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## *Membrane Disintegrating Antibiotics and Bacterial Resistance*

Resistance of bacteria to antibiotics is a major issue in health care today. Nearly every antibiotic available has met some level of resistance in at least one species of bacteria. Alternative antibacterial strategies must be developed in order to keep up with the rate of antibacterial resistance development. The purpose of my research is to test for the development of bacterial resistance in a library of compounds developed from the calixarene family. Over the last semester I have treated a variety of bacteria with several compounds from the library to see if they develop resistance. Although this project is still in progress, the results look very good for most of the compounds tested. Once enough information is collected the raw data itself tell us which compounds are likely to experience resistance from bacteria and the structure information available for each compound can show correlations between compound structure and bactericidal activity in each type of bacteria tested. This information can be used a stepping stone for more in-depth research and help revise therapeutic antimicrobial use.



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