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2021 SEA Symposium Abstract

Western Carolina University

Cullowhee NC

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The Sequencing and Annotation of Two “Vintage” Actinobacteriophages Culver and StolenFromERC Discovered at Western Carolina University

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Western Carolina University (WCU) joined the SEA-PHAGES program in 2015. Over the past 6 years freshmen students at WCU have isolated and archived 100 Actinobacteriophages. While this is impressive, only 17 of these bacteriophage genomes have been fully sequenced and annotated. In an attempt to explore the genetic diversity of the additional Actinobacteriophages discovered at WCU, 10 additional bacteriophages were selected from our archive for full genome sequencing at WCU. This semester WCU students are currently working to annotate the genomes of two of these bacteriophages, Culver and StolenFromERC. Bacteriophage StolenFromERC was discovered in 2015 using the host *Mycobacterium smegmatis*. StolenFromERC is a member of cluster E that currently contains 111 members. Bacteriophage Culver was discovered in 2017 using the host *Gordonia terrae*. Culver has been assigned to the CQ1 cluster that currently contains only 11 members. Our current progress on genome annotation of these two bacteriophages will be discussed.