

The Characterization of Three Novel Antimicrobial Compounds with Potent Activity against Methicillin-Resistant *Staphylococcus Aureus*

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The continuous emergence of pathogenic bacteria resistant to antibiotics punctuates the growing necessity for novel classes of antimicrobials; however, despite this need, a limited number of such classes have been released onto the market since the end of the golden age of antibiotics in the early 1960's. Through a whole-cell screening approach, we have identified three compounds of novel antimicrobial structure that show potent activity against methicillin-resistant *Staphylococcus aureus* (MRSA). These compounds are selective for Gram-positive bacteria and have been shown to have limited toxicity to human cell lines. We are currently investigating the modes of action of these compounds through whole-cell labeling assays and resistant strain generation. In addition, we describe the synthesis of one compound and its derivatives for structure-activity relationship (SAR) analysis.