Apr 14th, 9:00 AM - 10:00 AM

Isolation of *Rhodobacter capsulatus* Bacteriophages and development of Optimal Infection Conditions

Brooke Bernardoni
Illinois Wesleyan University

Matthew R. Bockman
Illinois Wesleyan University

David Bollivar, Faculty Advisor
Illinois Wesleyan University

Poster Presentation P11

ISOLATION OF *RHODOBACTER CAPSULATUS* BACTERIOPHAGES AND DEVELOPMENT OF OPTIMAL INFECTION CONDITIONS

Brooke Bernardoni, Matthew R. Bockman, and David W. Bollivar*
Biology Department, Illinois Wesleyan University

Few studies have been performed regarding bacteriophages that infect photosynthetic bacteria. *Rhodobacter capsulatus* is a photosynthetic bacterium that has been used as a model system for studying the genetics of photosynthesis. It has been used as a host for bacteriophages in the past, but most of this work was performed prior to the advent of molecular biology. Three bacteriophages have been isolated that will infect *Rhodobacter capsulatus.* During the course of the studies described in this poster, it was discovered that different strains of this bacterium have very different susceptibilities to infection by bacteriophages. The isolated bacteriophages were discovered from water samples taken from a creek in the Bloomington/Normal, Illinois area. The *R. capsulatus* strain YW1C-6 showed evidence for increased susceptibility for bacteriophage infection when compared to the St. Louis strain. Following isolation and purification of these bacteriophages, optimal conditions for bacteriophage infection were developed to enhance isolation techniques for further studies.