# 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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