**ABSTRACT:**

_P. aeruginosa_ biofilms are difficult to treat due to the thick extracellular matrix and acquired antibiotic resistance. The bacteriophage (virus that infects bacterial cells) can destroy and prevent further growth of the bacterial biofilms. The goal of this project has been to treat biofilms with phages and check for antibiotic resistance.

**METHODS:**

**P. aeruginosa Strains:**
- Clinical isolates from urinary samples:
  - Voided Urine
  - Catheterized Urine
  - Kidney Stones
  - Vaginal Swabs

**Growing the Biofilms:**
- 37°C in 6-Well Plates
- 4 mL LB in each well & 1 mL overnight culture
- Replace LB every 2 days
- Repeat for 2 weeks for surface attaching biofilms

**Characterization:**
- Crystal Violet Assays
- Spectrophotometer - Biofilm Density

**Bacteriophage Treatment:**
- SPAM, Spike!, Dobby, D3112
- Variable amounts of phage lysate

**RESULTS:**

**Biofilms:**
- _P. aeruginosa_ biofilms grew sufficiently but tended towards flocking rather than surface attachment

**Bacteriophage Treatment:**
- Clear, initial lysis of biofilm by added phage lysate