CONSIDER FOR TALK

9th Annual SEA-PHAGES Symposium Abstract

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B1 is for is for Bacteriophage

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This year Drexel University freshman undergraduate students isolated 56 bacteriophages that infect *Mycobacterium smegmatis mc2 155*, from soil samples. Of these phages 5 were sequenced and their genomes annotated. All 5 phages belong to the B1 cluster. 71.4% of the bacteriophages annotated by Drexel University to date (10 of 14 phages) belong to the B1 cluster, compared to the national average which is 11.8%. Our students spent 10 weeks working on independent projects to advance their understanding of the characteristics of the B1 cluster phages isolated at Drexel. Vamsee Vemulapalli compared the distribution of bacteriophage clusters isolated by SEA-PHAGES students across the United States of America. He then compared this distribution data against regional temperature and soil type to determine if there were any correlations between geographic location and cluster identity. Maanasa Natrajan compared the phages within the sequenced B1 cluster phages from this year and identified similarities across the number of their genes, GC content and nucleotide length. The other students performed wet lab experiments to characterize the phages’ growth patterns when exposed to different conditions. These conditions included testing the phages ability to infect different host cells and the study of their plaque morphologies under stressful conditions (e.g. acidic, alkaline pH and higher glucose concentrations).