



Natural Antibiotic to Treat Clostridium Infection and More

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WARF: P140428US02

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing ecteinamycin, a compound that may be more potent than drugs currently used to treat serious bacterial infections.

Overview

Bacterial resistance to antibiotics is an escalating problem, especially in hospital settings. The Centers for Disease Control recently identified *Clostridium difficile* as posing an “urgent” health threat, highlighting the need for new and effective therapeutics.

C. difficile is the most common cause of nosocomial infectious diarrhea. The bacteria sicken half a million people each year and 20 percent of patients get sick again following treatment.

The Invention

UW–Madison researchers have identified a potential new antibiotic to treat infections caused by *C. difficile*, *Staphylococcus* and other drug-resistant strains. The compound is a natural product called ecteinamycin. It was discovered and isolated from a sea squirt bacterium (*Actinomadura*). Preliminary data suggests ecteinamycin is potent, selective and able to protect cells against bacterial toxins.

Applications

- Novel antibiotic to fight Gram-positive/negative bacteria, including *C. difficile*, methicillin-resistant *S. aureus* and vancomycin-resistant *Enterococcus*

Key Benefits

- Potential new weapon against dangerous and drug-resistant bacteria
- May be superior to available antibiotics

Stage of Development

Ecteinamycin has demonstrated potent *in vitro* activity against *C. difficile*. It showed greater potency than vancomycin (the “last resort” drug) against several different Gram-positive bacteria.

Additional Information

For More Information About the Inventors

- [Timothy Bugni](#)
- [Nasia Safdar](#)

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Related Technologies

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- [WARF reference number P130274US02 describes compounds isolated from the sea squirt bacterium that may be effective against fungal infections.](#)

Tech Fields

- [Therapeutics & Vaccines : Anti-infectives \(antibacterials, antifungals, antivirals\)](#)

For current licensing status, please contact Rafael Diaz at rdiaz@warf.org or 608-960-9847

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