CONSIDER FOR TALK

7th Annual SEA-PHAGES Symposium Abstract

University of Florida

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The annotation of 3 new Mycobacteriophages: ArcherNM, Petra64142 and Wooldri.

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The HHMI SEA-Phages class at UF this year concentrated on annotating the genomes of three Mycobacteriophages isolated by students of Washington State University, Pullman. WA. and provided by Dr. William Davis: ArcherNM, Petra64142 and Wooldri. ArcherNM is an A2 phage with high sequence similarity (96%) to Changeling – another A2 phage also isolated and annotated at Washington State University. ArcherNM is 52,561 bp in length with a GC content of 64.2%. Genome annotation suggests that there are 94 protein coding genes and no tRNAs.  
Petra64142 exhibits highest nucleotide sequence similarity (99%) to OrionPax, and has been assigned to phage cluster E. Petra64142’s genome is 75,271bp in length and exhibits 63% GC content; these values are typical of cluster E phages. Also typical of cluster E phages are a large number of protein coding genes. Petra64142 has 143 annotated protein genes and 2 tRNAs. Finally, Mycobacteriophage Wooldri is a member of the phage cluster A, subcluster A3. Wooldri is 50,797 bp in length, exhibits 64% CG content and contains 98 protein coding genes and 3 tRNAs. Details of the genome characterization of these 3 Mycobacteriophages are discussed, including search results for promotors, stoperators, translational frameshifts and a comparative analysis of gene content between A2 and A3 cluster phages.