

**FESTEL CAPITAL**

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## Antimicrobial Dental Filling Material

### Summary

SiO<sub>2</sub>-modified particles with antimicrobial properties for dental polymer fillings. A strong conjugation of the compound elements is achieved by the modification of the polysaccharide with chemical groups which react to form covalent bonds with the polymeric matrix. Infections found in conventional polymer fillings are prevented due to the antimicrobial properties.

Industrial partners are sought for various possible commercialisation options.

### Background

FESTEL CAPITAL is supporting a German university to commercialise an innovative antibacterial-active agent for dental polymer fillings.

### Description

Polymer dental filling materials display a higher bacterial adhesion than the native surface of the teeth. This bacterial adhesion promotes infections, sometimes leading to the degradation of the polymer matrix of the dental filling. Common polymer filling materials consist of SiO<sub>2</sub>-particles as filler embedded in a polymer matrix. In this antimicrobial filling material the SiO<sub>2</sub>-particles have been modified by coating them with a polysaccharide, which has antimicrobial properties. Additionally, the polysaccharide is modified with chemical groups that react to form covalent bonds with the polymeric matrix, leading to a strong conjugation of the compound elements.

### Application areas

- Polymeric filling for dental applications
- Polymeric cement for the fixing of pins in the tooth root
- Adhesive cement for crowns and bridges

## **Advantages**

Advantages this material offers include the following:

- antimicrobial properties
- prevention of infections in the filling/tooth interface

## **Investment Opportunity**

The aim of FESTEL CAPITAL is to commercialise this innovative antimicrobial filling material. In the search for industrial partners different commercialisation options, such as out-licensing or a sale of all relevant intellectual property and know-how, are possible. Detailed information can be provided after the signing of a confidentiality agreement.

## **Disclaimer**

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## **About FESTEL CAPITAL**

FESTEL CAPITAL is an advisory and investment firm focusing on the commercialisation of technologies in the areas of energy, environment, health, materials and nutrition.

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