CONSIDER FOR TALK

2023 SEA Symposium Abstract

Universidad Ana G. Mendez, Gurabo campus

Gurabo PR

Corresponding Faculty Member: Catalina Dávila (davilac2@uagm.edu)

Asta and Agente005: two newly tropical bacteriophages found in Puerto Rico

CATALINA DAVILA, FRANCISCO RIVERA, STEPHANY GARCIA, NICOLE HERNANDEZ, FERNANDO INCHAUSTY, CRISTINA MALAVE, BENJAMIN MARQUEZ, ELIZABETH MATEO, BRENELY RIVERA, PAOLA VAZQUEZ, KENNETH VELAZQUEZ, DARA VILLA

Ten Microbacterium foliorum-infecting bacteriophages were isolated in 2022 from enriched soil samples located at the central east region of the Island (Gurabo, Juncos and Aguas Buenas municipalities). Viral plaques were further purified for three rounds by picking a single plaque, performing serial dilutions and plating again.

Once purified, all phages were and amplified to high titer lysates. After getting a high-titer lysate of the purified bacteriophage, DNA was extracted and phages Asta and Agente005 were selected for sequencing and are currently being annotated. Results showed that both phages belong to cluster EA, subcluster EA1. Bacteriophage Asta DNA size is 41555 bp, with 65 protein-coding genes preliminary, and a GC content of 63.4%. Bacteriophage Agente005 DNA size is 41843 bp, with 64 protein-coding genes preliminary, and a GC content of 63.6%. Both phages have circularly permuted genome ends.