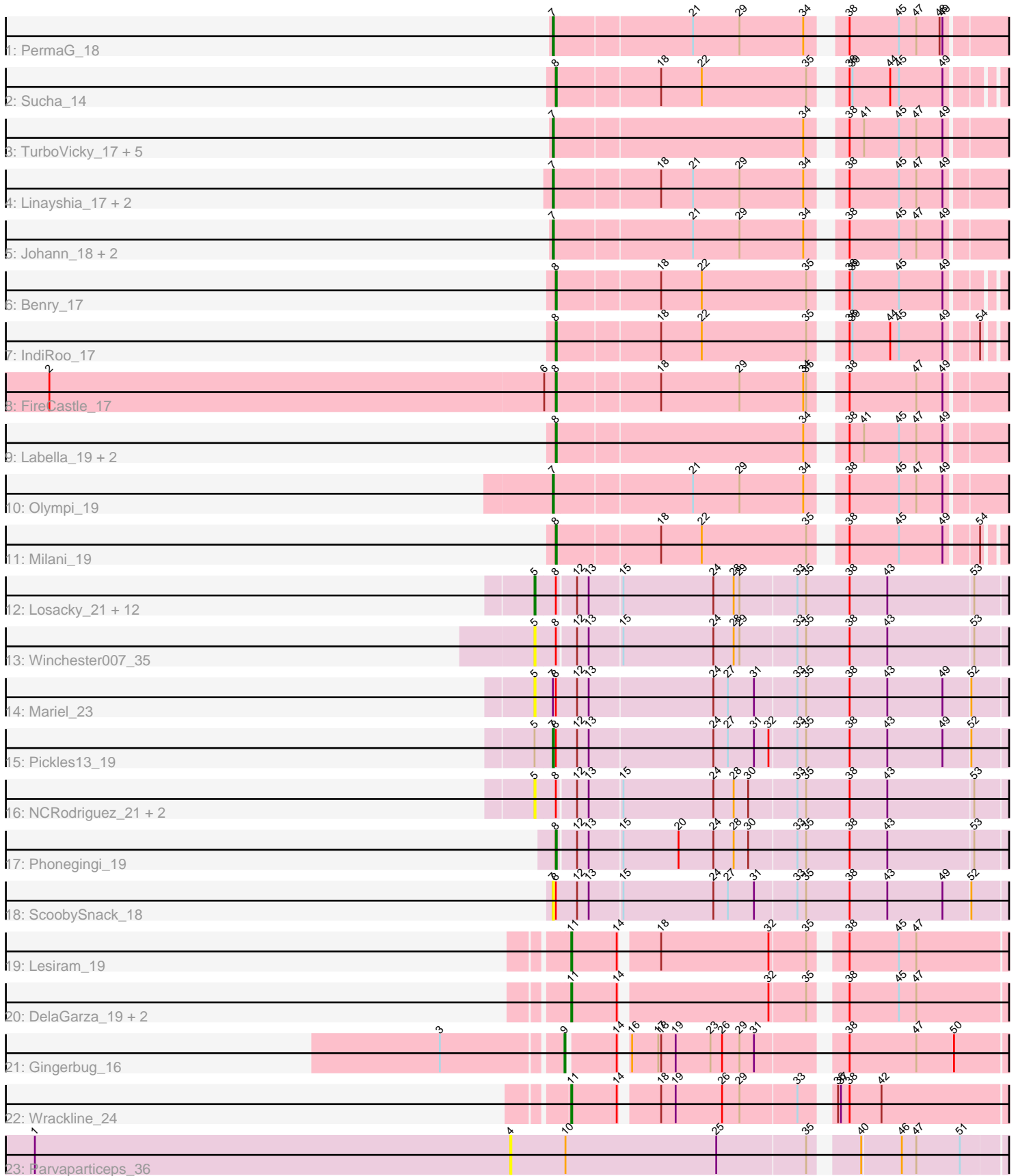


Pham 300145



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 300145 Report

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

Pham number 300145 has 50 members, 15 are drafts.

Phages represented in each track:

- Track 1 : PermaG\_18
- Track 2 : Sucha\_14
- Track 3 : TurboVicky\_17, SBlackberry\_17, Rootkit7\_17, Jera\_18, Alove\_17, Zanella\_17
- Track 4 : Linayshia\_17, Htur\_17, Rasovi\_17
- Track 5 : Johann\_18, Cicada\_19, Goodman\_18
- Track 6 : Benry\_17
- Track 7 : IndiRoo\_17
- Track 8 : FireCastle\_17
- Track 9 : Labella\_19, AyoTeo\_19, Typher\_19
- Track 10 : Olympi\_19
- Track 11 : Milani\_19
- Track 12 : Losacky\_21, Antuna\_20, Blett\_20, Violeta\_21, Carrillo\_21, PhillyJawn\_20, Dropshot\_19, Bush\_20, Warren\_20, CookieDog\_20, Appa\_19, MenE\_20, Guzman\_21
- Track 13 : Winchester007\_35
- Track 14 : Mariel\_23
- Track 15 : Pickles13\_19
- Track 16 : NCRodriguez\_21, Jakelyne\_22, Phingu\_22
- Track 17 : Phonegingi\_19
- Track 18 : ScoobySnack\_18
- Track 19 : Lesiram\_19
- Track 20 : DelaGarza\_19, Sweetums\_20, Teng\_20
- Track 21 : Gingerbug\_16
- Track 22 : Wrackline\_24
- Track 23 : Parvaparticeps\_36

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

The start number called the most often in the published annotations is 7, it was called in 13 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alove\_17, Cicada\_19, Goodman\_18, Htur\_17, Jera\_18, Johann\_18, Linayshia\_17, Olympi\_19, PermaG\_18, Pickles13\_19, Rasovi\_17, Rootkit7\_17, SBlackberry\_17, ScoobySnack\_18, TurboVicky\_17, Zanella\_17,

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

- Mariel\_23,

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

- Antuna\_20, Appa\_19, AyoTeo\_19, Benry\_17, Blett\_20, Bush\_20, Carrillo\_21, CookieDog\_20, DelaGarza\_19, Dropshot\_19, FireCastle\_17, Gingerbug\_16, Guzman\_21, IndiRoo\_17, Jakelyne\_22, Labella\_19, Lesiram\_19, Losacky\_21, MenE\_20, Milani\_19, NCRodriguez\_21, Parvarticeps\_36, PhillyJawn\_20, Phingu\_22, Phonegingi\_19, Sucha\_14, Sweetums\_20, Teng\_20, Typher\_19, Violeta\_21, Warren\_20, Winchester007\_35, Wrackline\_24,

### Summary by start number:

Start 4:

- Found in 1 of 50 ( 2.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Parvarticeps\_36 (UNK),

Start 5:

- Found in 19 of 50 ( 38.0% ) of genes in pham
- Manual Annotations of this start: 9 of 35
- Called 94.7% of time when present
- Phage (with cluster) where this start called: Antuna\_20 (GA), Appa\_19 (GA), Blett\_20 (GA), Bush\_20 (GA), Carrillo\_21 (GA), CookieDog\_20 (GA), Dropshot\_19 (GA), Guzman\_21 (GA), Jakelyne\_22 (GA), Losacky\_21 (GA), Mariel\_23 (GA), MenE\_20 (GA), NCRodriguez\_21 (GA), PhillyJawn\_20 (GA), Phingu\_22 (GA), Violeta\_21 (GA), Warren\_20 (GA), Winchester007\_35 (GA),

Start 7:

- Found in 17 of 50 ( 34.0% ) of genes in pham
- Manual Annotations of this start: 13 of 35
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Alove\_17 (EJ), Cicada\_19 (EJ), Goodman\_18 (EJ), Htur\_17 (EJ), Jera\_18 (EJ), Johann\_18 (EJ), Linayshia\_17 (EJ), Olympi\_19 (EJ), PermaG\_18 (EJ), Pickles13\_19 (GA), Rasovi\_17 (EJ), Rootkit7\_17 (EJ), SBlackberry\_17 (EJ), ScoobySnack\_18 (GA), TurboVicky\_17 (EJ), Zanella\_17 (EJ),

Start 8:

- Found in 29 of 50 ( 58.0% ) of genes in pham
- Manual Annotations of this start: 8 of 35
- Called 31.0% of time when present
- Phage (with cluster) where this start called: AyoTeo\_19 (EJ), Benry\_17 (EJ), FireCastle\_17 (EJ), IndiRoo\_17 (EJ), Labella\_19 (EJ), Milani\_19 (EJ), Phonegingi\_19 (GA), Sucha\_14 (EJ), Typher\_19 (EJ),

Start 9:

- Found in 1 of 50 ( 2.0% ) of genes in pham

- Manual Annotations of this start: 1 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gingerbug\_16 (GF),

Start 11:

- Found in 5 of 50 ( 10.0% ) of genes in pham
- Manual Annotations of this start: 4 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DelaGarza\_19 (GF), Lesiram\_19 (GF), Sweetums\_20 (GF), Teng\_20 (GF), Wrackline\_24 (GF),

### **Summary by clusters:**

There are 4 clusters represented in this pham: GF, UNK, GA, EJ,

Info for manual annotations of cluster EJ:

- Start number 7 was manually annotated 12 times for cluster EJ.
- Start number 8 was manually annotated 7 times for cluster EJ.

Info for manual annotations of cluster GA:

- Start number 5 was manually annotated 9 times for cluster GA.
- Start number 7 was manually annotated 1 time for cluster GA.
- Start number 8 was manually annotated 1 time for cluster GA.

Info for manual annotations of cluster GF:

- Start number 9 was manually annotated 1 time for cluster GF.
- Start number 11 was manually annotated 4 times for cluster GF.

### **Gene Information:**

Gene: Alove\_17 Start: 12613, Stop: 13065, Start Num: 7

Candidate Starts for Alove\_17:

(Start: 7 @12613 has 13 MA's), (34, 12865), (38, 12892), (41, 12907), (45, 12943), (47, 12961), (49, 12988),

Gene: Antuna\_20 Start: 10705, Stop: 11193, Start Num: 5

Candidate Starts for Antuna\_20:

(Start: 5 @10705 has 9 MA's), (Start: 8 @10726 has 8 MA's), (12, 10744), (13, 10756), (15, 10789), (24, 10882), (28, 10903), (29, 10909), (33, 10966), (35, 10975), (38, 11020), (43, 11059), (53, 11146),

Gene: Appa\_19 Start: 10567, Stop: 11055, Start Num: 5

Candidate Starts for Appa\_19:

(Start: 5 @10567 has 9 MA's), (Start: 8 @10588 has 8 MA's), (12, 10606), (13, 10618), (15, 10651), (24, 10744), (28, 10765), (29, 10771), (33, 10828), (35, 10837), (38, 10882), (43, 10921), (53, 11008),

Gene: AyoTeo\_19 Start: 12743, Stop: 13192, Start Num: 8

Candidate Starts for AyoTeo\_19:

(Start: 8 @12743 has 8 MA's), (34, 12992), (38, 13019), (41, 13034), (45, 13070), (47, 13088), (49, 13115),

Gene: Benry\_17 Start: 10815, Stop: 11249, Start Num: 8

Candidate Starts for Benry\_17:

(Start: 8 @10815 has 8 MA's), (18, 10917), (22, 10959), (35, 11067), (38, 11091), (39, 11094), (45, 11142), (49, 11187),

Gene: Blett\_20 Start: 10720, Stop: 11208, Start Num: 5

Candidate Starts for Blett\_20:

(Start: 5 @10720 has 9 MA's), (Start: 8 @10741 has 8 MA's), (12, 10759), (13, 10771), (15, 10804), (24, 10897), (28, 10918), (29, 10924), (33, 10981), (35, 10990), (38, 11035), (43, 11074), (53, 11161),

Gene: Bush\_20 Start: 10701, Stop: 11189, Start Num: 5

Candidate Starts for Bush\_20:

(Start: 5 @10701 has 9 MA's), (Start: 8 @10722 has 8 MA's), (12, 10740), (13, 10752), (15, 10785), (24, 10878), (28, 10899), (29, 10905), (33, 10962), (35, 10971), (38, 11016), (43, 11055), (53, 11142),

Gene: Carrillo\_21 Start: 10674, Stop: 11162, Start Num: 5

Candidate Starts for Carrillo\_21:

(Start: 5 @10674 has 9 MA's), (Start: 8 @10695 has 8 MA's), (12, 10713), (13, 10725), (15, 10758), (24, 10851), (28, 10872), (29, 10878), (33, 10935), (35, 10944), (38, 10989), (43, 11028), (53, 11115),

Gene: Cicada\_19 Start: 12850, Stop: 13302, Start Num: 7

Candidate Starts for Cicada\_19:

(Start: 7 @12850 has 13 MA's), (21, 12988), (29, 13036), (34, 13102), (38, 13129), (45, 13180), (47, 13198), (49, 13225),

Gene: CookieDog\_20 Start: 10701, Stop: 11189, Start Num: 5

Candidate Starts for CookieDog\_20:

(Start: 5 @10701 has 9 MA's), (Start: 8 @10722 has 8 MA's), (12, 10740), (13, 10752), (15, 10785), (24, 10878), (28, 10899), (29, 10905), (33, 10962), (35, 10971), (38, 11016), (43, 11055), (53, 11142),

Gene: DelaGarza\_19 Start: 11318, Stop: 11797, Start Num: 11

Candidate Starts for DelaGarza\_19:

(Start: 11 @11318 has 4 MA's), (14, 11363), (32, 11507), (35, 11543), (38, 11570), (45, 11621), (47, 11639),

Gene: Dropshot\_19 Start: 10567, Stop: 11055, Start Num: 5

Candidate Starts for Dropshot\_19:

(Start: 5 @10567 has 9 MA's), (Start: 8 @10588 has 8 MA's), (12, 10606), (13, 10618), (15, 10651), (24, 10744), (28, 10765), (29, 10771), (33, 10828), (35, 10837), (38, 10882), (43, 10921), (53, 11008),

Gene: FireCastle\_17 Start: 12516, Stop: 12965, Start Num: 8

Candidate Starts for FireCastle\_17:

(2, 11994), (6, 12504), (Start: 8 @12516 has 8 MA's), (18, 12618), (29, 12699), (34, 12765), (35, 12768), (38, 12792), (47, 12861), (49, 12888),

Gene: Gingerbug\_16 Start: 10503, Stop: 10961, Start Num: 9

Candidate Starts for Gingerbug\_16:

(3, 10386), (Start: 9 @10503 has 1 MA's), (14, 10548), (16, 10551), (17, 10578), (18, 10581), (19, 10596), (23, 10632), (26, 10644), (29, 10662), (31, 10677), (38, 10755), (47, 10824), (50, 10863),

Gene: Goodman\_18 Start: 12763, Stop: 13215, Start Num: 7

Candidate Starts for Goodman\_18:

(Start: 7 @12763 has 13 MA's), (21, 12901), (29, 12949), (34, 13015), (38, 13042), (45, 13093), (47, 13111), (49, 13138),

Gene: Guzman\_21 Start: 10982, Stop: 11470, Start Num: 5

Candidate Starts for Guzman\_21:

(Start: 5 @10982 has 9 MA's), (Start: 8 @11003 has 8 MA's), (12, 11021), (13, 11033), (15, 11066), (24, 11159), (28, 11180), (29, 11186), (33, 11243), (35, 11252), (38, 11297), (43, 11336), (53, 11423),

Gene: Htur\_17 Start: 12781, Stop: 13233, Start Num: 7

Candidate Starts for Htur\_17:

(Start: 7 @12781 has 13 MA's), (18, 12886), (21, 12919), (29, 12967), (34, 13033), (38, 13060), (45, 13111), (47, 13129), (49, 13156),

Gene: IndiRoo\_17 Start: 10824, Stop: 11258, Start Num: 8

Candidate Starts for IndiRoo\_17:

(Start: 8 @10824 has 8 MA's), (18, 10926), (22, 10968), (35, 11076), (38, 11100), (39, 11103), (44, 11142), (45, 11151), (49, 11196), (54, 11226),

Gene: Jakelyne\_22 Start: 10723, Stop: 11208, Start Num: 5

Candidate Starts for Jakelyne\_22:

(Start: 5 @10723 has 9 MA's), (Start: 8 @10744 has 8 MA's), (12, 10762), (13, 10774), (15, 10807), (24, 10900), (28, 10921), (30, 10936), (33, 10984), (35, 10993), (38, 11038), (43, 11077), (53, 11164),

Gene: Jera\_18 Start: 11860, Stop: 12312, Start Num: 7

Candidate Starts for Jera\_18:

(Start: 7 @11860 has 13 MA's), (34, 12112), (38, 12139), (41, 12154), (45, 12190), (47, 12208), (49, 12235),

Gene: Johann\_18 Start: 12763, Stop: 13215, Start Num: 7

Candidate Starts for Johann\_18:

(Start: 7 @12763 has 13 MA's), (21, 12901), (29, 12949), (34, 13015), (38, 13042), (45, 13093), (47, 13111), (49, 13138),

Gene: Labella\_19 Start: 12746, Stop: 13195, Start Num: 8

Candidate Starts for Labella\_19:

(Start: 8 @12746 has 8 MA's), (34, 12995), (38, 13022), (41, 13037), (45, 13073), (47, 13091), (49, 13118),

Gene: Lesiram\_19 Start: 11288, Stop: 11767, Start Num: 11

Candidate Starts for Lesiram\_19:

(Start: 11 @11288 has 4 MA's), (14, 11333), (18, 11366), (32, 11477), (35, 11513), (38, 11540), (45, 11591), (47, 11609),

Gene: Linayshia\_17 Start: 12773, Stop: 13225, Start Num: 7

Candidate Starts for Linayshia\_17:

(Start: 7 @12773 has 13 MA's), (18, 12878), (21, 12911), (29, 12959), (34, 13025), (38, 13052), (45, 13103), (47, 13121), (49, 13148),

Gene: Losacky\_21 Start: 10847, Stop: 11335, Start Num: 5

Candidate Starts for Losacky\_21:

(Start: 5 @10847 has 9 MA's), (Start: 8 @10868 has 8 MA's), (12, 10886), (13, 10898), (15, 10931), (24, 11024), (28, 11045), (29, 11051), (33, 11108), (35, 11117), (38, 11162), (43, 11201), (53, 11288),

Gene: Mariel\_23 Start: 10878, Stop: 11369, Start Num: 5

Candidate Starts for Mariel\_23:

(Start: 5 @10878 has 9 MA's), (Start: 7 @10896 has 13 MA's), (Start: 8 @10899 has 8 MA's), (12, 10920), (13, 10932), (24, 11058), (27, 11073), (31, 11100), (33, 11142), (35, 11151), (38, 11196), (43, 11235), (49, 11292), (52, 11319),

Gene: MenE\_20 Start: 10835, Stop: 11323, Start Num: 5

Candidate Starts for MenE\_20:

(Start: 5 @10835 has 9 MA's), (Start: 8 @10856 has 8 MA's), (12, 10874), (13, 10886), (15, 10919), (24, 11012), (28, 11033), (29, 11039), (33, 11096), (35, 11105), (38, 11150), (43, 11189), (53, 11276),

Gene: Milani\_19 Start: 11474, Stop: 11908, Start Num: 8

Candidate Starts for Milani\_19:

(Start: 8 @11474 has 8 MA's), (18, 11576), (22, 11618), (35, 11726), (38, 11750), (45, 11801), (49, 11846), (54, 11876),

Gene: NCRodriguez\_21 Start: 10836, Stop: 11321, Start Num: 5

Candidate Starts for NCRodriguez\_21:

(Start: 5 @10836 has 9 MA's), (Start: 8 @10857 has 8 MA's), (12, 10875), (13, 10887), (15, 10920), (24, 11013), (28, 11034), (30, 11049), (33, 11097), (35, 11106), (38, 11151), (43, 11190), (53, 11277),

Gene: Olympi\_19 Start: 12753, Stop: 13205, Start Num: 7

Candidate Starts for Olympi\_19:

(Start: 7 @12753 has 13 MA's), (21, 12891), (29, 12939), (34, 13005), (38, 13032), (45, 13083), (47, 13101), (49, 13128),

Gene: Parvaparticeps\_36 Start: 27462, Stop: 26911, Start Num: 4

Candidate Starts for Parvaparticeps\_36:

(1, 27954), (4, 27462), (10, 27405), (25, 27249), (35, 27159), (40, 27120), (46, 27081), (47, 27066), (51, 27021),

Gene: PermaG\_18 Start: 12827, Stop: 13279, Start Num: 7

Candidate Starts for PermaG\_18:

(Start: 7 @12827 has 13 MA's), (21, 12965), (29, 13013), (34, 13079), (38, 13106), (45, 13157), (47, 13175), (48, 13199), (49, 13202),

Gene: PhillyJawn\_20 Start: 10567, Stop: 11055, Start Num: 5

Candidate Starts for PhillyJawn\_20:

(Start: 5 @10567 has 9 MA's), (Start: 8 @10588 has 8 MA's), (12, 10606), (13, 10618), (15, 10651), (24, 10744), (28, 10765), (29, 10771), (33, 10828), (35, 10837), (38, 10882), (43, 10921), (53, 11008),

Gene: Phingu\_22 Start: 10726, Stop: 11211, Start Num: 5

Candidate Starts for Phingu\_22:

(Start: 5 @10726 has 9 MA's), (Start: 8 @10747 has 8 MA's), (12, 10765), (13, 10777), (15, 10810), (24, 10903), (28, 10924), (30, 10939), (33, 10987), (35, 10996), (38, 11041), (43, 11080), (53, 11167),

Gene: Phonegingi\_19 Start: 10589, Stop: 11053, Start Num: 8

Candidate Starts for Phonegingi\_19:

(Start: 8 @10589 has 8 MA's), (12, 10607), (13, 10619), (15, 10652), (20, 10709), (24, 10745), (28, 10766), (30, 10781), (33, 10829), (35, 10838), (38, 10883), (43, 10922), (53, 11009),

Gene: Pickles13\_19 Start: 10749, Stop: 11222, Start Num: 7

Candidate Starts for Pickles13\_19:

(Start: 5 @10731 has 9 MA's), (Start: 7 @10749 has 13 MA's), (Start: 8 @10752 has 8 MA's), (12, 10773), (13, 10785), (24, 10911), (27, 10926), (31, 10953), (32, 10968), (33, 10995), (35, 11004), (38, 11049), (43, 11088), (49, 11145), (52, 11172),

Gene: Rasovi\_17 Start: 12781, Stop: 13233, Start Num: 7

Candidate Starts for Rasovi\_17:

(Start: 7 @12781 has 13 MA's), (18, 12886), (21, 12919), (29, 12967), (34, 13033), (38, 13060), (45, 13111), (47, 13129), (49, 13156),

Gene: Rootkit7\_17 Start: 12613, Stop: 13065, Start Num: 7

Candidate Starts for Rootkit7\_17:

(Start: 7 @12613 has 13 MA's), (34, 12865), (38, 12892), (41, 12907), (45, 12943), (47, 12961), (49, 12988),

Gene: SBlackberry\_17 Start: 12619, Stop: 13071, Start Num: 7

Candidate Starts for SBlackberry\_17:

(Start: 7 @12619 has 13 MA's), (34, 12871), (38, 12898), (41, 12913), (45, 12949), (47, 12967), (49, 12994),

Gene: ScoobySnack\_18 Start: 10452, Stop: 10925, Start Num: 7

Candidate Starts for ScoobySnack\_18:

(Start: 7 @10452 has 13 MA's), (Start: 8 @10455 has 8 MA's), (12, 10476), (13, 10488), (15, 10521), (24, 10614), (27, 10629), (31, 10656), (33, 10698), (35, 10707), (38, 10752), (43, 10791), (49, 10848), (52, 10875),

Gene: Sucha\_14 Start: 9812, Stop: 10246, Start Num: 8

Candidate Starts for Sucha\_14:

(Start: 8 @9812 has 8 MA's), (18, 9914), (22, 9956), (35, 10064), (38, 10088), (39, 10091), (44, 10130), (45, 10139), (49, 10184),

Gene: Sweetums\_20 Start: 11392, Stop: 11871, Start Num: 11

Candidate Starts for Sweetums\_20:

(Start: 11 @11392 has 4 MA's), (14, 11437), (32, 11581), (35, 11617), (38, 11644), (45, 11695), (47, 11713),

Gene: Teng\_20 Start: 11315, Stop: 11794, Start Num: 11

Candidate Starts for Teng\_20:

(Start: 11 @11315 has 4 MA's), (14, 11360), (32, 11504), (35, 11540), (38, 11567), (45, 11618), (47, 11636),

Gene: TurboVicky\_17 Start: 12613, Stop: 13065, Start Num: 7

Candidate Starts for TurboVicky\_17:

(Start: 7 @12613 has 13 MA's), (34, 12865), (38, 12892), (41, 12907), (45, 12943), (47, 12961), (49, 12988),

Gene: Typher\_19 Start: 12746, Stop: 13195, Start Num: 8

Candidate Starts for Typher\_19:

(Start: 8 @12746 has 8 MA's), (34, 12995), (38, 13022), (41, 13037), (45, 13073), (47, 13091), (49, 13118),

Gene: Violeta\_21 Start: 10665, Stop: 11153, Start Num: 5

Candidate Starts for Violeta\_21:

(Start: 5 @10665 has 9 MA's), (Start: 8 @10686 has 8 MA's), (12, 10704), (13, 10716), (15, 10749), (24, 10842), (28, 10863), (29, 10869), (33, 10926), (35, 10935), (38, 10980), (43, 11019), (53, 11106),

Gene: Warren\_20 Start: 10765, Stop: 11253, Start Num: 5

Candidate Starts for Warren\_20:

(Start: 5 @10765 has 9 MA's), (Start: 8 @10786 has 8 MA's), (12, 10804), (13, 10816), (15, 10849), (24, 10942), (28, 10963), (29, 10969), (33, 11026), (35, 11035), (38, 11080), (43, 11119), (53, 11206),

Gene: Winchester007\_35 Start: 16685, Stop: 17173, Start Num: 5

Candidate Starts for Winchester007\_35:

(Start: 5 @16685 has 9 MA's), (Start: 8 @16706 has 8 MA's), (12, 16724), (13, 16736), (15, 16769), (24, 16862), (28, 16883), (29, 16889), (33, 16946), (35, 16955), (38, 17000), (43, 17039), (53, 17126),

Gene: Wrackline\_24 Start: 11988, Stop: 12446, Start Num: 11

Candidate Starts for Wrackline\_24:

(Start: 11 @11988 has 4 MA's), (14, 12033), (18, 12066), (19, 12081), (26, 12129), (29, 12147), (33, 12204), (36, 12228), (37, 12231), (38, 12240), (42, 12273),

Gene: Zanella\_17 Start: 12616, Stop: 13068, Start Num: 7

Candidate Starts for Zanella\_17:

(Start: 7 @12616 has 13 MA's), (34, 12868), (38, 12895), (41, 12910), (45, 12946), (47, 12964), (49, 12991),