

## TECHNOLOGY OFFER

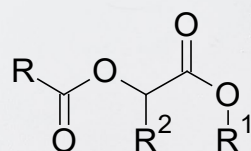
# HALOGENATED COMPOUNDS WITH ANTIMICROBIAL AND ANTIBIOFILM ACTIVITY

## 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 and US

## 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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