



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 2116 Report

This analysis was run 04/28/24 on database version 559.

Pham number 2116 has 47 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Baloo\_59, LestyG\_58, Yahalom\_58, Neos5\_59
- Track 2 : Daisy\_58, OrangeOswald\_59, Corofin\_59, Obutu\_60, MmasiCarm\_60, HarveySr\_58, Ben11\_59, Bernardo\_60, Casbah\_59, Philly\_58, Abinghost\_59, Devonte\_58, Akoma\_59, GlenHope\_60, Mortcellus\_59, Audrey\_59, Deenasa\_59, Gadget\_60, Pipefish\_60, Kronus\_59, Athena\_61, Heathcliff\_59, Halfpint\_58, Nozo\_59, Phlyer\_59, Gervas\_60, SlippinJimmy\_61, Phayeta\_61, Chandler\_59, Kamiyu\_59, RagingRooster\_58, Yinz\_59, Briakila\_58, ChaChing\_59, RomaT\_59, Rita1961\_60, Jackstina\_55, SynergyX\_59, Phaedruss\_55, Compostia\_59
- Track 3 : Tydolla\_57
- Track 4 : Morty007\_59, Marley1013\_60

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

The start number called the most often in the published annotations is 8, it was called in 37 of the 44 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost\_59, Akoma\_59, Athena\_61, Audrey\_59, Ben11\_59, Bernardo\_60, Briakila\_58, Casbah\_59, ChaChing\_59, Chandler\_59, Compostia\_59, Corofin\_59, Daisy\_58, Deenasa\_59, Devonte\_58, Gadget\_60, Gervas\_60, GlenHope\_60, Halfpint\_58, HarveySr\_58, Heathcliff\_59, Jackstina\_55, Kamiyu\_59, Kronus\_59, MmasiCarm\_60, Mortcellus\_59, Nozo\_59, Obutu\_60, OrangeOswald\_59, Phaedruss\_55, Phayeta\_61, Philly\_58, Phlyer\_59, Pipefish\_60, RagingRooster\_58, Rita1961\_60, RomaT\_59, SlippinJimmy\_61, SynergyX\_59, Yinz\_59,

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

- 

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

- Baloo\_59, LestyG\_58, Marley1013\_60, Morty007\_59, Neos5\_59, Tydolla\_57, Yahalom\_58,

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

Start 8:

- Found in 40 of 47 ( 85.1% ) of genes in pham
- Manual Annotations of this start: 37 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abinghost\_59 (B3), Akoma\_59 (B3), Athena\_61 (B3), Audrey\_59 (B3), Ben11\_59 (B3), Bernardo\_60 (B3), Briakila\_58 (B3), Casbah\_59 (B3), ChaChing\_59 (B3), Chandler\_59 (B3), Compostia\_59 (B3), Corofin\_59 (B3), Daisy\_58 (B3), Deenasa\_59 (B3), Devonte\_58 (B3), Gadget\_60 (B3), Gervas\_60 (B3), GlenHope\_60 (B3), Halfpint\_58 (B3), HarveySr\_58 (B3), Heathcliff\_59 (B3), Jackstina\_55 (B3), Kamiyu\_59 (B3), Kronus\_59 (B3), MmasiCarm\_60 (B3), Mortcellus\_59 (B3), Nozo\_59 (B3), Obutu\_60 (B3), OrangeOswald\_59 (B3), Phaedrus\_55 (B3), Phayeta\_61 (B3), Philly\_58 (B3), Phlyer\_59 (B3), Pipefish\_60 (B3), RagingRooster\_58 (B3), Rita1961\_60 (B3), RomaT\_59 (B3), SlippinJimmy\_61 (B3), SynergyX\_59 (B3), Yinz\_59 (B3),

Start 9:

- Found in 7 of 47 ( 14.9% ) of genes in pham
- Manual Annotations of this start: 7 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Baloo\_59 (B3), LestyG\_58 (B3), Marley1013\_60 (B3), Morty007\_59 (B3), Neos5\_59 (B3), Tydolla\_57 (B3), Yahalom\_58 (B3),

### **Summary by clusters:**

There is one cluster represented in this pham: B3

Info for manual annotations of cluster B3:

- Start number 8 was manually annotated 37 times for cluster B3.
- Start number 9 was manually annotated 7 times for cluster B3.

### **Gene Information:**

Gene: Abinghost\_59 Start: 53912, Stop: 53637, Start Num: 8

Candidate Starts for Abinghost\_59:

(7, 54014), (Start: 8 @53912 has 37 MA's), (10, 53855), (11, 53843), (12, 53831), (13, 53765), (14, 53723), (15, 53699), (16, 53672), (17, 53666), (18, 53651),

Gene: Akoma\_59 Start: 53960, Stop: 53685, Start Num: 8

Candidate Starts for Akoma\_59:

(7, 54062), (Start: 8 @53960 has 37 MA's), (10, 53903), (11, 53891), (12, 53879), (13, 53813), (14, 53771), (15, 53747), (16, 53720), (17, 53714), (18, 53699),

Gene: Athena\_61 Start: 54695, Stop: 54420, Start Num: 8

Candidate Starts for Athena\_61:

(7, 54797), (Start: 8 @54695 has 37 MA's), (10, 54638), (11, 54626), (12, 54614), (13, 54548), (14, 54506), (15, 54482), (16, 54455), (17, 54449), (18, 54434),

Gene: Audrey\_59 Start: 53951, Stop: 53676, Start Num: 8

Candidate Starts for Audrey\_59:

(7, 54053), (Start: 8 @53951 has 37 MA's), (10, 53894), (11, 53882), (12, 53870), (13, 53804), (14, 53762), (15, 53738), (16, 53711), (17, 53705), (18, 53690),

Gene: Baloo\_59 Start: 53948, Stop: 53679, Start Num: 9

Candidate Starts for Baloo\_59:

(2, 54512), (3, 54407), (4, 54341), (5, 54296), (6, 54143), (Start: 9 @53948 has 7 MA's), (10, 53897), (12, 53873), (13, 53807), (14, 53765), (15, 53741), (16, 53714), (17, 53708), (18, 53693),

Gene: Ben11\_59 Start: 54166, Stop: 53891, Start Num: 8

Candidate Starts for Ben11\_59:

(7, 54268), (Start: 8 @54166 has 37 MA's), (10, 54109), (11, 54097), (12, 54085), (13, 54019), (14, 53977), (15, 53953), (16, 53926), (17, 53920), (18, 53905),

Gene: Bernardo\_60 Start: 54303, Stop: 54028, Start Num: 8

Candidate Starts for Bernardo\_60:

(7, 54405), (Start: 8 @54303 has 37 MA's), (10, 54246), (11, 54234), (12, 54222), (13, 54156), (14, 54114), (15, 54090), (16, 54063), (17, 54057), (18, 54042),

Gene: Briakila\_58 Start: 53924, Stop: 53649, Start Num: 8

Candidate Starts for Briakila\_58:

(7, 54026), (Start: 8 @53924 has 37 MA's), (10, 53867), (11, 53855), (12, 53843), (13, 53777), (14, 53735), (15, 53711), (16, 53684), (17, 53678), (18, 53663),

Gene: Casbah\_59 Start: 54269, Stop: 53994, Start Num: 8

Candidate Starts for Casbah\_59:

(7, 54371), (Start: 8 @54269 has 37 MA's), (10, 54212), (11, 54200), (12, 54188), (13, 54122), (14, 54080), (15, 54056), (16, 54029), (17, 54023), (18, 54008),

Gene: ChaChing\_59 Start: 53971, Stop: 53696, Start Num: 8

Candidate Starts for ChaChing\_59:

(7, 54073), (Start: 8 @53971 has 37 MA's), (10, 53914), (11, 53902), (12, 53890), (13, 53824), (14, 53782), (15, 53758), (16, 53731), (17, 53725), (18, 53710),

Gene: Chandler\_59 Start: 54739, Stop: 54464, Start Num: 8

Candidate Starts for Chandler\_59:

(7, 54841), (Start: 8 @54739 has 37 MA's), (10, 54682), (11, 54670), (12, 54658), (13, 54592), (14, 54550), (15, 54526), (16, 54499), (17, 54493), (18, 54478),

Gene: Compostia\_59 Start: 54358, Stop: 54083, Start Num: 8

Candidate Starts for Compostia\_59:

(7, 54460), (Start: 8 @54358 has 37 MA's), (10, 54301), (11, 54289), (12, 54277), (13, 54211), (14, 54169), (15, 54145), (16, 54118), (17, 54112), (18, 54097),

Gene: Corofin\_59 Start: 53982, Stop: 53707, Start Num: 8

Candidate Starts for Corofin\_59:

(7, 54084), (Start: 8 @53982 has 37 MA's), (10, 53925), (11, 53913), (12, 53901), (13, 53835), (14, 53793), (15, 53769), (16, 53742), (17, 53736), (18, 53721),

Gene: Daisy\_58 Start: 53515, Stop: 53240, Start Num: 8

Candidate Starts for Daisy\_58:

(7, 53617), (Start: 8 @53515 has 37 MA's), (10, 53458), (11, 53446), (12, 53434), (13, 53368), (14, 53326), (15, 53302), (16, 53275), (17, 53269), (18, 53254),

Gene: Deenasa\_59 Start: 54820, Stop: 54545, Start Num: 8

Candidate Starts for Deenasa\_59:

(7, 54922), (Start: 8 @54820 has 37 MA's), (10, 54763), (11, 54751), (12, 54739), (13, 54673), (14, 54631), (15, 54607), (16, 54580), (17, 54574), (18, 54559),

Gene: Devonte\_58 Start: 53594, Stop: 53319, Start Num: 8

Candidate Starts for Devonte\_58:

(7, 53696), (Start: 8 @53594 has 37 MA's), (10, 53537), (11, 53525), (12, 53513), (13, 53447), (14, 53405), (15, 53381), (16, 53354), (17, 53348), (18, 53333),

Gene: Gadjet\_60 Start: 54287, Stop: 54012, Start Num: 8

Candidate Starts for Gadjet\_60:

(7, 54389), (Start: 8 @54287 has 37 MA's), (10, 54230), (11, 54218), (12, 54206), (13, 54140), (14, 54098), (15, 54074), (16, 54047), (17, 54041), (18, 54026),

Gene: Gervas\_60 Start: 54376, Stop: 54101, Start Num: 8

Candidate Starts for Gervas\_60:

(7, 54478), (Start: 8 @54376 has 37 MA's), (10, 54319), (11, 54307), (12, 54295), (13, 54229), (14, 54187), (15, 54163), (16, 54136), (17, 54130), (18, 54115),

Gene: GlenHope\_60 Start: 53950, Stop: 53675, Start Num: 8

Candidate Starts for GlenHope\_60:

(7, 54052), (Start: 8 @53950 has 37 MA's), (10, 53893), (11, 53881), (12, 53869), (13, 53803), (14, 53761), (15, 53737), (16, 53710), (17, 53704), (18, 53689),

Gene: Halfpint\_58 Start: 53690, Stop: 53415, Start Num: 8

Candidate Starts for Halfpint\_58:

(7, 53792), (Start: 8 @53690 has 37 MA's), (10, 53633), (11, 53621), (12, 53609), (13, 53543), (14, 53501), (15, 53477), (16, 53450), (17, 53444), (18, 53429),

Gene: HarveySr\_58 Start: 53540, Stop: 53265, Start Num: 8

Candidate Starts for HarveySr\_58:

(7, 53642), (Start: 8 @53540 has 37 MA's), (10, 53483), (11, 53471), (12, 53459), (13, 53393), (14, 53351), (15, 53327), (16, 53300), (17, 53294), (18, 53279),

Gene: Heathcliff\_59 Start: 53917, Stop: 53642, Start Num: 8

Candidate Starts for Heathcliff\_59:

(7, 54019), (Start: 8 @53917 has 37 MA's), (10, 53860), (11, 53848), (12, 53836), (13, 53770), (14, 53728), (15, 53704), (16, 53677), (17, 53671), (18, 53656),

Gene: Jackstina\_55 Start: 53842, Stop: 53567, Start Num: 8

Candidate Starts for Jackstina\_55:

(7, 53944), (Start: 8 @53842 has 37 MA's), (10, 53785), (11, 53773), (12, 53761), (13, 53695), (14, 53653), (15, 53629), (16, 53602), (17, 53596), (18, 53581),

Gene: Kamiyu\_59 Start: 53919, Stop: 53644, Start Num: 8

Candidate Starts for Kamiyu\_59:

(7, 54021), (Start: 8 @53919 has 37 MA's), (10, 53862), (11, 53850), (12, 53838), (13, 53772), (14, 53730), (15, 53706), (16, 53679), (17, 53673), (18, 53658),

Gene: Kronus\_59 Start: 55004, Stop: 54729, Start Num: 8

Candidate Starts for Kronus\_59:

(7, 55106), (Start: 8 @55004 has 37 MA's), (10, 54947), (11, 54935), (12, 54923), (13, 54857), (14, 54815), (15, 54791), (16, 54764), (17, 54758), (18, 54743),

Gene: LestyG\_58 Start: 53601, Stop: 53332, Start Num: 9

Candidate Starts for LestyG\_58:

(2, 54165), (3, 54060), (4, 53994), (5, 53949), (6, 53796), (Start: 9 @53601 has 7 MA's), (10, 53550), (12, 53526), (13, 53460), (14, 53418), (15, 53394), (16, 53367), (17, 53361), (18, 53346),

Gene: Marley1013\_60 Start: 54799, Stop: 54530, Start Num: 9

Candidate Starts for Marley1013\_60:

(1, 55402), (2, 55363), (3, 55258), (4, 55192), (5, 55147), (6, 54994), (Start: 9 @54799 has 7 MA's), (10, 54748), (12, 54724), (13, 54658), (14, 54616), (15, 54592), (16, 54565), (17, 54559), (18, 54544),

Gene: MmasiCarm\_60 Start: 54364, Stop: 54089, Start Num: 8

Candidate Starts for MmasiCarm\_60:

(7, 54466), (Start: 8 @54364 has 37 MA's), (10, 54307), (11, 54295), (12, 54283), (13, 54217), (14, 54175), (15, 54151), (16, 54124), (17, 54118), (18, 54103),

Gene: Mortcellus\_59 Start: 55019, Stop: 54744, Start Num: 8

Candidate Starts for Mortcellus\_59:

(7, 55121), (Start: 8 @55019 has 37 MA's), (10, 54962), (11, 54950), (12, 54938), (13, 54872), (14, 54830), (15, 54806), (16, 54779), (17, 54773), (18, 54758),

Gene: Morty007\_59 Start: 54799, Stop: 54530, Start Num: 9

Candidate Starts for Morty007\_59:

(1, 55402), (2, 55363), (3, 55258), (4, 55192), (5, 55147), (6, 54994), (Start: 9 @54799 has 7 MA's), (10, 54748), (12, 54724), (13, 54658), (14, 54616), (15, 54592), (16, 54565), (17, 54559), (18, 54544),

Gene: Neos5\_59 Start: 54261, Stop: 53992, Start Num: 9

Candidate Starts for Neos5\_59:

(2, 54825), (3, 54720), (4, 54654), (5, 54609), (6, 54456), (Start: 9 @54261 has 7 MA's), (10, 54210), (12, 54186), (13, 54120), (14, 54078), (15, 54054), (16, 54027), (17, 54021), (18, 54006),

Gene: Nozo\_59 Start: 54718, Stop: 54443, Start Num: 8

Candidate Starts for Nozo\_59:

(7, 54820), (Start: 8 @54718 has 37 MA's), (10, 54661), (11, 54649), (12, 54637), (13, 54571), (14, 54529), (15, 54505), (16, 54478), (17, 54472), (18, 54457),

Gene: Obutu\_60 Start: 54317, Stop: 54042, Start Num: 8

Candidate Starts for Obutu\_60:

(7, 54419), (Start: 8 @54317 has 37 MA's), (10, 54260), (11, 54248), (12, 54236), (13, 54170), (14, 54128), (15, 54104), (16, 54077), (17, 54071), (18, 54056),

Gene: OrangeOswald\_59 Start: 53959, Stop: 53684, Start Num: 8

Candidate Starts for OrangeOswald\_59:

(7, 54061), (Start: 8 @53959 has 37 MA's), (10, 53902), (11, 53890), (12, 53878), (13, 53812), (14, 53770), (15, 53746), (16, 53719), (17, 53713), (18, 53698),

Gene: Phaedrus\_55 Start: 53392, Stop: 53117, Start Num: 8

Candidate Starts for Phaedrus\_55:

(7, 53494), (Start: 8 @53392 has 37 MA's), (10, 53335), (11, 53323), (12, 53311), (13, 53245), (14, 53203), (15, 53179), (16, 53152), (17, 53146), (18, 53131),

Gene: Phayeta\_61 Start: 54219, Stop: 53944, Start Num: 8

Candidate Starts for Phayeta\_61:

(7, 54321), (Start: 8 @54219 has 37 MA's), (10, 54162), (11, 54150), (12, 54138), (13, 54072), (14, 54030), (15, 54006), (16, 53979), (17, 53973), (18, 53958),

Gene: Philly\_58 Start: 53779, Stop: 53504, Start Num: 8

Candidate Starts for Philly\_58:

(7, 53881), (Start: 8 @53779 has 37 MA's), (10, 53722), (11, 53710), (12, 53698), (13, 53632), (14, 53590), (15, 53566), (16, 53539), (17, 53533), (18, 53518),

Gene: Phlyer\_59 Start: 54661, Stop: 54386, Start Num: 8

Candidate Starts for Phlyer\_59:

(7, 54763), (Start: 8 @54661 has 37 MA's), (10, 54604), (11, 54592), (12, 54580), (13, 54514), (14, 54472), (15, 54448), (16, 54421), (17, 54415), (18, 54400),

Gene: Pipefish\_60 Start: 54690, Stop: 54415, Start Num: 8

Candidate Starts for Pipefish\_60:

(7, 54792), (Start: 8 @54690 has 37 MA's), (10, 54633), (11, 54621), (12, 54609), (13, 54543), (14, 54501), (15, 54477), (16, 54450), (17, 54444), (18, 54429),

Gene: RagingRooster\_58 Start: 53607, Stop: 53332, Start Num: 8

Candidate Starts for RagingRooster\_58:

(7, 53709), (Start: 8 @53607 has 37 MA's), (10, 53550), (11, 53538), (12, 53526), (13, 53460), (14, 53418), (15, 53394), (16, 53367), (17, 53361), (18, 53346),

Gene: Rita1961\_60 Start: 54317, Stop: 54042, Start Num: 8

Candidate Starts for Rita1961\_60:

(7, 54419), (Start: 8 @54317 has 37 MA's), (10, 54260), (11, 54248), (12, 54236), (13, 54170), (14, 54128), (15, 54104), (16, 54077), (17, 54071), (18, 54056),

Gene: RomaT\_59 Start: 54516, Stop: 54241, Start Num: 8

Candidate Starts for RomaT\_59:

(7, 54618), (Start: 8 @54516 has 37 MA's), (10, 54459), (11, 54447), (12, 54435), (13, 54369), (14, 54327), (15, 54303), (16, 54276), (17, 54270), (18, 54255),

Gene: SlippinJimmy\_61 Start: 55117, Stop: 54842, Start Num: 8

Candidate Starts for SlippinJimmy\_61:

(7, 55219), (Start: 8 @55117 has 37 MA's), (10, 55060), (11, 55048), (12, 55036), (13, 54970), (14, 54928), (15, 54904), (16, 54877), (17, 54871), (18, 54856),

Gene: SynergyX\_59 Start: 53956, Stop: 53681, Start Num: 8

Candidate Starts for SynergyX\_59:

(7, 54058), (Start: 8 @53956 has 37 MA's), (10, 53899), (11, 53887), (12, 53875), (13, 53809), (14, 53767), (15, 53743), (16, 53716), (17, 53710), (18, 53695),

Gene: Tydolla\_57 Start: 54153, Stop: 53884, Start Num: 9

Candidate Starts for Tydolla\_57:

(1, 54756), (2, 54717), (3, 54612), (4, 54546), (5, 54501), (6, 54348), (Start: 9 @54153 has 7 MA's), (10, 54102), (11, 54090), (12, 54078), (13, 54012), (14, 53970), (15, 53946), (16, 53919), (17, 53913), (18, 53898),

Gene: Yahalom\_58 Start: 53927, Stop: 53658, Start Num: 9

Candidate Starts for Yahalom\_58:

(2, 54491), (3, 54386), (4, 54320), (5, 54275), (6, 54122), (Start: 9 @53927 has 7 MA's), (10, 53876), (12, 53852), (13, 53786), (14, 53744), (15, 53720), (16, 53693), (17, 53687), (18, 53672),

Gene: Yinz\_59 Start: 53812, Stop: 53537, Start Num: 8

Candidate Starts for Yinz\_59:

(7, 53914), (Start: 8 @53812 has 37 MA's), (10, 53755), (11, 53743), (12, 53731), (13, 53665), (14, 53623), (15, 53599), (16, 53572), (17, 53566), (18, 53551),