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Medium Chain Fatty Acids (MCFAs) for Enhanced Bacterial Infection Treatment

Tech ID: 34753 / UC Case 2025-847-0

BRIEF DESCRIPTION

MCFAs provide a synergistic bactericidal effect in combination with antibiotics and bacteriophages to effectively treat antibiotic-resistant bacterial infections.

FULL DESCRIPTION

Medium chain fatty acids (MCFAs) exhibit potent bactericidal activity against a broad range of gram-positive and gram-negative bacteria even at neutral pH. When used alongside antibiotics and bacteriophages, MCFAs enhance their efficacy by overcoming bacterial resistance, thus offering a superior treatment approach for infections caused by difficult pathogens like *Stenotrophomonas maltophilia*. This combinational therapy addresses limitations of current solutions such as slow antibiotic development and the narrow specificity of phage therapy.

SUGGESTED USES

- » Pharmaceutical formulations combining MCFAs with antibiotics or phages
- » Treatments for infections caused by multi-drug resistant bacteria
- » Cystic fibrosis patient infection management
- » Hospital-acquired infection therapies
- » Development of novel antimicrobial combination therapies
- » Adjunct therapy in clinical settings to enhance existing antibiotic regimens

ADVANTAGES

- » Broad-spectrum bactericidal action effective at neutral pH
- » Synergistic enhancement of bacteriophage and antibiotic activity
- » Effective against antibiotic-resistant and opportunistic pathogens
- » Improved treatment potency against difficult bacteria like *Stenotrophomonas maltophilia*
- » Potential to reduce treatment resistance development
- » Versatile application with multiple antibiotic classes

PATENT STATUS

Patent Pending

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OTHER INFORMATION

CATEGORIZED AS

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

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2025-847-0

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