Scientists to develop novel dental restorative material

By DTI

TORONTO, Canada: Researchers from the University of Toronto (U of T) have recently been awarded a grant to develop a new restorative material for treating dental caries. The goal is to create a tooth-colored material that will not degrade when it comes into contact with saliva or when it encounters the body’s immune response. The grant will help address the failure of dental restorations and consequently reduce treatment costs.

The grant, awarded by the Canadian Institutes of Health Research (CIHR) and worth C$939,040 (€648,000), is aimed at reducing root and recurrent dental caries. According to the researchers, the aforementioned oral health diseases are especially prevalent in disadvantaged populations. In populations where oral health and hygiene is difficult or compromised, tooth-colored fillings often fail prematurely and may require continual replacement.

The polymer material will be tested in different oral conditions. “We are able to replicate the interactions of restorative materials with saliva, bacteria and the immune system for the development of a novel restorative system for cervical lesions with enhanced performance using much more rigorous testing than ever before,” said Prof. Yoav Finer, George Zarb/Nobel Biocare Chair in Prosthodontics in the Faculty of Dentistry at the U of T.

“This funding further exemplifies the deep and comprehensive programs in applied biomaterials research that exist in the Faculty of Dentistry at the University of Toronto, with CIHR grants such as this one led by an internationally recognized clinician scientist and supported by outstanding research engineers and scientists,” said Prof. Paul Santerre, also from the U of T Faculty of Dentistry.

“This is an important clinical problem with especially negative effects on the health of vulnerable populations,” said Prof. Bernhard Ganss, Vice Dean of Research in the faculty. “But with this kind of deeply collaborative, multidisciplinary approach, we can fundamentally change long-term outcomes for people and alter the landscape of oral health care.”

The researchers hope to commercialize the material through a health technology startup company called Mesosil, headed by Dr. Cameron Stewart. More information about Mesosil can be obtained here.