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2023 SEA Symposium Abstract

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Amavida, Heylee, and JaNo: Three Novel Arthrobacter phage

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To date, students at Montclair State University have isolated 257 phage using *Mycobacterium smegmatis*, and *Arthrobacter* sp. as hosts. Of these 257 phage, 26 have been sequenced and 21 have been deposited in GenBank (with one currently in review). During the spring of 2023, MSU students are working to annotate the genomes of three novel Arthrobacter phage: Amavida, Heylee, and JaNo. Amavida is a cluster AQ phage with approximately 90 coding genes, Heylee is a cluster AQ phage with approximately 90 coding genes, and JaNo is a cluster AR phage with approximately 110 coding genes. Pairwise alignments between genomes shows a 44.47% identity between Amavida and JaNo, a 44.49% identity between Heylee and JaNo, and a 99.9% identity between Amavida and Heylee. The results of the pairwise alignments are not surprising given Amavida and Heylee are both in cluster AQ and JaNo is in cluster AR. Work on these annotations is ongoing and the students at MSU anticipate their annotations to be complete by May 1, 2023.