Abstract Submitted
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**Interaction of Mastoparan with Model Membranes** JUSTIN HALOOT, SPS — The use of antimicrobial agents began during the 20th century to reduce the effects of infectious diseases. Since the 1990s, antimicrobial resistance has become an ever-increasing global problem. Our laboratory recently found that small antimicrobial peptides (AMPs) have potent antimicrobial activity against a wide range of Gram-negative and Gram-positive organisms including antibiotic resistant organisms. These AMPs are potential therapeutic agents against the growing problem of antimicrobial resistance. AMPs are small peptides produced by plants, insects and animals. Several hypotheses concede that these peptides cause some type of structural perturbations and increased membrane permeability in bacteria however, how AMPs kill bacteria remains unclear. The goal of this study was to design an assay that would allow us to evaluate and monitor the pore forming ability of an AMP, Mastoparan, on model membrane structures called liposomes. Development of this model will facilitate the study of how mastoparan and related AMPs interact with the bacterial membrane.

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