

Characterization of novel lytic phages infecting the fast-growing marine bacterium *Vibrio natriegens*

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In aquatic environments, the structure of bacterial communities is strongly influenced by phage infection, thereby affecting the dynamics of carbon and nutrient cycling. Among marine bacteria, the genus *Vibrio* is widespread and an ecologically important component of coastal microbial communities. While numerous bacteriophages infecting pathogenic *Vibrio* species have been isolated and characterized for therapeutic purposes, comparatively little is known about phages infecting non-pathogenic species, leaving gaps in our understanding of their ecology and potential utility as tools for host manipulation. Here, we isolated two lytic phages, vB_Vna_AM1 and vB_Vna_AM2, infecting *Vibrio natriegens*, one of the fastest-growing known bacteria and an emerging model in biotechnology and synthetic biology. We characterized their phenotypic, morphological, and genomic features. Our data expand current knowledge of culturable phages infecting marine bacteria and highlight their potential for biotechnological applications.

Keywords: Bacteriophage, Marine microbiology, Virus-host interactions