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Amherst MA

Corresponding Faculty Member: Jessica Rocheleau (jmrocheleau@umass.edu)

Isolation and Characterization of Microbacteriophages KingJulien, NickSell, and StirfryIV

Sherlyn Alex, Sai Nirmal Karunanithi, Caleb Lawyer, Abhay Yajurvedi, Jessica Rocheleau

The characterization of bacteriophage genomes is becoming an area of interest in microbiology as a result of an increase in antibiotic-resistant pathogens. It is crucial to understand the properties of these phages as potential new medical therapies. KingJulien, Nicksell, and StirfryIV are three new bacteriophages isolated from soil samples in Amherst, Massachusetts. Infecting the host bacterium Microbacterium foliorum, each of these phages was isolated, purified, and amplified prior to characterization electron microscopy and sequencing via Illumina MiSeq. All three phages were similar in length and GC content and were assigned to the EA1 cluster, sharing siphoviridae morphology. The phage genomes were annotated using PECAAN, Phamerator, and HHPred. KingJulien, NickSell, and StirFryIV were isolated from the same geographic area and were all classified as lytic phages.