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MoyaNatalis, a new Arthrobacteriophage isolated from Oklahoma Soil

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Under the SEA-PHAGEs program, we isolated and characterized a novel bacteriophage, MoyaNatalis, which infects the host Arthrobacter sp. ATCC 21022. With multi-drug resistant bacteria recognized as a public threat, phage therapy is increasingly being researched as an additional tool to fight against antibiotic-resistant infections. In this work, we enriched a soil sample to isolate the phage, purified MoyaNatalis three times, and obtained a high titer lysate. The high titer lysate was used to perform DNA extractions and restriction enzyme digestions. Extracted DNA was selected for sequencing. MoyaNatalis is a lytic phage with a Siphoviridae morphology. It belongs to the AU cluster with a genome size of 69808 bp. The genome is currently being annotated as part of the Bioinformatics class.