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2025 SEA Symposium Abstract

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Bowling and LucySwiss: Two Novel Arthrobacter phage

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To date, students at Montclair State University have isolated 299 phage using *Mycobacterium smegmatis*, and *Arthrobacter* sp. as hosts. Of these 299 phage, 30 have been sequenced and 27 have been deposited in GenBank. During the spring of 2025, MSU students are working to annotate the genomes of two novel Arthrobacter phage: Bowling and LucySwiss. Bowling is a cluster AM phage with approximately 98 coding genes, and LucySwiss is a cluster AU phage with approximately 97 coding genes. Surprisingly, there appears to be one gene not called by DNA Master in the initial auto-annotation of Bowling that had to be added manually and seven uncalled genes in LucySwiss. Pairwise alignments between genomes shows a 54.15% identity between Bowling and LucySwiss. Work on these annotations is ongoing and the students at MSU anticipate their annotations to be complete by May 1, 2025.