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Communications in Science and Education

**Client: University of Toronto Faculty of Dentistry—Case for Support
for dental research, directed to the private sector**

excerpt:

...At the turn of the 20th century, fluoride research to fight tooth decay shot dentistry to the forefront of preventive medicine. In the 21st century, understanding the genetic structure of the human body has propelled overall health research well beyond the symptoms of disease. Understanding what our genes are telling our cells to do is becoming the common starting point for prevention and treatment. For oral and craniofacial health scientists, this means that their research is fundamentally linked to the health of the entire body: to conditions such as osteoporosis, arthritis, infectious diseases, immune disorders, and the pathways of pain, among other areas...

LOOSENING BACTERIA'S GRIP Biofilms, like glue, stick to everything they touch. Biofilms readily form when bacteria mix with water and attach to surfaces, whether the surface is a piece of equipment, food, a tooth, a medical implant, or the heart itself. Conventional means of killing bacteria alone, such as antibiotics and disinfection, don't usually do much against biofilms. The goal is to stop its formation before it takes hold. This pioneer investigator isolates biofilms at their source: in the genes that regulate their formation and proliferation. His and his team's research has resulted in technologies that are being sought after by international bio pharmaceutical companies. The tenacious study of biofilm will benefit, not only those with tooth decay, but also patients with persistent urological infections or endocarditis, an infection of the heart muscle or valves resulting from treatment procedures in the mouth....