DO NOT CONSIDER FOR TALK

2024 SEA Symposium Abstract

Southern Maine Community College

South Portland ME

Corresponding Faculty Member: Emily Savage (esavage@smccme.edu)

Florida phage, Maine host: Genomic characterization of a singleton phage infecting a marine microbacterium

Sam Cousins, Lucas Girard, Alexis Heald, Doxel Tanzey, Elizabeth Omo

PensacolaC28 is a bacteriophage that infects the Microbacterium sp. strain Casco Bay, a marine host found in Maine. PensacolaC28 was collected from plants growing on Navarre Beach in Florida by students at the University of West Florida. The genome was annotated by the SEA phage group of Southern Maine Community College. Of the five bacteriophages known to infect M. Casco Bay, PensacolaC28 is the first phage that shows reduced infection efficiency on M. foliorum. PensacolaC28 is a singleton siphovirus most similar to clusters FE and GH with a genome that is 16,749 base pairs long and contains 25 genes. Twelve of these genes are orphams and are present in both the left and right arms of the genome. Bioinformatic analysis suggests a putative tyrosine integrase as well as an immunity repressor.