PURDUE INNOVATES | Office of Technology Commercialization

CF3-, OCF3-, SCF3- and SF5-containing Antibacterial Agents

Novel antimicrobial agents effectively inhibit and kill drug-resistant bacterial strains at very low concentrations, addressing a critical public health issue.

Researchers at Purdue University have developed novel antimicrobial agents to solve the continued problem of drug-resistant bacterial strains; approximately 20,000 people die in the US every year from drug-resistant infections. These antimicrobial agents potently inhibit bacterial growth in several species, including drug-resistant strains, at concentrations as low as 0.0675 micrograms per milliliter. This family of compounds contains both bactericidal and bacteriostatic agents.

Advantages:

-Inhibits drug resistant bacteria strains

-Kills bacteria at low concentration

Potential Applications:

-Antimicrobial Agent

Related Publications:

Ultrapotent Inhibitor of Clostridioides difficile Growth, Which Suppresses Recurrence In Vivo

Journal of medicinal chemistry 63.20 (2020): 11934-11944.

https://doi.org/10.1021/acs.jmedchem.0c01198

Potent trifluoromethoxy, trifluoromethylsulfonyl, trifluoromethylthio and pentafluorosulfanyl containing (1,3,4-oxadiazol-2-yl)benzamides against drug-resistant Gram-positive bacteria

RSC Med. Chem., 2020,11, 102-110

DOI: 10.1039/C9MD00391F

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Category

Pharmaceuticals/Small Molecule Therapeutics

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Intellectual Property:

Provisional-Patent, 2019-04-26, United States | PCT-Patent, 2020-04-24, WO | NATL-Patent, 2021-10-26, United States | NATL-Patent, 2021-11-22, Europe

Keywords: antimicrobial agents, drug-resistant bacterial strains, drug-resistant infections, bactericidal, bacteriostatic, bacterial growth inhibition, low concentration kill, medicinal chemistry, Clostridioides difficile, Gram-positive bacteria