DO NOT CONSIDER FOR TALK

2024 SEA Symposium Abstract

Chatham University

Pittsburgh PA

Corresponding Faculty Member: Colleen Barrett (c.barrett@chatham.edu)

Contamination of Microbacterium Cluster EE Phage in the Laboratory Setting

Claire Hartinger, Jocalyn Henry, Addyson Shawley, Cameron Thompson

During the fall of 2023, BIO 143L students at Chatham University took part in the SEA-PHAGES program to isolate, extract, and purify bacteriophage. After successful extraction, the phage samples were sent to the Pittsburgh Bacteriophage Institute at the University of Pittsburgh for sequencing. It was discovered that three phages from the fall 2023 semester – Hernando, PotatoBox, and Rahj – were all identical to Rhogar, which was isolated during the fall semester of 2022. The reisolation of Rhogar was presumed to have occurred through contamination within the laboratory, specifically from the pipettors. Through direct isolation and the creation of enriched cultures obtained from surface sampling of the pipettors, samples of bacteriophage were obtained. Sequencing of the detected bacteriophage at the University of Pittsburgh is yet to be completed as of this writing. This research serves to caution other laboratories about the importance of taking preventative measures to protect against contamination. If contamination does occur, it is imperative that there is thorough decontamination of tools used during SEA-PHAGE isolation. After gathering results from experimentation, tools in the Chatham University laboratory used for bacteriophage isolation were decontaminated.