

## ABSTRACT

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### **Exploring the Interactions Between *Bdellovibrio bacteriovorus* and Biofilms: Implications for Novel Antimicrobial Strategies**

Biofilms represent structured microbial communities that exhibit enhanced resistance to chemical treatments, making them a persistent challenge in both clinical and industrial settings. *Bdellovibrio bacteriovorus*, a predatory bacterium, has emerged as a potential biocontrol agent capable of infiltrating and disrupting bacterial biofilms. In this talk, I will explore the interactions between *B. bacteriovorus* and biofilm-forming bacteria, emphasizing how its predatory mechanisms function within the confined, low-dimensional environments of biofilm structures. I will discuss recent findings on the efficacy of *B. bacteriovorus* in degrading biofilms, factors influencing its predatory activity, and the implications for antimicrobial applications. Understanding these interactions could pave the way for novel strategies to prevent and remove unwanted biofilms.