DO NOT CONSIDER FOR TALK

10th Annual SEA Symposium Abstract

University of Mary Washington

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Phage Hunting at the University of Mary Washington

Leland Burke, Samantha Everett, Tara Fitzgerald, Chase Forster, Faith Hodges, MacKenzie Johnson, Macy Justice, Francesca Maisano, Emily O'Lare, Natalie Padilla, Cindy Ramirez, Sarah Riddell, Lydia Samson, Jillian Stone, Nicole Taylor, Eleanor Tober, Theresa Vierow, M. Bradley Walker, Jenifer Grove, Lynn Lewis , Theresa Grana

UMW Phage Hunters classes have been isolating phages from *Bacillus* hosts since 2011. Our host this year was *B. thuringiensis* subsp. Kurstaki, which has been used as microbial insecticide for pest control and is used as a simulant for *Bacillus anthracis* in biowarfare/bioterrorism studies. Of the 18 phages isolated this year, one (Natp) was sequenced. Natp was isolated from an enriched culture, and was found in soil from Warrenton, VA. Natp has a genome length of 164,648 bp, which autoannotated with 294 features, a direct terminal repeat of 2,545 bp, and a GC content of 37.8%. Natp is most similar to BM5, Juglone, AvesoBmore, and Troll by BLAST. No tRNA genes were found when searched with tRNA Scan. Interesting features of the genome will be shared. During the spring semester, the class attempted a host range project and several phages were able to replicate on *Bacillus anthracis*, showing a potential phage therapy for anthrax. One new feature this year was that the course was taught by a new instructor, Theresa Grana, for the first time. Much guidance was provided by Lynn Lewis and other regional members of the SEA-phages network instructors.