



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 291141 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291141 has 68 members, 27 are drafts.

Phages represented in each track:

- Track 1 : LilMcDreamy\_61
- Track 2 : Stinger\_59
- Track 3 : Epah\_57, Fanaw\_57, BobbyK\_59, Hally898\_57, BrownCNA\_60, ChrisnMich\_58, GinPorsche\_58, Antihero\_57, Fortunato\_59, Hangman\_58, VioletZ\_60, Poster\_57, Mithril\_58, Ahwei\_57, Frederick\_59, Heath\_57, Lolalove\_59, Magpie\_57, Lambano\_57, RawrgerThat\_59, JoyceMaria\_58, Zemanar\_59, Waleliano\_58, Nanao\_57
- Track 4 : Hydro\_58, Prince\_58, Apex\_59, Mudslide\_58, Austelle\_59
- Track 5 : Vincenzo\_61, AlanGrant\_62
- Track 6 : JaguarMi\_60
- Track 7 : JAMaL\_58, LittleDigger\_57, Renkei\_57
- Track 8 : Cooper\_60
- Track 9 : QueenPie\_56
- Track 10 : Xincheng\_59
- Track 11 : Nigel\_58
- Track 12 : Phelemich\_61, Reprobate\_62
- Track 13 : KarasumaRum\_63, Shenyu\_63, Nangang\_63, StinkyVeggy\_63, DigitDog\_64
- Track 14 : Bae\_64
- Track 15 : SirJeffery\_63, Acadian\_64, Rita130\_63, Reccee\_64, EastView9101\_63, Suigeneris\_65, Donny\_65
- Track 16 : Mysterious\_61, Nehemiah\_62
- Track 17 : Serendipitous\_62
- Track 18 : Rich\_62
- Track 19 : 39HC\_058, 40BC\_058
- Track 20 : Jolie1\_058, Hosp\_056
- Track 21 : ForDig\_59
- Track 22 : Funsized\_64
- Track 23 : CRB2\_61
- Track 24 : Quesadilla\_63

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

The start number called the most often in the published annotations is 6, it was called in 36 of the 41 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acadian\_64, Ahwei\_57, AlanGrant\_62, Antihero\_57, Apex\_59, Austelle\_59, Bae\_64, BobbyK\_59, BrownCNA\_60, ChrisnMich\_58, Cooper\_60, Donny\_65, EastView9101\_63, Epah\_57, Fanaw\_57, Fortunato\_59, Frederick\_59, GinPorsche\_58, Hally898\_57, Hangman\_58, Heath\_57, Hydro\_58, JAMaL\_58, JaguarMi\_60, JoyceMaria\_58, Lambano\_57, LittleDigger\_57, Lolalove\_59, Magpie\_57, Mithril\_58, Mudslide\_58, Mysterious\_61, Nanao\_57, Nehemiah\_62, Nigel\_58, Phelemich\_61, Poster\_57, Prince\_58, QueenPie\_56, RawrgerThat\_59, Reccee\_64, Renkei\_57, Reprobate\_62, Rich\_62, Rita130\_63, Serendipitous\_62, SirJeffery\_63, Stinger\_59, Suigeneris\_65, Vincenzo\_61, VioletZ\_60, Waleliano\_58, Xincheng\_59, Zemanar\_59,

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

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

- 39HC\_058, 40BC\_058, CRB2\_61, DigitDog\_64, ForDig\_59, Funsized\_64, Hosp\_056, Jolie1\_058, KarasumaRum\_63, LilMcDreamy\_61, Nangang\_63, Quesadilla\_63, Shenyu\_63, StinkyVeggy\_63,

### Summary by start number:

Start 4:

- Found in 1 of 68 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CRB2\_61 (B9),

Start 5:

- Found in 1 of 68 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilMcDreamy\_61 (B12),

Start 6:

- Found in 54 of 68 ( 79.4% ) of genes in pham
- Manual Annotations of this start: 36 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acadian\_64 (B5), Ahwei\_57 (B4), AlanGrant\_62 (B4), Antihero\_57 (B4), Apex\_59 (B4), Austelle\_59 (B4), Bae\_64 (B5), BobbyK\_59 (B4), BrownCNA\_60 (B4), ChrisnMich\_58 (B4), Cooper\_60 (B4), Donny\_65 (B5), EastView9101\_63 (B5), Epah\_57 (B4), Fanaw\_57 (B4), Fortunato\_59 (B4), Frederick\_59 (B4), GinPorsche\_58 (B4), Hally898\_57 (B4), Hangman\_58 (B4), Heath\_57 (B4), Hydro\_58 (B4), JAMaL\_58 (B4), JaguarMi\_60 (B4), JoyceMaria\_58 (B4), Lambano\_57 (B4), LittleDigger\_57 (B4), Lolalove\_59 (B4), Magpie\_57 (B4), Mithril\_58 (B4), Mudslide\_58 (B4), Mysterious\_61 (B5), Nanao\_57 (B4), Nehemiah\_62 (B5), Nigel\_58 (B4), Phelemich\_61 (B5), Poster\_57 (B4), Prince\_58 (B4), QueenPie\_56 (B4), RawrgerThat\_59 (B4), Reccee\_64 (B5), Renkei\_57 (B4), Reprobate\_62 (B5), Rich\_62 (B5), Rita130\_63 (B5), Serendipitous\_62 (B5), SirJeffery\_63 (B5), Stinger\_59 (B4), Suigeneris\_65 (B5),

Vincenzo\_61 (B4), VioletZ\_60 (B4), Waleliano\_58 (B4), Xincheng\_59 (B4), Zemanar\_59 (B4),

Start 7:

- Found in 6 of 68 ( 8.8% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DigitDog\_64 (B5), KarasumaRum\_63 (B5), Nangang\_63 (B5), Quesadilla\_63 (B9), Shenyu\_63 (B5), StinkyVeggy\_63 (B5),

Start 8:

- Found in 1 of 68 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Funsized\_64 (B9),

Start 10:

- Found in 5 of 68 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC\_058 (B6), 40BC\_058 (B6), ForDig\_59 (B6), Hosp\_056 (B6), Jolie1\_058 (B6),

### **Summary by clusters:**

There are 5 clusters represented in this pham: B4, B5, B6, B12, B9,

Info for manual annotations of cluster B12:

- Start number 5 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B4:

- Start number 6 was manually annotated 26 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 6 was manually annotated 10 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 10 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B9:

- Start number 4 was manually annotated 1 time for cluster B9.
- Start number 7 was manually annotated 1 time for cluster B9.
- Start number 8 was manually annotated 1 time for cluster B9.

### **Gene Information:**

Gene: 39HC\_058 Start: 54678, Stop: 54355, Start Num: 10

Candidate Starts for 39HC\_058:

(Start: 10 @54678 has 1 MA's), (17, 54639), (21, 54612), (41, 54528),

Gene: 40BC\_058 Start: 54678, Stop: 54355, Start Num: 10

Candidate Starts for 40BC\_058:

(Start: 10 @54678 has 1 MA's), (17, 54639), (21, 54612), (41, 54528),

Gene: Acadian\_64 Start: 56676, Stop: 56335, Start Num: 6

Candidate Starts for Acadian\_64:

(Start: 6 @56676 has 36 MA's), (11, 56649), (14, 56631), (25, 56565), (33, 56532), (40, 56484), (53, 56394), (58, 56364), (60, 56346),

Gene: Ahwei\_57 Start: 55326, Stop: 55054, Start Num: 6

Candidate Starts for Ahwei\_57:

(Start: 6 @55326 has 36 MA's), (11, 55299), (12, 55296), (18, 55257), (40, 55152), (43, 55125), (44, 55113), (45, 55095), (48, 55086),

Gene: AlanGrant\_62 Start: 57505, Stop: 57170, Start Num: 6

Candidate Starts for AlanGrant\_62:

(Start: 6 @57505 has 36 MA's), (11, 57478), (18, 57436), (24, 57391), (29, 57361), (34, 57337), (35, 57334), (48, 57217), (54, 57190),

Gene: Antihero\_57 Start: 55324, Stop: 55052, Start Num: 6

Candidate Starts for Antihero\_57:

(Start: 6 @55324 has 36 MA's), (11, 55297), (12, 55294), (18, 55255), (40, 55150), (43, 55123), (44, 55111), (45, 55093), (48, 55084),

Gene: Apex\_59 Start: 56547, Stop: 56275, Start Num: 6

Candidate Starts for Apex\_59:

(Start: 6 @56547 has 36 MA's), (11, 56520), (12, 56517), (18, 56478), (40, 56373), (43, 56346), (44, 56334), (45, 56316), (48, 56307), (51, 56292),

Gene: Austelle\_59 Start: 57003, Stop: 56731, Start Num: 6

Candidate Starts for Austelle\_59:

(Start: 6 @57003 has 36 MA's), (11, 56976), (12, 56973), (18, 56934), (40, 56829), (43, 56802), (44, 56790), (45, 56772), (48, 56763), (51, 56748),

Gene: Bae\_64 Start: 57648, Stop: 57262, Start Num: 6

Candidate Starts for Bae\_64:

(Start: 6 @57648 has 36 MA's), (11, 57621), (12, 57618), (14, 57603), (25, 57537), (34, 57465), (35, 57462), (53, 57321), (58, 57291), (59, 57279), (60, 57273),

Gene: BobbyK\_59 Start: 56313, Stop: 56041, Start Num: 6

Candidate Starts for BobbyK\_59:

(Start: 6 @56313 has 36 MA's), (11, 56286), (12, 56283), (18, 56244), (40, 56139), (43, 56112), (44, 56100), (45, 56082), (48, 56073),

Gene: BrownCNA\_60 Start: 56670, Stop: 56398, Start Num: 6

Candidate Starts for BrownCNA\_60:

(Start: 6 @56670 has 36 MA's), (11, 56643), (12, 56640), (18, 56601), (40, 56496), (43, 56469), (44, 56457), (45, 56439), (48, 56430),

Gene: CRB2\_61 Start: 57387, Stop: 56986, Start Num: 4

Candidate Starts for CRB2\_61:

(Start: 4 @57387 has 1 MA's), (11, 57309), (22, 57231), (36, 57168), (39, 57126), (49, 57051), (50, 57048),

Gene: ChrisnMich\_58 Start: 55338, Stop: 55066, Start Num: 6

Candidate Starts for ChrisnMich\_58:

(Start: 6 @55338 has 36 MA's), (11, 55311), (12, 55308), (18, 55269), (40, 55164), (43, 55137), (44, 55125), (45, 55107), (48, 55098),

Gene: Cooper\_60 Start: 55804, Stop: 55523, Start Num: 6

Candidate Starts for Cooper\_60:

(Start: 6 @55804 has 36 MA's), (11, 55777), (18, 55735), (20, 55729), (27, 55684), (38, 55633), (40, 55609), (44, 55570), (50, 55537),

Gene: DigitDog\_64 Start: 56730, Stop: 56395, Start Num: 7

Candidate Starts for DigitDog\_64:

(Start: 7 @56730 has 1 MA's), (11, 56706), (12, 56703), (13, 56697), (14, 56688), (40, 56544), (53, 56454), (58, 56424), (60, 56406),

Gene: Donny\_65 Start: 56722, Stop: 56381, Start Num: 6

Candidate Starts for Donny\_65:

(Start: 6 @56722 has 36 MA's), (11, 56695), (14, 56677), (25, 56611), (33, 56578), (40, 56530), (53, 56440), (58, 56410), (60, 56392),

Gene: EastView9101\_63 Start: 56420, Stop: 56079, Start Num: 6

Candidate Starts for EastView9101\_63:

(Start: 6 @56420 has 36 MA's), (11, 56393), (14, 56375), (25, 56309), (33, 56276), (40, 56228), (53, 56138), (58, 56108), (60, 56090),

Gene: Epah\_57 Start: 55324, Stop: 55052, Start Num: 6

Candidate Starts for Epah\_57:

(Start: 6 @55324 has 36 MA's), (11, 55297), (12, 55294), (18, 55255), (40, 55150), (43, 55123), (44, 55111), (45, 55093), (48, 55084),

Gene: Fanaw\_57 Start: 56225, Stop: 55953, Start Num: 6

Candidate Starts for Fanaw\_57:

(Start: 6 @56225 has 36 MA's), (11, 56198), (12, 56195), (18, 56156), (40, 56051), (43, 56024), (44, 56012), (45, 55994), (48, 55985),

Gene: ForDig\_59 Start: 55009, Stop: 54668, Start Num: 10

Candidate Starts for ForDig\_59:

(Start: 10 @55009 has 1 MA's), (17, 54970), (19, 54958), (21, 54943),

Gene: Fortunato\_59 Start: 56365, Stop: 56093, Start Num: 6

Candidate Starts for Fortunato\_59:

(Start: 6 @56365 has 36 MA's), (11, 56338), (12, 56335), (18, 56296), (40, 56191), (43, 56164), (44, 56152), (45, 56134), (48, 56125),

Gene: Frederick\_59 Start: 56256, Stop: 55984, Start Num: 6

Candidate Starts for Frederick\_59:

(Start: 6 @56256 has 36 MA's), (11, 56229), (12, 56226), (18, 56187), (40, 56082), (43, 56055), (44, 56043), (45, 56025), (48, 56016),

Gene: Funsized\_64 Start: 58606, Stop: 58226, Start Num: 8

Candidate Starts for Funsized\_64:

(1, 58819), (2, 58771), (3, 58690), (Start: 8 @58606 has 1 MA's), (16, 58558), (23, 58513), (28, 58456), (30, 58444), (37, 58423), (42, 58354), (46, 58306), (53, 58276), (55, 58273),

Gene: GinPorsche\_58 Start: 55324, Stop: 55052, Start Num: 6

Candidate Starts for GinPorsche\_58:

(Start: 6 @55324 has 36 MA's), (11, 55297), (12, 55294), (18, 55255), (40, 55150), (43, 55123), (44, 55111), (45, 55093), (48, 55084),

Gene: Hally898\_57 Start: 55339, Stop: 55067, Start Num: 6

Candidate Starts for Hally898\_57:

(Start: 6 @55339 has 36 MA's), (11, 55312), (12, 55309), (18, 55270), (40, 55165), (43, 55138), (44, 55126), (45, 55108), (48, 55099),

Gene: Hangman\_58 Start: 56413, Stop: 56141, Start Num: 6

Candidate Starts for Hangman\_58:

(Start: 6 @56413 has 36 MA's), (11, 56386), (12, 56383), (18, 56344), (40, 56239), (43, 56212), (44, 56200), (45, 56182), (48, 56173),

Gene: Heath\_57 Start: 56039, Stop: 55767, Start Num: 6

Candidate Starts for Heath\_57:

(Start: 6 @56039 has 36 MA's), (11, 56012), (12, 56009), (18, 55970), (40, 55865), (43, 55838), (44, 55826), (45, 55808), (48, 55799),

Gene: Hosp\_056 Start: 52913, Stop: 52590, Start Num: 10

Candidate Starts for Hosp\_056:

(Start: 10 @52913 has 1 MA's), (17, 52874), (21, 52847), (41, 52763), (44, 52736), (61, 52610),

Gene: Hydro\_58 Start: 56390, Stop: 56118, Start Num: 6

Candidate Starts for Hydro\_58:

(Start: 6 @56390 has 36 MA's), (11, 56363), (12, 56360), (18, 56321), (40, 56216), (43, 56189), (44, 56177), (45, 56159), (48, 56150), (51, 56135),

Gene: JAMaL\_58 Start: 56431, Stop: 56159, Start Num: 6

Candidate Starts for JAMaL\_58:

(Start: 6 @56431 has 36 MA's), (11, 56404), (12, 56401), (18, 56362), (40, 56257), (43, 56230), (44, 56218), (45, 56200),

Gene: JaguarMi\_60 Start: 57457, Stop: 57185, Start Num: 6

Candidate Starts for JaguarMi\_60:

(Start: 6 @57457 has 36 MA's), (11, 57430), (12, 57427), (15, 57409), (18, 57388), (40, 57283), (43, 57256), (44, 57244), (45, 57226), (48, 57217),

Gene: Jolie1\_058 Start: 54813, Stop: 54490, Start Num: 10

Candidate Starts for Jolie1\_058:

(Start: 10 @54813 has 1 MA's), (17, 54774), (21, 54747), (41, 54663), (44, 54636), (61, 54510),

Gene: JoyceMaria\_58 Start: 56293, Stop: 56021, Start Num: 6

Candidate Starts for JoyceMaria\_58:

(Start: 6 @56293 has 36 MA's), (11, 56266), (12, 56263), (18, 56224), (40, 56119), (43, 56092), (44, 56080), (45, 56062), (48, 56053),

Gene: KarasumaRum\_63 Start: 56576, Stop: 56241, Start Num: 7

Candidate Starts for KarasumaRum\_63:

(Start: 7 @56576 has 1 MA's), (11, 56552), (12, 56549), (13, 56543), (14, 56534), (40, 56390), (53, 56300), (58, 56270), (60, 56252),

Gene: Lambano\_57 Start: 55339, Stop: 55067, Start Num: 6

Candidate Starts for Lambano\_57:

(Start: 6 @55339 has 36 MA's), (11, 55312), (12, 55309), (18, 55270), (40, 55165), (43, 55138), (44, 55126), (45, 55108), (48, 55099),

Gene: LilMcDreamy\_61 Start: 56322, Stop: 55963, Start Num: 5

Candidate Starts for LilMcDreamy\_61:

(Start: 5 @56322 has 1 MA's), (9, 56292), (32, 56190), (40, 56151), (41, 56139), (57, 56028),

Gene: LittleDigger\_57 Start: 55349, Stop: 55077, Start Num: 6

Candidate Starts for LittleDigger\_57:

(Start: 6 @55349 has 36 MA's), (11, 55322), (12, 55319), (18, 55280), (40, 55175), (43, 55148), (44, 55136), (45, 55118),

Gene: Lolalove\_59 Start: 56370, Stop: 56098, Start Num: 6

Candidate Starts for Lolalove\_59:

(Start: 6 @56370 has 36 MA's), (11, 56343), (12, 56340), (18, 56301), (40, 56196), (43, 56169), (44, 56157), (45, 56139), (48, 56130),

Gene: Magpie\_57 Start: 56295, Stop: 56023, Start Num: 6

Candidate Starts for Magpie\_57:

(Start: 6 @56295 has 36 MA's), (11, 56268), (12, 56265), (18, 56226), (40, 56121), (43, 56094), (44, 56082), (45, 56064), (48, 56055),

Gene: Mithril\_58 Start: 56502, Stop: 56230, Start Num: 6

Candidate Starts for Mithril\_58:

(Start: 6 @56502 has 36 MA's), (11, 56475), (12, 56472), (18, 56433), (40, 56328), (43, 56301), (44, 56289), (45, 56271), (48, 56262),

Gene: Mudslide\_58 Start: 56635, Stop: 56363, Start Num: 6

Candidate Starts for Mudslide\_58:

(Start: 6 @56635 has 36 MA's), (11, 56608), (12, 56605), (18, 56566), (40, 56461), (43, 56434), (44, 56422), (45, 56404), (48, 56395), (51, 56380),

Gene: Mysterious\_61 Start: 56569, Stop: 56225, Start Num: 6

Candidate Starts for Mysterious\_61:

(Start: 6 @56569 has 36 MA's), (11, 56542), (18, 56500), (33, 56422), (40, 56374), (53, 56284), (60, 56236),

Gene: Nanao\_57 Start: 55329, Stop: 55057, Start Num: 6

Candidate Starts for Nanao\_57:

(Start: 6 @55329 has 36 MA's), (11, 55302), (12, 55299), (18, 55260), (40, 55155), (43, 55128), (44, 55116), (45, 55098), (48, 55089),

Gene: Nangang\_63 Start: 56756, Stop: 56421, Start Num: 7

Candidate Starts for Nangang\_63:

(Start: 7 @56756 has 1 MA's), (11, 56732), (12, 56729), (13, 56723), (14, 56714), (40, 56570), (53, 56480), (58, 56450), (60, 56432),

Gene: Nehemiah\_62 Start: 56572, Stop: 56228, Start Num: 6

Candidate Starts for Nehemiah\_62:

(Start: 6 @56572 has 36 MA's), (11, 56545), (18, 56503), (33, 56425), (40, 56377), (53, 56287), (60, 56239),

Gene: Nigel\_58 Start: 55443, Stop: 55117, Start Num: 6

Candidate Starts for Nigel\_58:

(Start: 6 @55443 has 36 MA's), (11, 55416), (18, 55374), (27, 55317), (35, 55272), (44, 55182), (47, 55158),

Gene: Phelemich\_61 Start: 56567, Stop: 56223, Start Num: 6

Candidate Starts for Phelemich\_61:

(Start: 6 @56567 has 36 MA's), (11, 56540), (16, 56510), (18, 56498), (31, 56423), (33, 56420), (40, 56372), (53, 56282), (60, 56234),

Gene: Poster\_57 Start: 55330, Stop: 55058, Start Num: 6

Candidate Starts for Poster\_57:

(Start: 6 @55330 has 36 MA's), (11, 55303), (12, 55300), (18, 55261), (40, 55156), (43, 55129), (44, 55117), (45, 55099), (48, 55090),

Gene: Prince\_58 Start: 56548, Stop: 56276, Start Num: 6

Candidate Starts for Prince\_58:

(Start: 6 @56548 has 36 MA's), (11, 56521), (12, 56518), (18, 56479), (40, 56374), (43, 56347), (44, 56335), (45, 56317), (48, 56308), (51, 56293),

Gene: QueenPie\_56 Start: 56063, Stop: 55791, Start Num: 6

Candidate Starts for QueenPie\_56:

(Start: 6 @56063 has 36 MA's), (11, 56036), (18, 55994), (40, 55889), (43, 55862), (44, 55850), (45, 55832), (48, 55823),

Gene: Quesadilla\_63 Start: 56737, Stop: 56441, Start Num: 7

Candidate Starts for Quesadilla\_63:

(Start: 7 @56737 has 1 MA's), (44, 56509), (52, 56458), (56, 56449),

Gene: RawrgerThat\_59 Start: 56388, Stop: 56116, Start Num: 6

Candidate Starts for RawrgerThat\_59:

(Start: 6 @56388 has 36 MA's), (11, 56361), (12, 56358), (18, 56319), (40, 56214), (43, 56187), (44, 56175), (45, 56157), (48, 56148),

Gene: Reccee\_64 Start: 56805, Stop: 56464, Start Num: 6

Candidate Starts for Reccee\_64:

(Start: 6 @56805 has 36 MA's), (11, 56778), (14, 56760), (25, 56694), (33, 56661), (40, 56613), (53, 56523), (58, 56493), (60, 56475),

Gene: Renkei\_57 Start: 55343, Stop: 55071, Start Num: 6

Candidate Starts for Renkei\_57:

(Start: 6 @55343 has 36 MA's), (11, 55316), (12, 55313), (18, 55274), (40, 55169), (43, 55142), (44, 55130), (45, 55112),

Gene: Reprobate\_62 Start: 56572, Stop: 56228, Start Num: 6

Candidate Starts for Reprobate\_62:

(Start: 6 @56572 has 36 MA's), (11, 56545), (16, 56515), (18, 56503), (31, 56428), (33, 56425), (40, 56377), (53, 56287), (60, 56239),

Gene: Rich\_62 Start: 57709, Stop: 57323, Start Num: 6

Candidate Starts for Rich\_62:

(Start: 6 @57709 has 36 MA's), (11, 57682), (12, 57679), (14, 57664), (25, 57598), (34, 57526), (35, 57523), (40, 57472), (53, 57382), (58, 57352), (59, 57340), (60, 57334),

Gene: Rita130\_63 Start: 56618, Stop: 56277, Start Num: 6

Candidate Starts for Rita130\_63:

(Start: 6 @56618 has 36 MA's), (11, 56591), (14, 56573), (25, 56507), (33, 56474), (40, 56426), (53, 56336), (58, 56306), (60, 56288),

Gene: Serendipitous\_62 Start: 56107, Stop: 55766, Start Num: 6

Candidate Starts for Serendipitous\_62:

(Start: 6 @56107 has 36 MA's), (11, 56080), (12, 56077), (40, 55915), (53, 55825), (58, 55795), (59, 55783),

Gene: Shenyu\_63 Start: 56833, Stop: 56498, Start Num: 7

Candidate Starts for Shenyu\_63:

(Start: 7 @56833 has 1 MA's), (11, 56809), (12, 56806), (13, 56800), (14, 56791), (40, 56647), (53, 56557), (58, 56527), (60, 56509),

Gene: SirJeffery\_63 Start: 56753, Stop: 56412, Start Num: 6

Candidate Starts for SirJeffery\_63:

(Start: 6 @56753 has 36 MA's), (11, 56726), (14, 56708), (25, 56642), (33, 56609), (40, 56561), (53, 56471), (58, 56441), (60, 56423),

Gene: Stinger\_59 Start: 55258, Stop: 54989, Start Num: 6

Candidate Starts for Stinger\_59:

(Start: 6 @55258 has 36 MA's), (11, 55231), (18, 55189), (26, 55144), (38, 55099), (40, 55075), (43, 55048), (44, 55036), (50, 55003),

Gene: StinkyVeggy\_63 Start: 56576, Stop: 56241, Start Num: 7

Candidate Starts for StinkyVeggy\_63:

(Start: 7 @56576 has 1 MA's), (11, 56552), (12, 56549), (13, 56543), (14, 56534), (40, 56390), (53, 56300), (58, 56270), (60, 56252),

Gene: Suigeneris\_65 Start: 56871, Stop: 56530, Start Num: 6

Candidate Starts for Suigeneris\_65:

(Start: 6 @56871 has 36 MA's), (11, 56844), (14, 56826), (25, 56760), (33, 56727), (40, 56679), (53, 56589), (58, 56559), (60, 56541),

Gene: Vincenzo\_61 Start: 57535, Stop: 57200, Start Num: 6

Candidate Starts for Vincenzo\_61:

(Start: 6 @57535 has 36 MA's), (11, 57508), (18, 57466), (24, 57421), (29, 57391), (34, 57367), (35, 57364), (48, 57247), (54, 57220),

Gene: VioletZ\_60 Start: 56461, Stop: 56189, Start Num: 6

Candidate Starts for VioletZ\_60:

(Start: 6 @56461 has 36 MA's), (11, 56434), (12, 56431), (18, 56392), (40, 56287), (43, 56260), (44, 56248), (45, 56230), (48, 56221),

Gene: Waleliano\_58 Start: 56402, Stop: 56130, Start Num: 6

Candidate Starts for Waleliano\_58:

(Start: 6 @56402 has 36 MA's), (11, 56375), (12, 56372), (18, 56333), (40, 56228), (43, 56201), (44, 56189), (45, 56171), (48, 56162),

Gene: Xincheng\_59 Start: 57567, Stop: 57295, Start Num: 6

Candidate Starts for Xincheng\_59:

(Start: 6 @57567 has 36 MA's), (11, 57540), (18, 57498), (40, 57393), (43, 57366), (44, 57354), (48, 57327),

Gene: Zemanar\_59 Start: 56234, Stop: 55962, Start Num: 6

Candidate Starts for Zemanar\_59:

(Start: 6 @56234 has 36 MA's), (11, 56207), (12, 56204), (18, 56165), (40, 56060), (43, 56033), (44, 56021), (45, 56003), (48, 55994),