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SYDNEY



Antibacterial and Biofilm Resistant Resin-Based Dental Composites

Development and testing of a number of antibacterial resin-based dental composites that resist biofilm formation - which leads to tooth decay - while simultaneously meeting the other material property requirements for use in specific dental treatments.

Competitive advantage

- Expertise and facilities to develop and test antibacterial resin-based dental composites using various approaches tailored to specific dental treatments.

Impact

- Longer lasting dental treatments and reduced societal and economic costs for dental care.

Successful outcomes

- Focus to date has been on journal publications and patent applications. Presently looking for commercialisation partners.

Capabilities and facilities

Capabilities include the development of novel antimicrobial resin composites and facilities and expertise for testing various properties, including but not limited to:

- Minimum inhibitory concentration (MIC)
- Agar disk-diffusion test
- Crystal violet biofilm assay
- Biofilm assay for colony forming units
- Live/dead bacterial assay for biofilm analysis
- Custom developed biomechanical analyses of biofilm inhibition
- Cytotoxicity
- Genotoxicity
- Degree of conversion
- Flexural strength
- Fracture toughness

Our partners

- National Institute of Dental and Craniofacial Research, USA
- Oregon Health and Science University, USA
- Sao Paulo Research Foundation, Brazil

More Information

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