PURDUE INNOVATES | Office of Technology Commercialization

# Synthesis of Class II HMG-CoA Reductase Inhibitors as New Potent Nosocomial Antibiotics

**Developing new HMG-CoA Reductase Inhibitors to combat hospital-acquired bacterial infections.**

Hospital-acquired (nosocomial) infections cause or contribute to 99,000 deaths each year in the United States alone. A patient's weakened state combined with bacteria's increasing resistance to antibiotics makes these infections difficult to treat. The current suite of antibiotics available for treating serious nosocomial infections, such as MRSA, can have unwanted side effects; hence, it is important to identify new antibiotics.

Researchers at Purdue University have developed a class of antibiotic compounds designed to specifically target common nosocomial infections. By selectively targeting the mevalonate pathway of Gram-positive bacteria, these compounds will be more effective with fewer side effects. Several of the analogues also demonstrated selective antibacterial activity against MRSA and VRE, two of the most common and most dangerous nosocomial infections.

**Advantages**:

-Targets common nosocomial infections

-Fewer side effects

Potential Applications:

-Medical/Healthcare

-Pharmaceutical Industry

-Drug Development

**TRL:** 2

**Technology ID**
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**Category**
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