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(∶ Bachita_153 + 6					
2					
2: Norvs_148					
ν γ ν κ ν ν					
B: Abscondus_148 + 1					
3 A 9					
4: WilliamBoone_151 + 4					
5 S					
5: Dusty_146					
b. Daving_110		×			9
6: OneUp_135					
	~ \	×	6		9
			Ĭ		
7. Divitor Costor 430					
7: BrutonGaster_130					

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 218338 Report

This analysis was run 03/28/25 on database version 593.

Pham number 218338 has 18 members, 2 are drafts.

Phages represented in each track:

• Track 1 : Bachita\_153, PhinkBoden\_148, Lozinak\_150, Culver\_150, Toniann\_150, Engineer\_152, Cucurbita\_149

• Track 2 : Norvs\_148

Track 3: Abscondus 148, Geeche 150

Track 4: WilliamBoone\_151, ClubL\_151, Aphelion\_149, Miskis\_143, Smoothie\_151

Track 5 : Dusty\_146Track 6 : OneUp\_135

Track 7 : BrutonGaster\_130

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

The start number called the most often in the published annotations is 1, it was called in 12 of the 16 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

 Aphelion\_149, Bachita\_153, ClubL\_151, Cucurbita\_149, Culver\_150, Engineer\_152, Lozinak\_150, Miskis\_143, PhinkBoden\_148, Smoothie\_151, Toniann\_150, WilliamBoone\_151,

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

Abscondus\_148, Dusty\_146, Geeche\_150, Norvs\_148,

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

BrutonGaster\_130, OneUp\_135,

### Summary by start number:

#### Start 1:

- Found in 16 of 18 (88.9%) of genes in pham
- Manual Annotations of this start: 12 of 16
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Aphelion\_149 (CQ1), Bachita\_153 (CQ1), ClubL\_151 (CQ1), Cucurbita\_149 (CQ1), Culver\_150 (CQ1), Engineer\_152 (CQ1), Lozinak\_150 (CQ1), Miskis\_143 (CQ1), PhinkBoden\_148 (CQ1),

Smoothie\_151 (CQ1), Toniann\_150 (CQ1), WilliamBoone\_151 (CQ1),

### Start 3:

- Found in 17 of 18 (94.4%) of genes in pham
- Manual Annotations of this start: 1 of 16
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Norvs\_148 (CQ1),

### Start 4:

- Found in 18 of 18 (100.0%) of genes in pham
- Manual Annotation's of this start: 3 of 16
- Called 27.8% of time when present
- Phage (with cluster) where this start called: Abscondus\_148 (CQ1),
  BrutonGaster\_130 (CQ2), Dusty\_146 (CQ1), Geeche\_150 (CQ1), OneUp\_135 (CQ2),

## Summary by clusters:

There are 2 clusters represented in this pham: CQ2, CQ1,

Info for manual annotations of cluster CQ1:

- •Start number 1 was manually annotated 12 times for cluster CQ1.
- •Start number 3 was manually annotated 1 time for cluster CQ1.
- •Start number 4 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CQ2:

•Start number 4 was manually annotated 2 times for cluster CQ2.

## Gene Information:

Gene: Abscondus 148 Start: 80856, Stop: 81065, Start Num: 4

Candidate Starts for Abscondus 148:

(Start: 1 @80733 has 12 MA's), (2, 80787), (Start: 3 @80820 has 1 MA's), (Start: 4 @80856 has 3 MA's), (5, 80922), (7, 80985), (8, 81018),

Gene: Aphelion\_149 Start: 81626, Stop: 81958, Start Num: 1

Candidate Starts for Aphelion\_149:

(Start: 1 @81626 has 12 MA's), (Start: 3 @81713 has 1 MA's), (Start: 4 @81749 has 3 MA's), (5, 81815), (8, 81911),

Gene: Bachita\_153 Start: 81773, Stop: 82105, Start Num: 1

Candidate Starts for Bachita 153:

(Start: 1 @81773 has 12 MA's), (Start: 3 @81860 has 1 MA's), (Start: 4 @81896 has 3 MA's), (5, 81962), (7, 82025), (8, 82058),

Gene: BrutonGaster\_130 Start: 77074, Stop: 77265, Start Num: 4

Candidate Starts for BrutonGaster\_130:

(Start: 3 @77038 has 1 MA's), (Start: 4 @77074 has 3 MA's), (6, 77179), (9, 77257),

Gene: ClubL\_151 Start: 81025, Stop: 81357, Start Num: 1

Candidate Starts for ClubL 151:

(Start: 1 @81025 has 12 MA's), (Start: 3 @81112 has 1 MA's), (Start: 4 @81148 has 3 MA's), (5, 81214), (8, 81310),

Gene: Cucurbita\_149 Start: 82086, Stop: 82418, Start Num: 1

Candidate Starts for Cucurbita\_149:

(Start: 1 @82086 has 12 MA's), (Start: 3 @82173 has 1 MA's), (Start: 4 @82209 has 3 MA's), (5, 82275), (7, 82338), (8, 82371),

Gene: Culver\_150 Start: 80350, Stop: 80682, Start Num: 1

Candidate Starts for Culver\_150:

(Start: 1 @80350 has 12 MA's), (Start: 3 @80437 has 1 MA's), (Start: 4 @80473 has 3 MA's), (5, 80539), (7, 80602), (8, 80635),

Gene: Dusty\_146 Start: 80684, Stop: 80893, Start Num: 4

Candidate Starts for Dusty\_146:

(Start: 1 @80561 has 12 MA's), (Start: 3 @80648 has 1 MA's), (Start: 4 @80684 has 3 MA's), (5, 80750), (8, 80846),

Gene: Engineer 152 Start: 81609, Stop: 81941, Start Num: 1

Candidate Starts for Engineer\_152:

(Start: 1 @81609 has 12 MA's), (Start: 3 @81696 has 1 MA's), (Start: 4 @81732 has 3 MA's), (5, 81798), (7, 81861), (8, 81894),

Gene: Geeche\_150 Start: 81109, Stop: 81318, Start Num: 4

Candidate Starts for Geeche\_150:

(Start: 1 @80986 has 12 MA's), (2, 81040), (Start: 3 @81073 has 1 MA's), (Start: 4 @81109 has 3 MA's), (5, 81175), (7, 81238), (8, 81271),

Gene: Lozinak\_150 Start: 81614, Stop: 81946, Start Num: 1

Candidate Starts for Lozinak\_150:

(Start: 1 @81614 has 12 MA's), (Start: 3 @81701 has 1 MA's), (Start: 4 @81737 has 3 MA's), (5, 81803), (7, 81866), (8, 81899),

Gene: Miskis 143 Start: 80375, Stop: 80707, Start Num: 1

Candidate Starts for Miskis\_143:

(Start: 1 @80375 has 12 MA's), (Start: 3 @80462 has 1 MA's), (Start: 4 @80498 has 3 MA's), (5, 80564), (8, 80660),

Gene: Norvs\_148 Start: 80892, Stop: 81137, Start Num: 3

Candidate Starts for Norvs\_148:

(Start: 1 @80805 has 12 MA's), (Start: 3 @80892 has 1 MA's), (Start: 4 @80928 has 3 MA's), (5, 80994), (7, 81057), (8, 81090),

Gene: OneUp 135 Start: 80483, Stop: 80674, Start Num: 4

Candidate Starts for OneUp 135:

(Start: 4 @80483 has 3 MA's), (9, 80666),

Gene: PhinkBoden\_148 Start: 81203, Stop: 81535, Start Num: 1

Candidate Starts for PhinkBoden\_148:

(Start: 1 @81203 has 12 MA's), (Start: 3 @81290 has 1 MA's), (Start: 4 @81326 has 3 MA's), (5, 81392), (7, 81455), (8, 81488),

Gene: Smoothie\_151 Start: 81190, Stop: 81522, Start Num: 1

Candidate Starts for Smoothie\_151:

(Start: 1 @81190 has 12 MA's), (Start: 3 @81277 has 1 MA's), (Start: 4 @81313 has 3 MA's), (5, 81379), (8, 81475),

Gene: Toniann\_150 Start: 80946, Stop: 81278, Start Num: 1

Candidate Starts for Toniann\_150:

(Start: 1 @80946 has 12 MA's), (Start: 3 @81033 has 1 MA's), (Start: 4 @81069 has 3 MA's), (5, 81135), (7, 81198), (8, 81231),

Gene: WilliamBoone\_151 Start: 79204, Stop: 79536, Start Num: 1

Candidate Starts for WilliamBoone\_151:

(Start: 1 @79204 has 12 MA's), (Start: 3 @79291 has 1 MA's), (Start: 4 @79327 has 3 MA's), (5, 79393), (8, 79489),