

Compounds with Promising Antibacterial and Antifungal Activity for New Therapeutic Development

Track Code: 2017-DAI-67879

Categories:

- Chemistry and Chemical Analysis
- Medical/Health

Keywords:

- Antimicrobials
- Chemistry and Chemical Analysis
- Compounds
- Medical/Health
- Therapy

Invasive fungal infections are a serious cause of mortality in many patients including an increasing number of immunocompromised patients. Few treatment choices exist and first-line therapies have significant limitations due to safety problems and the lack of broad-spectrum activity. There is a need for novel antibacterial/antifungal agents and efficient methods of making these agents.

Researchers at Purdue University have identified several compounds with novel structures that indicate promising antibacterial and antifungal activity. Researchers evaluated the compounds against important bacterial, yeast, and mold pathogens. Preliminary results demonstrated promising activity against toxigenic strains of *Clostridium difficile*. The compounds did not show a side effect on beneficial intestinal microflora and were nontoxic. Researchers are currently preparing analogues of the antibacterial and antifungal lead compounds to improve potency and physicochemical properties for new therapeutic development.

Advantages:

- Efficient
- No effect on beneficial intestinal microflora
- Nontoxic

Potential Applications:

- Pharmaceuticals
- Drug development
- Treatment for fungal and bacterial infections

People:

- Dai, Mingji (Project leader)
- Seleem, Mohamed
- Yin, Xianglin

Intellectual Property:

Application Date: August 13, 2018
Type: DIV-Patent
Country of Filing: United States
Patent Number: 10,138,252
Issue Date: November 27, 2018

Application Date: April 10, 2018
Type: Utility Patent
Country of Filing: United States
Patent Number: 10,087,190
Issue Date: October 2, 2018

Application Date: April 24, 2017
Type: Provisional-Patent
Country of Filing: United States
Patent Number: (None)
Issue Date: (None)

Contact OTC:

Purdue Office of Technology Commercialization
The Convergence Center
101 Foundry Drive, Suite 2500
West Lafayette, IN 47906

Phone: (765) 588-3475
Fax: (765) 463-3486
Email: otcip@prf.org