

ADAM BERT, ROGER SEEBER, AND JOSEPH HORZEMPA, Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV USA. Duck Potato Extract May Lead to the Inhibition of Biofilm Formation of *Pseudomonas aeruginosa*.

*Pseudomonas aeruginosa* is a gram-negative bacterium that forms biofilms on many surfaces as well as within the lungs of cystic fibrosis (CF) patients. *Pseudomonas* biofilms are particularly dangerous because these structures protect bacteria from antibiotics and other chemical antimicrobial agents. Therefore, compounds that inhibit biofilm formation of *P. aeruginosa* are highly desired. In a separate study by our laboratory, we observed that Duck Potato extract (*Sagittaria latifolia*) exhibited antimicrobial activity on *Clostridium perfringens*, a pathogenic Gram-positive bacterium. Therefore, duck potato extract was evaluated to determine whether or not it was capable of inhibiting the growth of other pathogenic bacteria. Duck Potato plants were collected, the leaves were removed, and ethanol was used to extract organic compounds. The extracted material was added to a culture of *P. aeruginosa*. While duck potato extract did not inhibit the growth of this bacterium, a cursory analysis indicated that biofilm production was mitigated. We therefore conducted several microtiter-based biofilm studies to determine whether duck potato extract was capable of inhibiting the formation of *Pseudomonas* biofilms. Results showed that the Duck Potato extract did not directly kill the bacteria, however, this extract appeared to inhibit the biofilm formation of *P. aeruginosa*. (Supported by NIH Grant P20GM103434 to the West Virginia IDeA Network for Biomedical Research Excellence).