Cover Sheet

Mycobacteriophage GageAP Annotation

Helena High School

Although we felt fairly confident in most areas, please double check the following areas/predictions.

\*\*\*\*since submitting on 5/15/14 we identified a predicted G and G/T frameshift in gene 25 and 26. We altered the DNA Master file and resubmitted as GageAP\_Final2\*\*\*\*

Gp1 was not predicted by Glimmer or GeneMark but matched a sergeantshorty9 predicted protein

Gp39 not called by Glimmer and GeneMark but DNA matches HanShot First so the product would also be possible there. There is a competing (possible) gene in the same DNA segment, but it overlaps with the start of the integrase (a match of which is well established from Bxb1 studies)

Predicted frameshift on GeneMark M.tb.H37Rv output at about 31970 (gene 43/44 area)

336 bp gap between genes 73 and 74

gp87 No blast matches

A portion of predicted gp92 matches a portion of a phage Kugel predicted protein gp95

MANY THANKS FROM THE HELENA HIGH SCHOOL PHAGE ANNOTATION CORPS!

Caitlyn Chilinski, Sawyer Linke, Atticus Proctor, and Marisa Pedulla