CONSIDER FOR TALK

2022 SEA Symposium Abstract

University of Mary Washington

Fredericksburg VA

Corresponding Faculty Member: Swati Agrawal (sagrawal@umw.edu)

Phage Hunting at the University of Mary Washington

Elizabeth Breckenridge, Sandra Arias, Bonnie Butler, Adrian Coello, Kevin Halpin, Megan Baxter, Ashlyn Rauch, Emma Goehner, Maddie Kimmitz, Morgan Hicok, Megan Baxter, Ashlyn Rauch, Emma Goehner, Maddie Kimmitz, Morgan Hicok, Gabriela Valle, Erin Reynolds, Swati Agrawal

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Bacillus thuringiensis subspecies Kurstaki (BTK) is often used as a microbial insecticide for pest control and as a simulant for Bacillus anthracis in biowarfare and bioterrorism studies. Students in 2022 Phage Hunters class at University of Mary Washington isolated eight bacteriophages using the host Bacillus thuringiensis subspecies Kurstaki. One of the phages KoopaTroopa , was sequenced and is currently being annotated in the lab during the Spring semester. KoopaTroopa was found in a soil sample obtained from Dumfries, VA and later enriched for isolation and purification. It has a genome length of 170,590 bp, which auto-annotated with 269 features, and a direct terminal repeat of 284 bp. KoopaTroopa is Siphoviridae, and it’s genome is most similar to Tsamsa as analysed by BLAST. KoopaTroopa genome also consists to 20 tRNA genes which is a feature we have not observed in the phages previously isolated on this host.