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11th Annual SEA Symposium Abstract

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Characterization of a new Microbacterium foliorum Cluster EB phage 'Stromboli': A tale of toxins, giant lysins, HNH endonucleases, and a gene cluster predicted to regulate nucleotide levels.

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Stromboli is a new member of the Cluster EB, a cluster that infects the bacterial host *Microbacterium foliorum*. It has a 41,594 bp genome and a GC% of 68.8. It is one of eighteen members in this cluster, is in the *Siphoviridae* family, produces a 'bullseye' plaque morphology, and is predicted to be a lytic phage. It has an unusually large lysinA which contains several repeats. We will present a phylogenetic analysis of the Type II HicAB system predicted in *Microbacterium* and actinobacteriophages. Stromboli also contains two predicted HNH endonucleases, tRNAs, and several genes that are predicted to encode enzymes that regulate nucleotide levels in the bacterial host.