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2025 SEA Symposium Abstract

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Annotation of Gordonia terrae Cluster DN Phage BotCity

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We extracted our phage BotCityfrom an enriched soil sample in Ashland, Nebraska in August of 2024. The phage was cultured on the host bacteria Gordonia terrae. The structure of the phage was examined using Transmission Electron Microscopy (TEM) which revealed that the phage was a siphovirus.This phage is lysogenic and belongs to the DN cluster but is not assigned to a subcluster. BotCity has a genome length of 55,060 base pairs, which is similar in length to most other annotated DN genomes. Auto-annotation predicts 105 protein-coding genes. Using DNAMaster, Phamerator, Starterator, and BLAST data, we examined the predicted ORFs for coding potential and possible start sites. Future work will include calling the functions of genes.