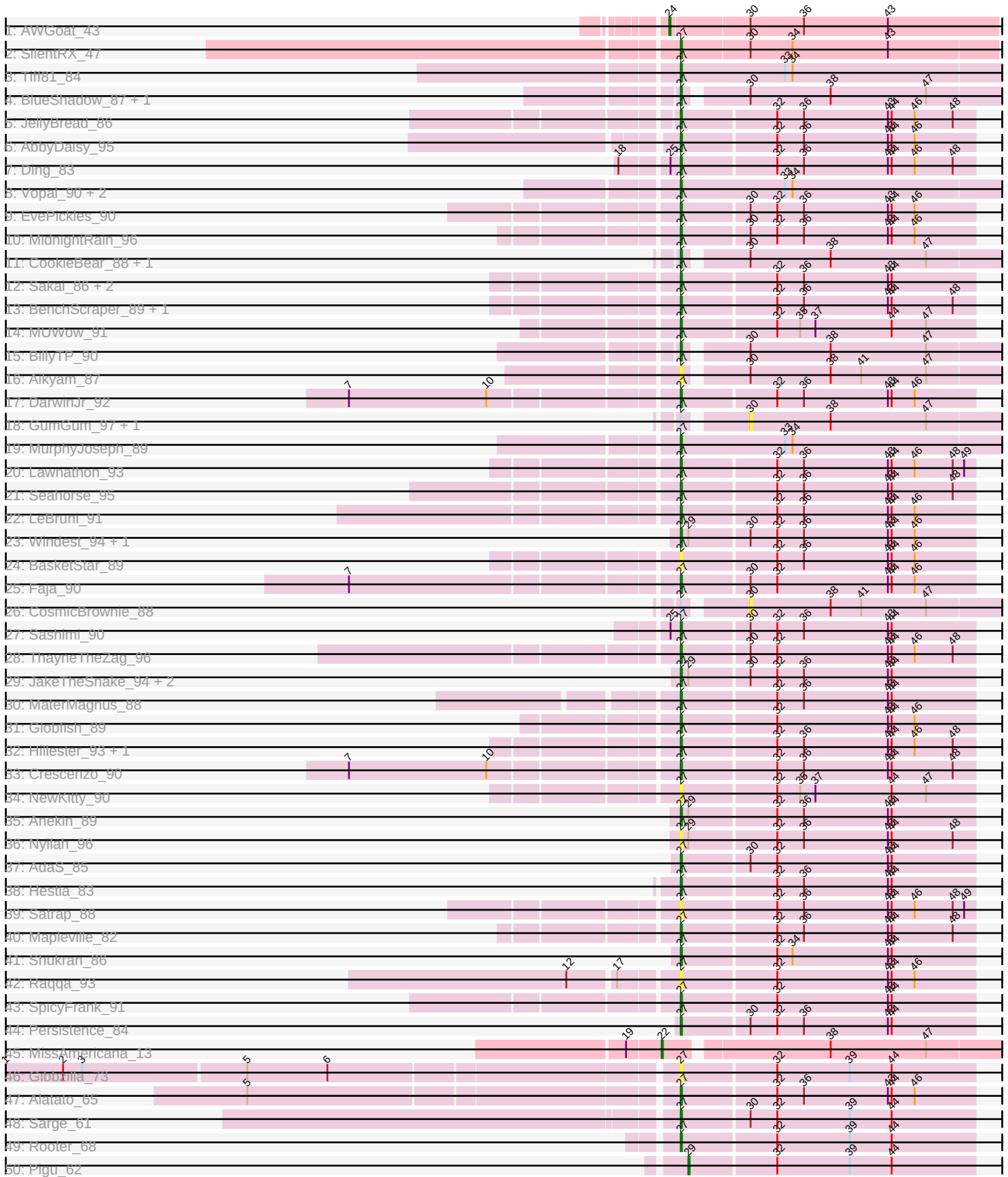
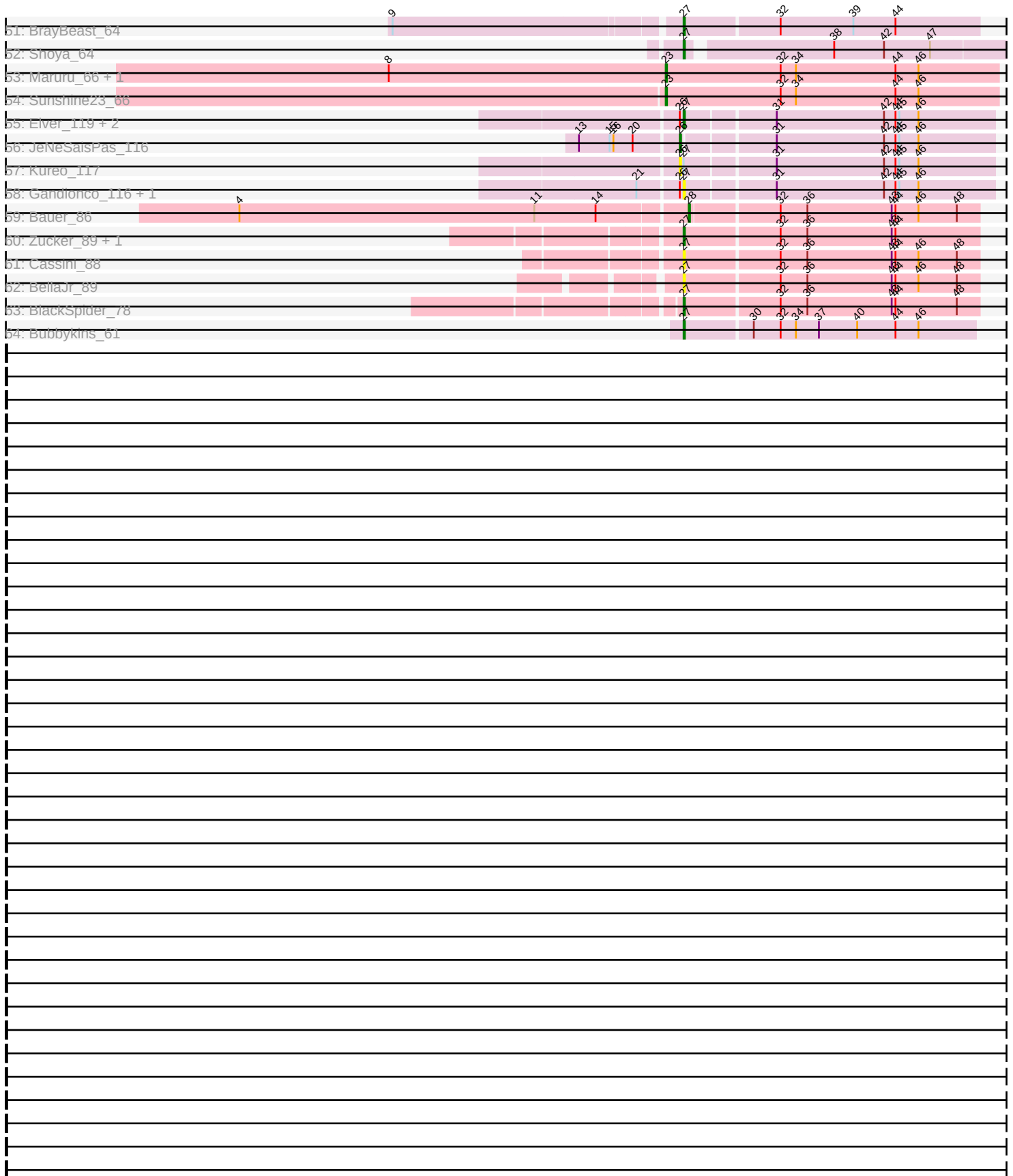




Pham 326958



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 326958 Report

This analysis was run 09/05/26 on database version 662.

Pham number 326958 has 81 members, 17 are drafts.

Phages represented in each track:

- Track 1 : AWGoat\_43
- Track 2 : SilentRX\_47
- Track 3 : Tiff81\_84
- Track 4 : BlueShadow\_87, Kabloowy\_88
- Track 5 : JellyBread\_86
- Track 6 : AbbyDaisy\_95
- Track 7 : Ding\_83
- Track 8 : Vopal\_90, Lasker\_89, Raphaella\_89
- Track 9 : EvePickles\_90
- Track 10 : MidnightRain\_96
- Track 11 : CookieBear\_88, Sporco\_92
- Track 12 : Sakai\_86, Auxilium\_87, Gorpy\_87
- Track 13 : BenchScraper\_89, Richie\_92
- Track 14 : MUWow\_91
- Track 15 : BillyTP\_90
- Track 16 : Aikyam\_87
- Track 17 : DarwinJr\_92
- Track 18 : GumGum\_97, SonDevVon\_97
- Track 19 : MurphyJoseph\_89
- Track 20 : Lawnathon\_93
- Track 21 : Seahorse\_95
- Track 22 : LeBruni\_91
- Track 23 : Windest\_94, Isolde\_90
- Track 24 : BasketStar\_89
- Track 25 : Faja\_90
- Track 26 : CosmicBrownie\_88
- Track 27 : Sashimi\_90
- Track 28 : ThayneTheZag\_96
- Track 29 : JakeTheSnake\_94, YoungHarleezy\_90, Bhageatrice\_93
- Track 30 : MaterMagnus\_88
- Track 31 : Globfish\_89
- Track 32 : Hillester\_93, RadFad\_94
- Track 33 : Crescenzo\_90
- Track 34 : NewKitty\_90
- Track 35 : Anekin\_89
- Track 36 : Nyilah\_96
- Track 37 : AdaS\_85

- Track 38 : Hestia\_83
- Track 39 : Satrap\_88
- Track 40 : Mapleville\_82
- Track 41 : Shukran\_86
- Track 42 : Raqqa\_93
- Track 43 : SpicyFrank\_91
- Track 44 : Persistence\_84
- Track 45 : MissAmericana\_13
- Track 46 : Gibbzilla\_73
- Track 47 : Alatato\_65
- Track 48 : Sarge\_61
- Track 49 : Rooter\_68
- Track 50 : Pigu\_62
- Track 51 : BrayBeast\_64
- Track 52 : Shoya\_64
- Track 53 : Maruru\_66, Sonali\_66
- Track 54 : Sunshine23\_66
- Track 55 : Elver\_119, Paella\_119, Qui\_119
- Track 56 : JeNeSaisPas\_116
- Track 57 : Kureo\_117
- Track 58 : Gandionco\_116, Marianna39\_117
- Track 59 : Bauer\_86
- Track 60 : Zucker\_89, Phrank15\_95
- Track 61 : Cassini\_88
- Track 62 : BellaJr\_89
- Track 63 : BlackSpider\_78
- Track 64 : Bubbykins\_61

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

The start number called the most often in the published annotations is 27, it was called in 56 of the 64 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AbbyDaisy\_95, AdaS\_85, Aikyam\_87, Alatato\_65, Anekin\_89, Auxilium\_87, BasketStar\_89, BellaJr\_89, BenchScraper\_89, Bhageatrice\_93, BillyTP\_90, BlackSpider\_78, BlueShadow\_87, BrayBeast\_64, Bubbykins\_61, Cassini\_88, CookieBear\_88, Crescenzo\_90, DarwinJr\_92, Ding\_83, Elver\_119, EvePickles\_90, Faja\_90, Gandionco\_116, Gibbzilla\_73, Globfish\_89, Gorpy\_87, Hestia\_83, Hillester\_93, Isolde\_90, JakeTheSnake\_94, JellyBread\_86, Kabloowy\_88, Lasker\_89, Lawnathon\_93, LeBruni\_91, MUWow\_91, Mapleville\_82, Marianna39\_117, MaterMagnus\_88, MidnightRain\_96, MurphyJoseph\_89, NewKitty\_90, Nyilah\_96, Paella\_119, Persistence\_84, Phrank15\_95, Qui\_119, RadFad\_94, Raphaella\_89, Raqqa\_93, Richie\_92, Rooter\_68, Sakai\_86, Sarge\_61, Sashimi\_90, Satrap\_88, Seahorse\_95, Shoya\_64, Shukran\_86, SilentRX\_47, SpicyFrank\_91, Sporco\_92, ThayneTheZag\_96, Tiff81\_84, Vopal\_90, Windest\_94, YoungHarleezy\_90, Zucker\_89,

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

• CosmicBrownie\_88, GumGum\_97, Kureo\_117, SonDevVon\_97,

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

- AWGoat\_43, Bauer\_86, JeNeSaisPas\_116, Maruru\_66, MissAmericana\_13, Pigu\_62, Sonali\_66, Sunshine23\_66,

### Summary by start number:

Start 22:

- Found in 1 of 81 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MissAmericana\_13 (EM2),

Start 23:

- Found in 3 of 81 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 3 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Maruru\_66 (FG), Sonali\_66 (FG), Sunshine23\_66 (FG),

Start 24:

- Found in 1 of 81 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat\_43 (AP4),

Start 26:

- Found in 7 of 81 ( 8.6% ) of genes in pham
- Manual Annotations of this start: 1 of 64
- Called 28.6% of time when present
- Phage (with cluster) where this start called: JeNeSaisPas\_116 (FK), Kureo\_117 (FK),

Start 27:

- Found in 73 of 81 ( 90.1% ) of genes in pham
- Manual Annotations of this start: 56 of 64
- Called 94.5% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_95 (AY), AdaS\_85 (AY), Aikyam\_87 (AY), Alatato\_65 (FB), Anekin\_89 (AY), Auxilium\_87 (AY), BasketStar\_89 (AY), BellaJr\_89 (FN), BenchScraper\_89 (AY), Bhageatrice\_93 (AY), BillyTP\_90 (AY), BlackSpider\_78 (FN), BlueShadow\_87 (AY), BrayBeast\_64 (FB), Bubbykins\_61 (UNK), Cassini\_88 (FN), CookieBear\_88 (AY), Crescenzo\_90 (AY), DarwinJr\_92 (AY), Ding\_83 (AY), Elver\_119 (FK), EvePickles\_90 (AY), Faja\_90 (AY), Gandionco\_116 (FK), Gibbzilla\_73 (FB), Globfish\_89 (AY), Gorpy\_87 (AY), Hestia\_83 (AY), Hillester\_93 (AY), Isolde\_90 (AY), JakeTheSnake\_94 (AY), JellyBread\_86 (AY), Kabloowy\_88 (AY), Lasker\_89 (AY), Lawnathon\_93 (AY), LeBruni\_91 (AY), MUWow\_91 (AY), Mapleville\_82 (AY), Marianna39\_117 (FK), MaterMagnus\_88 (AY), MidnightRain\_96 (AY), MurphyJoseph\_89 (AY), NewKitty\_90 (AY), Nyilah\_96 (AY), Paella\_119 (FK), Persistence\_84 (AY), Phrank15\_95 (AY), Qui\_119 (FK), RadFad\_94 (AY), Raphaella\_89 (AY), Raqqa\_93 (AY), Richie\_92 (AY), Rooter\_68 (FB), Sakai\_86 (AY), Sarge\_61 (FB), Sashimi\_90 (AY), Satrap\_88 (AY), Seahorse\_95 (AY), Shoya\_64 (FB), Shukran\_86 (AY), SilentRX\_47 (AP4), SpicyFrank\_91 (AY), Sporco\_92 (AY), ThayneTheZag\_96 (AY), Tiff81\_84 (AY), Vopal\_90 (AY),

Windest\_94 (AY), YoungHarleezy\_90 (AY), Zucker\_89 (FN),

Start 28:

- Found in 1 of 81 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bauer\_86 (FN),

Start 29:

- Found in 8 of 81 ( 9.9% ) of genes in pham
- Manual Annotations of this start: 1 of 64
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Pigu\_62 (FB),

Start 30:

- Found in 25 of 81 ( 30.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 12.0% of time when present
- Phage (with cluster) where this start called: CosmicBrownie\_88 (AY), GumGum\_97 (AY), SonDevVon\_97 (AY),

### **Summary by clusters:**

There are 8 clusters represented in this pham: UNK, EM2, AP4, FB, FG, AY, FK, FN,

Info for manual annotations of cluster AP4:

- Start number 24 was manually annotated 1 time for cluster AP4.
- Start number 27 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster AY:

- Start number 27 was manually annotated 44 times for cluster AY.

Info for manual annotations of cluster EM2:

- Start number 22 was manually annotated 1 time for cluster EM2.

Info for manual annotations of cluster FB:

- Start number 27 was manually annotated 5 times for cluster FB.
- Start number 29 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FG:

- Start number 23 was manually annotated 3 times for cluster FG.

Info for manual annotations of cluster FK:

- Start number 26 was manually annotated 1 time for cluster FK.
- Start number 27 was manually annotated 3 times for cluster FK.

Info for manual annotations of cluster FN:

- Start number 27 was manually annotated 2 times for cluster FN.
- Start number 28 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster UNK:

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

**Gene Information:**

Gene: AWGoat\_43 Start: 36435, Stop: 36184, Start Num: 24

Candidate Starts for AWGoat\_43:

(Start: 24 @36435 has 1 MA's), (30, 36378), (36, 36336), (43, 36270),

Gene: AbbyDaisy\_95 Start: 52716, Stop: 52943, Start Num: 27

Candidate Starts for AbbyDaisy\_95:

(Start: 27 @52716 has 56 MA's), (32, 52788), (36, 52809), (43, 52875), (44, 52878), (46, 52896),

Gene: AdaS\_85 Start: 47194, Stop: 47421, Start Num: 27

Candidate Starts for AdaS\_85:

(Start: 27 @47194 has 56 MA's), (30, 47245), (32, 47266), (43, 47353), (44, 47356),

Gene: Aikyam\_87 Start: 47697, Stop: 47942, Start Num: 27

Candidate Starts for Aikyam\_87:

(Start: 27 @47697 has 56 MA's), (30, 47739), (38, 47802), (41, 47826), (47, 47877),

Gene: Alatato\_65 Start: 36428, Stop: 36655, Start Num: 27

Candidate Starts for Alatato\_65:

(5, 36107), (Start: 27 @36428 has 56 MA's), (32, 36500), (36, 36521), (43, 36587), (44, 36590), (46, 36608),

Gene: Anekin\_89 Start: 49928, Stop: 50155, Start Num: 27

Candidate Starts for Anekin\_89:

(Start: 27 @49928 has 56 MA's), (Start: 29 @49934 has 1 MA's), (32, 50000), (36, 50021), (43, 50087), (44, 50090),

Gene: Auxilium\_87 Start: 46996, Stop: 47223, Start Num: 27

Candidate Starts for Auxilium\_87:

(Start: 27 @46996 has 56 MA's), (32, 47068), (36, 47089), (43, 47155), (44, 47158),

Gene: BasketStar\_89 Start: 49542, Stop: 49769, Start Num: 27

Candidate Starts for BasketStar\_89:

(Start: 27 @49542 has 56 MA's), (32, 49614), (36, 49635), (43, 49701), (44, 49704), (46, 49722),

Gene: Bauer\_86 Start: 46271, Stop: 46492, Start Num: 28

Candidate Starts for Bauer\_86:

(4, 45926), (11, 46157), (14, 46205), (Start: 28 @46271 has 1 MA's), (32, 46337), (36, 46358), (43, 46424), (44, 46427), (46, 46445), (48, 46475),

Gene: BellaJr\_89 Start: 49728, Stop: 49955, Start Num: 27

Candidate Starts for BellaJr\_89:

(Start: 27 @49728 has 56 MA's), (32, 49800), (36, 49821), (43, 49887), (44, 49890), (46, 49908), (48, 49938),

Gene: BenchScraper\_89 Start: 47947, Stop: 48174, Start Num: 27

Candidate Starts for BenchScraper\_89:

(Start: 27 @47947 has 56 MA's), (32, 48019), (36, 48040), (43, 48106), (44, 48109), (48, 48157),

Gene: Bhageatrice\_93 Start: 52222, Stop: 52449, Start Num: 27

Candidate Starts for Bhageatrice\_93:

(Start: 27 @52222 has 56 MA's), (Start: 29 @52228 has 1 MA's), (30, 52273), (32, 52294), (36, 52315), (43, 52381), (44, 52384),

Gene: BillyTP\_90 Start: 50050, Stop: 50289, Start Num: 27

Candidate Starts for BillyTP\_90:

(Start: 27 @50050 has 56 MA's), (30, 50092), (38, 50155), (47, 50230),

Gene: BlackSpider\_78 Start: 47304, Stop: 47531, Start Num: 27

Candidate Starts for BlackSpider\_78:

(Start: 27 @47304 has 56 MA's), (32, 47376), (36, 47397), (43, 47463), (44, 47466), (48, 47514),

Gene: BlueShadow\_87 Start: 49643, Stop: 49882, Start Num: 27

Candidate Starts for BlueShadow\_87:

(Start: 27 @49643 has 56 MA's), (30, 49685), (38, 49748), (47, 49823),

Gene: BrayBeast\_64 Start: 36058, Stop: 36285, Start Num: 27

Candidate Starts for BrayBeast\_64:

(9, 35845), (Start: 27 @36058 has 56 MA's), (32, 36130), (39, 36187), (44, 36220),

Gene: Bubbykins\_61 Start: 45574, Stop: 45798, Start Num: 27

Candidate Starts for Bubbykins\_61:

(Start: 27 @45574 has 56 MA's), (30, 45625), (32, 45646), (34, 45658), (37, 45676), (40, 45706), (44, 45736), (46, 45754),

Gene: Cassini\_88 Start: 49322, Stop: 49549, Start Num: 27

Candidate Starts for Cassini\_88:

(Start: 27 @49322 has 56 MA's), (32, 49394), (36, 49415), (43, 49481), (44, 49484), (46, 49502), (48, 49532),

Gene: CookieBear\_88 Start: 49258, Stop: 49497, Start Num: 27

Candidate Starts for CookieBear\_88:

(Start: 27 @49258 has 56 MA's), (30, 49300), (38, 49363), (47, 49438),

Gene: CosmicBrownie\_88 Start: 48350, Stop: 48547, Start Num: 30

Candidate Starts for CosmicBrownie\_88:

(Start: 27 @48308 has 56 MA's), (30, 48350), (38, 48413), (41, 48437), (47, 48488),

Gene: Crescenzo\_90 Start: 50951, Stop: 51178, Start Num: 27

Candidate Starts for Crescenzo\_90:

(7, 50708), (10, 50816), (Start: 27 @50951 has 56 MA's), (32, 51023), (36, 51044), (43, 51110), (44, 51113), (48, 51161),

Gene: DarwinJr\_92 Start: 51065, Stop: 51292, Start Num: 27

Candidate Starts for DarwinJr\_92:

(7, 50822), (10, 50930), (Start: 27 @51065 has 56 MA's), (32, 51137), (36, 51158), (43, 51224), (44, 51227), (46, 51245),

Gene: Ding\_83 Start: 49479, Stop: 49706, Start Num: 27

Candidate Starts for Ding\_83:

(18, 49440), (25, 49473), (Start: 27 @49479 has 56 MA's), (32, 49551), (36, 49572), (43, 49638), (44, 49641), (46, 49659), (48, 49689),



Gene: Elver\_119 Start: 65771, Stop: 66007, Start Num: 27

Candidate Starts for Elver\_119:

(Start: 26 @65768 has 1 MA's), (Start: 27 @65771 has 56 MA's), (31, 65837), (42, 65921), (44, 65930), (45, 65933), (46, 65948),

Gene: EvePickles\_90 Start: 50663, Stop: 50890, Start Num: 27

Candidate Starts for EvePickles\_90:

(Start: 27 @50663 has 56 MA's), (30, 50714), (32, 50735), (36, 50756), (43, 50822), (44, 50825), (46, 50843),

Gene: Faja\_90 Start: 49924, Stop: 50151, Start Num: 27

Candidate Starts for Faja\_90:

(7, 49681), (Start: 27 @49924 has 56 MA's), (30, 49975), (32, 49996), (43, 50083), (44, 50086), (46, 50104),

Gene: Gandionco\_116 Start: 64583, Stop: 64819, Start Num: 27

Candidate Starts for Gandionco\_116:

(21, 64550), (Start: 26 @64580 has 1 MA's), (Start: 27 @64583 has 56 MA's), (31, 64649), (42, 64733), (44, 64742), (45, 64745), (46, 64760),

Gene: Gibbzilla\_73 Start: 36826, Stop: 37053, Start Num: 27

Candidate Starts for Gibbzilla\_73:

(1, 36319), (2, 36364), (3, 36379), (5, 36505), (6, 36568), (Start: 27 @36826 has 56 MA's), (32, 36898), (39, 36955), (44, 36988),

Gene: Globfish\_89 Start: 48667, Stop: 48894, Start Num: 27

Candidate Starts for Globfish\_89:

(Start: 27 @48667 has 56 MA's), (32, 48739), (43, 48826), (44, 48829), (46, 48847),

Gene: Gorpy\_87 Start: 50675, Stop: 50902, Start Num: 27

Candidate Starts for Gorpy\_87:

(Start: 27 @50675 has 56 MA's), (32, 50747), (36, 50768), (43, 50834), (44, 50837),

Gene: GumGum\_97 Start: 51052, Stop: 51249, Start Num: 30

Candidate Starts for GumGum\_97:

(Start: 27 @51010 has 56 MA's), (30, 51052), (38, 51115), (47, 51190),

Gene: Hestia\_83 Start: 47282, Stop: 47509, Start Num: 27

Candidate Starts for Hestia\_83:

(Start: 27 @47282 has 56 MA's), (32, 47354), (36, 47375), (43, 47441), (44, 47444),

Gene: Hillester\_93 Start: 49669, Stop: 49896, Start Num: 27

Candidate Starts for Hillester\_93:

(Start: 27 @49669 has 56 MA's), (32, 49741), (36, 49762), (43, 49828), (44, 49831), (46, 49849), (48, 49879),

Gene: Isolde\_90 Start: 50517, Stop: 50744, Start Num: 27

Candidate Starts for Isolde\_90:

(Start: 27 @50517 has 56 MA's), (Start: 29 @50523 has 1 MA's), (30, 50568), (32, 50589), (36, 50610), (43, 50676), (44, 50679), (46, 50697),

Gene: JakeTheSnake\_94 Start: 51814, Stop: 52041, Start Num: 27

Candidate Starts for JakeTheSnake\_94:

(Start: 27 @51814 has 56 MA's), (Start: 29 @51820 has 1 MA's), (30, 51865), (32, 51886), (36, 51907), (43, 51973), (44, 51976),

Gene: JeNeSaisPas\_116 Start: 65186, Stop: 65422, Start Num: 26

Candidate Starts for JeNeSaisPas\_116:

(13, 65111), (15, 65135), (16, 65138), (20, 65153), (Start: 26 @65186 has 1 MA's), (31, 65252), (42, 65336), (44, 65345), (45, 65348), (46, 65363),

Gene: JellyBread\_86 Start: 49663, Stop: 49890, Start Num: 27

Candidate Starts for JellyBread\_86:

(Start: 27 @49663 has 56 MA's), (32, 49735), (36, 49756), (43, 49822), (44, 49825), (46, 49843), (48, 49873),

Gene: Kabloowy\_88 Start: 49923, Stop: 50162, Start Num: 27

Candidate Starts for Kabloowy\_88:

(Start: 27 @49923 has 56 MA's), (30, 49965), (38, 50028), (47, 50103),

Gene: Kureo\_117 Start: 64776, Stop: 65015, Start Num: 26

Candidate Starts for Kureo\_117:

(Start: 26 @64776 has 1 MA's), (Start: 27 @64779 has 56 MA's), (31, 64845), (42, 64929), (44, 64938), (45, 64941), (46, 64956),

Gene: Lasker\_89 Start: 50385, Stop: 50648, Start Num: 27

Candidate Starts for Lasker\_89:

(Start: 27 @50385 has 56 MA's), (33, 50466), (34, 50472),

Gene: Lawnathon\_93 Start: 50019, Stop: 50246, Start Num: 27

Candidate Starts for Lawnathon\_93:

(Start: 27 @50019 has 56 MA's), (32, 50091), (36, 50112), (43, 50178), (44, 50181), (46, 50199), (48, 50229), (49, 50238),

Gene: LeBruni\_91 Start: 49787, Stop: 50014, Start Num: 27

Candidate Starts for LeBruni\_91:

(Start: 27 @49787 has 56 MA's), (32, 49859), (36, 49880), (43, 49946), (44, 49949), (46, 49967),

Gene: MUWow\_91 Start: 50713, Stop: 50940, Start Num: 27

Candidate Starts for MUWow\_91:

(Start: 27 @50713 has 56 MA's), (32, 50785), (35, 50803), (37, 50815), (44, 50875), (47, 50902),

Gene: Mapleville\_82 Start: 48161, Stop: 48388, Start Num: 27

Candidate Starts for Mapleville\_82:

(Start: 27 @48161 has 56 MA's), (32, 48233), (36, 48254), (43, 48320), (44, 48323), (48, 48371),

Gene: Marianna39\_117 Start: 65194, Stop: 65430, Start Num: 27

Candidate Starts for Marianna39\_117:

(21, 65161), (Start: 26 @65191 has 1 MA's), (Start: 27 @65194 has 56 MA's), (31, 65260), (42, 65344), (44, 65353), (45, 65356), (46, 65371),

Gene: Maruru\_66 Start: 45050, Stop: 45310, Start Num: 23

Candidate Starts for Maruru\_66:

(8, 44834), (Start: 23 @45050 has 3 MA's), (32, 45140), (34, 45152), (44, 45230), (46, 45248),

Gene: MaterMagnus\_88 Start: 49961, Stop: 50188, Start Num: 27

Candidate Starts for MaterMagnus\_88:

(Start: 27 @49961 has 56 MA's), (32, 50033), (36, 50054), (43, 50120), (44, 50123),

Gene: MidnightRain\_96 Start: 51168, Stop: 51395, Start Num: 27

Candidate Starts for MidnightRain\_96:

(Start: 27 @51168 has 56 MA's), (30, 51219), (32, 51240), (36, 51261), (43, 51327), (44, 51330), (46, 51348),

Gene: MissAmericana\_13 Start: 9042, Stop: 8782, Start Num: 22

Candidate Starts for MissAmericana\_13:

(19, 9063), (Start: 22 @9042 has 1 MA's), (38, 8925), (47, 8850),

Gene: MurphyJoseph\_89 Start: 47998, Stop: 48261, Start Num: 27

Candidate Starts for MurphyJoseph\_89:

(Start: 27 @47998 has 56 MA's), (33, 48079), (34, 48085),

Gene: NewKitty\_90 Start: 50156, Stop: 50383, Start Num: 27

Candidate Starts for NewKitty\_90:

(Start: 27 @50156 has 56 MA's), (32, 50228), (35, 50246), (37, 50258), (44, 50318), (47, 50345),

Gene: Nyilah\_96 Start: 49629, Stop: 49856, Start Num: 27

Candidate Starts for Nyilah\_96:

(Start: 27 @49629 has 56 MA's), (Start: 29 @49635 has 1 MA's), (32, 49701), (36, 49722), (43, 49788), (44, 49791), (48, 49839),

Gene: Paella\_119 Start: 66359, Stop: 66595, Start Num: 27

Candidate Starts for Paella\_119:

(Start: 26 @66356 has 1 MA's), (Start: 27 @66359 has 56 MA's), (31, 66425), (42, 66509), (44, 66518), (45, 66521), (46, 66536),

Gene: Persistence\_84 Start: 47327, Stop: 47554, Start Num: 27

Candidate Starts for Persistence\_84:

(Start: 27 @47327 has 56 MA's), (30, 47378), (32, 47399), (36, 47420), (43, 47486), (44, 47489),

Gene: Phrank15\_95 Start: 50347, Stop: 50574, Start Num: 27

Candidate Starts for Phrank15\_95:

(Start: 27 @50347 has 56 MA's), (32, 50419), (36, 50440), (43, 50506), (44, 50509),

Gene: Pigu\_62 Start: 34831, Stop: 35052, Start Num: 29

Candidate Starts for Pigu\_62:

(Start: 29 @34831 has 1 MA's), (32, 34897), (39, 34954), (44, 34987),

Gene: Qui\_119 Start: 66359, Stop: 66595, Start Num: 27

Candidate Starts for Qui\_119:

(Start: 26 @66356 has 1 MA's), (Start: 27 @66359 has 56 MA's), (31, 66425), (42, 66509), (44, 66518), (45, 66521), (46, 66536),

Gene: RadFad\_94 Start: 49669, Stop: 49896, Start Num: 27

Candidate Starts for RadFad\_94:

(Start: 27 @49669 has 56 MA's), (32, 49741), (36, 49762), (43, 49828), (44, 49831), (46, 49849), (48, 49879),

Gene: Raphaella\_89 Start: 48624, Stop: 48887, Start Num: 27

Candidate Starts for Raphaella\_89:

(Start: 27 @48624 has 56 MA's), (33, 48705), (34, 48711),

Gene: Raqqa\_93 Start: 50720, Stop: 50947, Start Num: 27

Candidate Starts for Raqqa\_93:

(12, 50645), (17, 50678), (Start: 27 @50720 has 56 MA's), (32, 50792), (43, 50879), (44, 50882), (46, 50900),

Gene: Richie\_92 Start: 50519, Stop: 50746, Start Num: 27

Candidate Starts for Richie\_92:

(Start: 27 @50519 has 56 MA's), (32, 50591), (36, 50612), (43, 50678), (44, 50681), (48, 50729),

Gene: Rooter\_68 Start: 36880, Stop: 37107, Start Num: 27

Candidate Starts for Rooter\_68:

(Start: 27 @36880 has 56 MA's), (32, 36952), (39, 37009), (44, 37042),

Gene: Sakai\_86 Start: 49386, Stop: 49613, Start Num: 27

Candidate Starts for Sakai\_86:

(Start: 27 @49386 has 56 MA's), (32, 49458), (36, 49479), (43, 49545), (44, 49548),

Gene: Sarge\_61 Start: 33816, Stop: 34043, Start Num: 27

Candidate Starts for Sarge\_61:

(Start: 27 @33816 has 56 MA's), (30, 33867), (32, 33888), (39, 33945), (44, 33978),

Gene: Sashimi\_90 Start: 49657, Stop: 49884, Start Num: 27

Candidate Starts for Sashimi\_90:

(25, 49651), (Start: 27 @49657 has 56 MA's), (30, 49708), (32, 49729), (36, 49750), (43, 49816), (44, 49819),

Gene: Satrap\_88 Start: 49096, Stop: 49323, Start Num: 27

Candidate Starts for Satrap\_88:

(Start: 27 @49096 has 56 MA's), (32, 49168), (36, 49189), (43, 49255), (44, 49258), (46, 49276), (48, 49306), (49, 49315),

Gene: Seahorse\_95 Start: 54032, Stop: 54259, Start Num: 27

Candidate Starts for Seahorse\_95:

(Start: 27 @54032 has 56 MA's), (32, 54104), (36, 54125), (43, 54191), (44, 54194), (48, 54242),

Gene: Shoya\_64 Start: 35887, Stop: 36126, Start Num: 27

Candidate Starts for Shoya\_64:

(Start: 27 @35887 has 56 MA's), (38, 35992), (42, 36031), (47, 36067),

Gene: Shukran\_86 Start: 47862, Stop: 48089, Start Num: 27

Candidate Starts for Shukran\_86:

(Start: 27 @47862 has 56 MA's), (32, 47934), (34, 47946), (43, 48021), (44, 48024),

Gene: SilentRX\_47 Start: 38442, Stop: 38200, Start Num: 27

Candidate Starts for SilentRX\_47:

(Start: 27 @38442 has 56 MA's), (30, 38391), (34, 38358), (43, 38283),

Gene: SonDevVon\_97 Start: 50289, Stop: 50486, Start Num: 30

Candidate Starts for SonDevVon\_97:

(Start: 27 @50247 has 56 MA's), (30, 50289), (38, 50352), (47, 50427),

Gene: Sonali\_66 Start: 45518, Stop: 45778, Start Num: 23

Candidate Starts for Sonali\_66:

(8, 45302), (Start: 23 @45518 has 3 MA's), (32, 45608), (34, 45620), (44, 45698), (46, 45716),

Gene: SpicyFrank\_91 Start: 49438, Stop: 49665, Start Num: 27

Candidate Starts for SpicyFrank\_91:

(Start: 27 @49438 has 56 MA's), (32, 49510), (43, 49597), (44, 49600),

Gene: Sporco\_92 Start: 51010, Stop: 51249, Start Num: 27

Candidate Starts for Sporco\_92:

(Start: 27 @51010 has 56 MA's), (30, 51052), (38, 51115), (47, 51190),

Gene: Sunshine23\_66 Start: 45169, Stop: 45429, Start Num: 23

Candidate Starts for Sunshine23\_66:

(Start: 23 @45169 has 3 MA's), (32, 45259), (34, 45271), (44, 45349), (46, 45367),

Gene: ThayneTheZag\_96 Start: 51075, Stop: 51302, Start Num: 27

Candidate Starts for ThayneTheZag\_96:

(Start: 27 @51075 has 56 MA's), (30, 51126), (32, 51147), (43, 51234), (44, 51237), (46, 51255), (48, 51285),

Gene: Tiff81\_84 Start: 47744, Stop: 48007, Start Num: 27

Candidate Starts for Tiff81\_84:

(Start: 27 @47744 has 56 MA's), (33, 47825), (34, 47831),

Gene: Vopal\_90 Start: 50690, Stop: 50953, Start Num: 27

Candidate Starts for Vopal\_90:

(Start: 27 @50690 has 56 MA's), (33, 50771), (34, 50777),

Gene: Windest\_94 Start: 48912, Stop: 49139, Start Num: 27

Candidate Starts for Windest\_94:

(Start: 27 @48912 has 56 MA's), (Start: 29 @48918 has 1 MA's), (30, 48963), (32, 48984), (36, 49005), (43, 49071), (44, 49074), (46, 49092),

Gene: YoungHarleezy\_90 Start: 50145, Stop: 50372, Start Num: 27

Candidate Starts for YoungHarleezy\_90:

(Start: 27 @50145 has 56 MA's), (Start: 29 @50151 has 1 MA's), (30, 50196), (32, 50217), (36, 50238), (43, 50304), (44, 50307),

Gene: Zucker\_89 Start: 50629, Stop: 50856, Start Num: 27

Candidate Starts for Zucker\_89:

(Start: 27 @50629 has 56 MA's), (32, 50701), (36, 50722), (43, 50788), (44, 50791),