

Antimicrobial Effects of *Arctostaphylos uva ursi* Extract against *Acinetobacter baumannii*. Dicey Stewart\*, Elliot Collins\*, James Healy\*, Caleb Martin\*, Francisco Leon#, Joseph Horzempa\*. \*Department of Natural Sciences and Mathematics, West Liberty University, West Liberty, WV. #Department of BioMolecular Sciences, University of Mississippi School of Pharmacy.

*Acinetobacter baumannii* is a Gram-negative, opportunistic pathogen associated with a high mortality rate in those infected with this bacterium. There are few classes of antibiotics that can successfully eliminate *A. baumannii* infections; therefore, it is imperative to find novel therapeutics to reduce the mortality rate of those infected with these drug-resistant bacteria. Preliminary studies from our laboratory have shown that *Arctostaphylos uva ursi* (kinnikinnick) leaf extracts (AUU) inhibit the growth of *A. baumannii*. The AUU compounds were separated by chromatography, and the resulting fractions were tested for antimicrobial activity using an agar-based diffusion assay. This indicated that two fractions exhibited substantial antimicrobial activity. These results were verified using a *Galleria mellonella* larvae infection model. The *G. mellonella* model also indicated that active fractions were not toxic to these insects. The fraction with the most robust antimicrobial activity was further separated via chromatography and bio-assay guided fractionation (agar-based diffusion assays and *G. mellonella* infections) was used to identify fractions containing the active compound. Once the active compound has been isolated via a final round of chromatography using a sephadex column, this molecule will be elucidated via NMR and mass spectrometry.

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