Analytical Platform to Characterize Biofilm

Non-Confidential

BACKGROUND

The study of microbial biofilm formation is of paramount importance in a wide range of industries, including those associated with health products, food, water, paper mills, medical health, and pharmaceuticals. Research on the impact of various parameters on biofilm formation has been conducted within the framework of these industries, with varying results depending on the specific methods used in the industry.

NEED DESCRIPTION

For our industry, irreversible attachment of microorganisms to surface (e.g., fabrics, gum, toilet, etc.) and biofilm architecture are among the key factors of biofilm formation. We need a holistic analytical platform to characterize the chemical composition (substances like proteins (e.g., fibrin), polysaccharide (e.g., alginate), quorum sensing molecules, as well as eDNA) of biofilms and the architecture of the biofilm. The platform will be integrated with microbiology to elucidate MOA and identify the targets to intervene biofilm formation.

WHAT WE ARE LOOKING FOR

- One stop shop for analytical characterization of biofilms
- In situ chemical characterization (cryo OrbiSIMS) with chemical filtering method
- Chemicals to monitor: polysaccharides, lipids, glycolipids, protein fragments or peptides, quorum sensing molecules, metabolites
- 3D Chemistry: spatial resolution of the biofilm
- Visualization of biofilm: Cryo TEM, hyperspectral imaging, etc.

WHAT WE ARE NOT LOOKING FOR

Isolated capabilities for analytical characterization of biofilm

Please note that only **non-confidential** information describing the business & services model, current use and IP can be accepted for review.