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2021 SEA Symposium Abstract

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Phage Hunting at the University of Mary Washington

Hannah Lee, Sabine Krall, John Tan, Raesa Zia, Charlotte Russel, Jayme Bourdeau, Hannah Stottlemyer, Andrew Cooper, Raesa Zia, Charlotte Russel, Jayme Bourdeau, Elizabeth Sullivan, Madison DeWitt, Mitchell Freitag, Swati Agrawal

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 2021 Phage Hunters class at University of Mary Washington isolated nine bacteriophages using the host Bacillus thuringiensis subspecies Kurstaki. Two phages, Hari and Jackrabbit, were sent to SEAPHAGES for sequencing are currently being annotated in the lab during the Spring semester. Hari was found in a soil sample obtained from King George, VA while JackRabbit was isolated from Linton, VA. Both samples were isolated from enriched cultures. Hari has a genome length of 161,978 bp, which auto-annotated with 286 features, and a direct terminal repeat of 2,633 bp. Hari is most similar to DIGNKC, SBP8a and PPIsBest by BLAST. JackRabbit has a genome length of 161,552 bp, which auto-annotated with 288 features, and a direct terminal repeat of 2,821 bp.