

GreenMark Biomedical and University of Michigan receive Phase I SBIR funding for diagnostic to enable minimally invasive dentistry

East Lansing, MI – April 4, 2018 – GreenMark Biomedical Inc. today announced that it has received a Phase I Small Business Innovation Research (SBIR) grant in the amount of US \$228,883 from the National Institutes of Health (NIH). The grant will fund a collaborative project between GreenMark and the University of Michigan (U-M).

GreenMark is developing next generation diagnostics and therapeutics for early stages of Dental Caries (tooth decay), the world's most prevalent chronic disease. In this SBIR, the company will continue its development of a diagnostic to be used by dental professionals as part of the routine dental exam, to better detect and predict progression of dental caries, a critical need identified by NIH. The product, a mouth rinse containing fluorescent particles made from food grade corn starch, targets active cavities and illuminates them using a standard dental curing lamp found in every dental practice. At early stages, before they actually cavitate, non-surgical management options can be used for dental caries, resulting in improved long term oral health outcomes for patients.

The project is in collaboration Dr. Brian Clarkson, B.Ch.D., L.D.S., M.S., Ph.D., Professor, Dep. of Cariology, Restorative Sciences and Endodontics, U-M School of Dentistry and Dr. Joerg Lahann, Ph.D., Professor of Chemical Engineering, Materials Science/Biomedical Engineering and Director of the U-M Biointerfaces Institute.

There is a growing philosophy in the management of tooth decay that focuses on preserving enamel. Scientific advances have shown early forming cavities begin with demineralization which can be repaired using non-invasive treatments. Furthermore, some early pre-cavities are not progressing and there are no accurate methods to differentiate active from inactive ones, leading to treatment errors. *"Effective management of caries is characterized by detection of early lesions and accurate diagnosis of caries activity"* explains Dr. Clarkson. *"Patients are currently failing to benefit from the scientific developments supporting non or minimally invasive dentistry. GreenMark and U-M are collaborating to help enable this advance in dentistry."*

GreenMark's bio-based nanomaterials make an ideal carrier given that starch is degraded by natural enzymes in our saliva. *"The diagnostic is fully bioresorbable and degrades into harmless materials by the time the patient is ready to leave the dental office."* said Dr. Lahann.

Once a small business is awarded a Phase I SBIR/STTR grant, it becomes eligible to apply for a larger Phase II grant. *"We are very excited about this Phase I SBIR award from NIH, as it points to the significance of the technology we are developing,"* said Dr. Steven Bloembergen, Ph.D., GreenMark's founder, Chairman and CEO.

For more information about GreenMark Biomedical, please visit <http://greenmark.bio>.

About GreenMark Biomedical Inc.

GreenMark's central concept is the biodelivery of health solutions on target, precisely where they are needed. The company has patented, patent-pending and proprietary technologies that use different grades of biobased nanoparticles uniquely modified into novel products that have built-in targeting performance for diagnostic and therapeutic dental and medical applications.

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