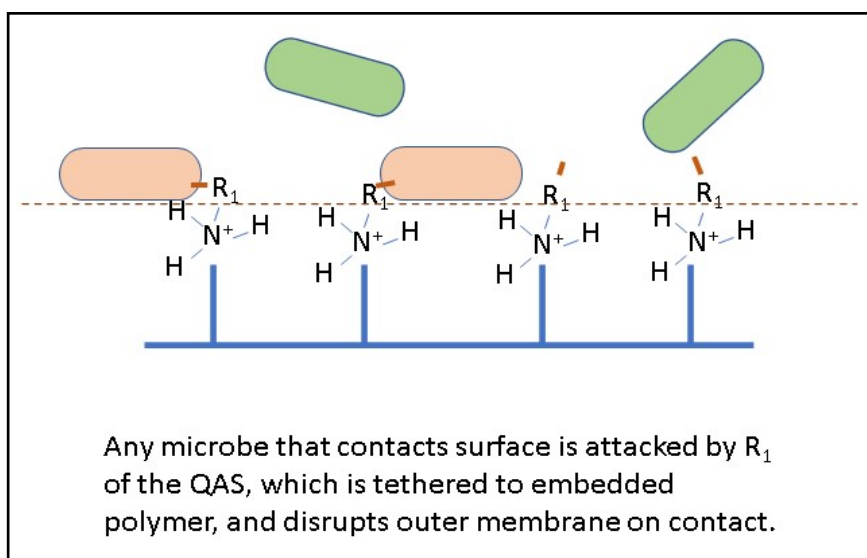


ANTI-MICROBIAL COATINGS FOR MEDICAL AND UNDERWATER BIOFOULING APPLICATIONS (RFT-260)

Technology:

The technology includes a polysiloxane backbone that enables versatile attachment of QAS with multiple options for salts (e.g. bromides, chlorides, and iodides).



Invention Summary:

Scientists at North Dakota State University have developed a method to confer dual-action and broad-spectrum (gram +, gram -, and yeast) anti-microbial properties into polymers and coatings. The anti-microbial components are quaternary ammonium salts (QAS). The QAS component is attached to polysiloxane backbone - it may be strongly attached to provide a contact-active anti-microbial, or may be gradually released and leachable. The resulting materials enable "tethering" of certain antibiotics so that they are in an accessible location, yet retained on the surface for ongoing protection.

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Benefits:

- Confer anti-microbial effect to a diverse array of polymers and coatings, ranging from medical devices to underwater instruments
- Broad efficacy against gram + gram - bacteria, and yeast
- Tethered QAS disrupts outer membranes, meaning the anti-microbial surface can kill microbes on contact, making attachment to surfaces (and eventual biofilm formation) less likely/rapid

Phase of Development:

This technology has successfully completed laboratory testing with reproducible results.

Patents:

This technology is the subject of US Issued Patent No. [8,709,394](#) and is available for licensing/partnering opportunities.

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