 MA's), (43, 36148), (44, 36154), (54, 36214), (58, 36238), (70, 36298), (75, 36376), (77, 36442), (84, 36553),

Gene: Larva\_47 Start: 36146, Stop: 36748, Start Num: 17

Candidate Starts for Larva\_47:

(Start: 17 @36146 has 8 MA's), (21, 36161), (Start: 30 @36221 has 1 MA's), (31, 36224), (Start: 38 @36299 has 8 MA's), (43, 36317), (44, 36323), (54, 36383), (58, 36407), (66, 36443), (70, 36467), (72, 36509), (75, 36545), (77, 36611), (81, 36659),

Gene: LeMond\_56 Start: 38937, Stop: 39401, Start Num: 34

Candidate Starts for LeMond\_56:

(Start: 34 @38937 has 4 MA's), (46, 38982), (49, 38997), (52, 39018), (55, 39039), (73, 39165), (74, 39168), (77, 39252), (80, 39285), (83, 39339), (85, 39390),

Gene: Leston\_46 Start: 36247, Stop: 36882, Start Num: 18

Candidate Starts for Leston\_46:

(3, 36070), (8, 36151), (9, 36166), (10, 36178), (Start: 18 @36247 has 7 MA's), (22, 36262), (26, 36286), (Start: 30 @36322 has 1 MA's), (31, 36325), (Start: 38 @36397 has 8 MA's), (43, 36421), (53, 36478), (55, 36496), (57, 36502), (62, 36526), (67, 36562), (76, 36709), (77, 36736),

Gene: LilPharaoh\_47 Start: 37034, Stop: 37459, Start Num: 38

Candidate Starts for LilPharaoh\_47:

(20, 36899), (23, 36917), (29, 36962), (Start: 38 @37034 has 8 MA's), (43, 37055), (49, 37082), (52, 37103), (64, 37157), (73, 37229), (74, 37232), (77, 37319),

Gene: Marshawn\_54 Start: 38519, Stop: 39190, Start Num: 12

Candidate Starts for Marshawn\_54:

(6, 38411), (Start: 12 @38519 has 1 MA's), (15, 38543), (16, 38552), (21, 38576), (25, 38597), (28, 38621), (31, 38642), (39, 38723), (54, 38801), (57, 38816), (61, 38834), (65, 38852), (69, 38903), (77, 39047), (80, 39080), (83, 39134),

Gene: Mdavu\_48 Start: 37295, Stop: 37720, Start Num: 38

Candidate Starts for Mdavu\_48:

(20, 37160), (23, 37178), (29, 37223), (Start: 38 @37295 has 8 MA's), (43, 37316), (49, 37343), (52, 37364), (64, 37418), (73, 37490), (74, 37493), (77, 37580),

Gene: Miryou\_50 Start: 38449, Stop: 39084, Start Num: 18

Candidate Starts for Miryou\_50:

(Start: 18 @38449 has 7 MA's), (22, 38464), (26, 38488), (Start: 30 @38524 has 1 MA's), (31, 38527), (Start: 38 @38599 has 8 MA's), (43, 38623), (53, 38680), (55, 38698), (57, 38704), (63, 38731), (67, 38764), (76, 38911), (77, 38938),

Gene: Nergal\_49 Start: 36269, Stop: 36790, Start Num: 27

Candidate Starts for Nergal\_49:

(Start: 27 @36269 has 1 MA's), (32, 36323), (37, 36344), (41, 36362), (43, 36368), (45, 36377), (59, 36455), (77, 36641), (82, 36713),

Gene: Nikao\_50 Start: 39919, Stop: 40344, Start Num: 38

Candidate Starts for Nikao\_50:

(20, 39784), (23, 39802), (29, 39847), (Start: 38 @39919 has 8 MA's), (43, 39940), (49, 39967), (52, 39988), (64, 40042), (73, 40114), (74, 40117), (77, 40204),

Gene: Nutello\_47 Start: 37306, Stop: 37731, Start Num: 38

Candidate Starts for Nutello\_47:

(20, 37171), (23, 37189), (29, 37234), (Start: 38 @37306 has 8 MA's), (43, 37327), (49, 37354), (52, 37375), (64, 37429), (73, 37501), (74, 37504), (77, 37591),

Gene: OkiRoe\_46 Start: 36120, Stop: 36755, Start Num: 18

Candidate Starts for OkiRoe\_46:

(3, 35943), (10, 36051), (Start: 18 @36120 has 7 MA's), (22, 36135), (26, 36159), (Start: 30 @36195 has 1 MA's), (31, 36198), (Start: 38 @36270 has 8 MA's), (43, 36294), (53, 36351), (55, 36369), (57, 36375), (63, 36402), (67, 36435), (76, 36582), (77, 36609),

Gene: Omnicron\_49 Start: 35732, Stop: 36313, Start Num: 19

Candidate Starts for Omnicron\_49:

(5, 35576), (6, 35582), (7, 35585), (Start: 19 @35732 has 3 MA's), (Start: 30 @35810 has 1 MA's), (31, 35813), (Start: 38 @35885 has 8 MA's), (43, 35903), (48, 35927), (50, 35936), (51, 35939), (52, 35957), (59, 35990), (70, 36032), (75, 36110), (77, 36176),

Gene: Oscar\_56 Start: 38839, Stop: 39306, Start Num: 34

Candidate Starts for Oscar\_56:

(Start: 34 @38839 has 4 MA's), (46, 38887), (49, 38902), (52, 38923), (55, 38944), (73, 39070), (74, 39073), (77, 39157), (80, 39190), (83, 39244), (85, 39295),

Gene: Paola\_46 Start: 36118, Stop: 36753, Start Num: 18

Candidate Starts for Paola\_46:

(3, 35941), (10, 36049), (Start: 18 @36118 has 7 MA's), (22, 36133), (26, 36157), (Start: 30 @36193 has 1 MA's), (31, 36196), (Start: 38 @36268 has 8 MA's), (43, 36292), (53, 36349), (55, 36367), (57, 36373), (62, 36397), (67, 36433), (76, 36580), (77, 36607),

Gene: Psycho\_46 Start: 36276, Stop: 36878, Start Num: 17

Candidate Starts for Psycho\_46:

(Start: 17 @36276 has 8 MA's), (21, 36291), (Start: 30 @36351 has 1 MA's), (31, 36354), (Start: 38 @36429 has 8 MA's), (43, 36447), (44, 36453), (54, 36513), (58, 36537), (66, 36573), (70, 36597), (72, 36639), (75, 36675), (77, 36741), (78, 36753), (81, 36789),

Gene: Rando14\_48 Start: 35246, Stop: 35872, Start Num: 11

Candidate Starts for Rando14\_48:

(6, 35150), (8, 35207), (Start: 11 @35246 has 1 MA's), (Start: 19 @35297 has 3 MA's), (Start: 30 @35375 has 1 MA's), (31, 35378), (Start: 38 @35450 has 8 MA's), (43, 35468), (48, 35492), (51, 35504), (52, 35522), (59, 35555), (70, 35597), (75, 35669), (77, 35735),

Gene: Scarlett\_56 Start: 38831, Stop: 39301, Start Num: 34

Candidate Starts for Scarlett\_56:

(Start: 34 @38831 has 4 MA's), (49, 38897), (52, 38918), (56, 38942), (73, 39065), (74, 39068), (77, 39152), (80, 39185), (83, 39239), (85, 39290),

Gene: SgtBeansprout\_47 Start: 37306, Stop: 37731, Start Num: 38

Candidate Starts for SgtBeansprout\_47:

(20, 37171), (23, 37189), (29, 37234), (Start: 38 @37306 has 8 MA's), (43, 37327), (49, 37354), (52, 37375), (64, 37429), (73, 37501), (74, 37504), (77, 37591),

Gene: Shadow1\_57 Start: 38538, Stop: 39143, Start Num: 13

Candidate Starts for Shadow1\_57:

(4, 38412), (6, 38421), (Start: 13 @38538 has 2 MA's), (14, 38550), (16, 38565), (21, 38589), (25, 38610), (36, 38676), (40, 38697), (42, 38700), (47, 38724), (60, 38793), (68, 38823), (73, 38889), (74, 38892), (77, 38976), (80, 39009), (83, 39063),

Gene: SoSeph\_46 Start: 36269, Stop: 36925, Start Num: 19

Candidate Starts for SoSeph\_46:

(1, 35981), (2, 36077), (Start: 19 @36269 has 3 MA's), (22, 36287), (24, 36293), (Start: 30 @36347 has 1 MA's), (43, 36446), (53, 36503), (55, 36521), (57, 36527), (62, 36551), (67, 36605), (76, 36752), (77, 36779), (79, 36803),

Gene: Sunflower1121\_58 Start: 38639, Stop: 39289, Start Num: 13

Candidate Starts for Sunflower1121\_58:

(4, 38513), (6, 38522), (Start: 13 @38639 has 2 MA's), (14, 38651), (16, 38666), (21, 38690), (25, 38711), (35, 38816), (36, 38822), (40, 38843), (42, 38846), (47, 38870), (60, 38939), (68, 38969), (73, 39035), (74, 39038), (77, 39122), (80, 39155), (83, 39209),

Gene: TClif\_56 Start: 38682, Stop: 39194, Start Num: 13

Candidate Starts for TClif\_56:

(Start: 13 @38682 has 2 MA's), (15, 38697), (16, 38706), (21, 38730), (25, 38751), (28, 38775), (31, 38796), (47, 38832), (60, 38868), (68, 38889), (73, 38925), (74, 38928), (77, 39012), (80, 39045), (83, 39099),

Gene: Thyatira\_49 Start: 38470, Stop: 39090, Start Num: 18

Candidate Starts for Thyatira\_49:



(3, 38293), (Start: 18 @38470 has 7 MA's), (22, 38485), (26, 38509), (Start: 30 @38545 has 1 MA's), (31, 38548), (Start: 38 @38620 has 8 MA's), (43, 38644), (53, 38701), (55, 38719), (57, 38725), (67, 38776), (76, 38923), (77, 38950), (79, 38974),

Gene: Waterfoul\_47 Start: 36361, Stop: 36987, Start Num: 18

Candidate Starts for Waterfoul\_47:

(3, 36184), (7, 36211), (Start: 18 @36361 has 7 MA's), (22, 36376), (26, 36400), (Start: 30 @36436 has 1 MA's), (31, 36439), (Start: 38 @36511 has 8 MA's), (43, 36535), (53, 36592), (55, 36610), (57, 36616), (67, 36667), (76, 36814), (77, 36841), (79, 36865),