TECHNOLOGY OFFER

HALOGENATED COMPOUNDS WITH ANTIMICROBIAL AND ANTIBIOFILM ACTIVITY

Background

Healthcare-associated infections are the most frequent adverse cases in the healthcare settings worldwide, namely the biofilm-associated microbial infections related to medical devices. *Staphylococcus aureus* and coagulase-negative staphylococci are the most frequent pathogens found in those cases. Biofilm infections are difficult to overcome solely by using antibiotics, mainly due to inherent antibiotic resistance.

Technology

This technology relates to novel halogenated fatty acid lactylates, in particular chlorinated fatty acid lactylates compounds, isolated from the cyanobacterial strain *Sphaerospermopsis* sp. LEGE 00249, with antimicrobial and antibiofilm activity towards healthcare-associated microbial infections. These halogenated fatty acid lactylates, present antibacterial activity against *Staphylococcus aureus* and antibiofilm activity against coagulase-negative staphylococci (CNS). The compounds can be used in medicine with potential applications in the treatment and prevention of biofilm-associated infections.

Advantages

- Natural product with potential biodegradable properties;
- Antimicrobial activity against *Staphylococcus aureus*;
- Antibiofilm activity against coagulase-negative staphylococci (CNS);
- No toxicity.

PATENT STATUS

International Patent Application via PCT WO2021038506
Priority date: 30.08.2019
Granted in India and China
Pending in Europe

DEVELOPMENT STAGE

TRL4 – Technology validated in lab
Further development for validation in large scale setups required.

APPLICATIONS

Treatment and prevention of bacterial infections;
Coatings for medical devices;
Veterinary.

COOPERATION

Research Cooperation Agreement;
Licensing Agreement;
Commercial Agreement with technical assistance.

KEYWORDS

Halogenated compounds
Antimicrobial
Antibiofilm
Microbial infections

DEVELOPED BY

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