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Antimicrobial Therapy Through The Combination Of Pore-Forming Agents And Histones

Tech ID: 33908 / UC Case 2019-689-0

BRIEF DESCRIPTION

A novel antimicrobial approach combining pore-forming agents with histones to eradicate bacteria and bypass known resistance mechanisms.

FULL DESCRIPTION

Researchers at UC Irvine developed a synergistic method for bacterial eradication by combining bacterial pore-forming agents with histones. Histone additives stabilize the transient pores caused by antibiotics or antimicrobial peptides, preventing bacteria from repairing the membrane, which leads to death. This approach addresses the urgent need for new antimicrobial strategies due to the rise of antibiotic-resistant bacterial strains.

SUGGESTED USES

- » Development of new antimicrobial drugs to prevent and treat bacterial infections.
- » Therapeutic treatments for infections caused by antibiotic-resistant bacteria.
- » Use in combination therapies to enhance the effectiveness of existing antimicrobial agents.

ADVANTAGES

- » Offers a new mechanism of antimicrobial activity to combat antibiotic-resistant bacteria.
- » Prevents the repair of bacterial membrane pores, leading to effective bacterial eradication.

PATENT STATUS

Country	Type	Number	Dated	Case
Patent Cooperation Treaty	Reference for National Filings	2021/022068	02/24/2021	2019-689

Patent Pending

RELATED MATERIALS

- » Doolin, T., et al. Gross, S. P., Siryaporn, A. (2020). Mammalian histones facilitate antimicrobial synergy by disrupting the bacterial proton gradient and chromosome organization. Nature Communications. 11.

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OTHER INFORMATION

CATEGORIZED AS

- » **Medical**
- » Disease: Infectious Diseases
- » Therapeutics

RELATED CASES

2019-689-0

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