

Novel Chemical Formulation for Regulating Biofilm

Never Stand Still

NewSouth Innovations

Researchers have developed a novel compound for the treatment of biofilm-related infections and for the prevention of industrial biofilm development.

The Opportunity

Biofilms are the cause of a number of diseases which are associated with a variety of chronic infections in humans. They typically form on a variety of surfaces within the body, for example, in the respiratory tract and lungs (associated with cystic fibrosis and Legionnaire's disease), on surfaces of the ear (associated with otitis media), and of the heart and heart valves (associated with bacterial endocarditis). This can have severe consequences including a great degree of resistance to antibiotics and an increase in morbidity.

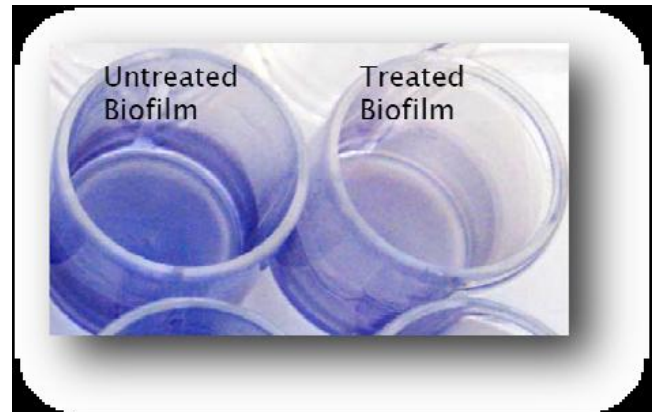
Biofilms are also known to form on medical equipment and in industrial situations where systems are exposed to water. They can cause significant industrial damage including fouling and corrosion.

The Technology

The present technology is a novel bio-film dispersing agent. The agent includes a compound, which is able to provide a controlled release of single molecule nitric oxide upon activation by bacterial enzymes.

The release of nitric oxide disperses biofilm and exposes the bacteria within the biofilm to other agents such as antibiotics. This mechanism enables, for example, an infection to be treated via normal antibiotic action.

The compound has the potential for the treatment of biofilm-related infections, and can also be used in the prevention of industrial biofilm development. The novel compound developed has been shown to have a stable and targeted release of Nitric Oxide, which provides significant advantage over previous Nitric Oxide donors.



The Team

The technology is being developed by inventors from the University of New South Wales in conjunction with the University of Wollongong. The UNSW inventors include: Scott Rice, Staffan Kjelleberg and Nicolas Barraud. The UoW inventors include: Michael Kelso and Bharat Kardak.

Investment Opportunity

NewSouth Innovations is looking for a partner to help further develop this technology in the biofilm regulation, human health and other industrial markets.

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