



**FOR IMMEDIATE RELEASE**

**CONTACT:**

Marlene Esqueda

GolinHarris

213-438-8734

[mesqueda@golinharris.com](mailto:mesqueda@golinharris.com)

Angelica Urquijo

USC School of Dentistry

Public Relations

213-740-6568

[urquijo@usc.edu](mailto:urquijo@usc.edu)

**USC STUDY FINDS DENTAL WATER JET REMOVES  
99.9 PERCENT OF DENTAL PLAQUE BIOFILM**

*Removal of Oral Bacteria is Key in Fighting Tooth Decay and Gum Disease*

**FORT COLLINS, Colo. (February 26, 2009)** – A newly published study conducted by the University of Southern California School of Dentistry (USC), shows that dental water jet systems effectively remove 99.9 percent of harmful plaque biofilms from teeth.<sup>1</sup> The study has been published in the *Compendium of Continuing Education in Dentistry*.

The USC study, conducted by renowned biofilm expert J. William (Bill) Costerton, Ph.D., utilized a scanning electron microscope (SEM) to evaluate the effectiveness of a Waterpik<sup>®</sup> dental water jet at removing plaque biofilm. Dental water jet systems send pulsations of water deep between teeth and below the gum line, where brushing and flossing cannot reach. Viewing teeth under this highly sensitive microscope, the researchers were able to see far more than with traditional methods.

For the study, teeth from patients with extensive gum disease and plaque build-up were extracted, and then processed to accelerate additional plaque biofilm growth. The teeth were then subjected to a three-second treatment with a dental water jet and viewed with the SEM microscope.

“The results were almost impossible for me to believe the first time through,” commented Dr. Costerton, the founding director of the USC Center for Biofilms. “One of the difficulties with plaque biofilm is that you really can’t see it, it’s clear. So we didn’t have visual evidence of complete removal. But now with these direct methods, the scanning electron microscopy, you apply a dental water jet to plaque on the surface of a tooth and you look with a scanning scope and it’s gone. It’s simply gone. And that’s unequivocal and unarguable.”

## **USC Biofilm Study**

### **Page 2**

Plaque is now understood by the dental profession to be a biofilm, a collection of bacteria that form complex, interactive colonies. Within these colonies thousands of disease-causing bacteria grow, communicate and thrive. Plaque biofilm forms throughout the mouth, particularly in hard-to-reach areas between teeth and below the gum line, and it is difficult to remove. The removal of plaque biofilm is the basis of all preventative dental health, as plaque is the leading cause of tooth decay and gum disease and eventually jaw bone disease.

“Basically, anywhere that water stream touches, it is very effective at dislodging biofilms,” commented Dr. Parish Sedghizadeh, director of the USC Center for Biofilms. “So, there’s no question that dental water jets safely and efficiently remove plaque.”

This new finding builds on recent studies that demonstrate the Waterpik® dental water jet is an easy and effective alternative for those who do not floss for improving gum health and reversing gingivitis.

This study, *Biofilm Removal with a Dental Water Jet*, was conducted at the USC School of Dentistry’s Center for Biofilms. Study authors included: Amita Gorur, M.S.; Deborah M. Lyle, R.D.H.; M.S., Christoph Schaudinn, Ph.D.; and John W. Costerton, Ph.D. To learn more about this study go to [www.waterpik.com](http://www.waterpik.com).

#### **About Water Pik, Inc.**

Water Pik is a leading developer, manufacturer and marketer of innovative personal healthcare products sold under the Waterpik® brand name. The Company has developed and introduced many products that are considered the first of their kind and have led to the formation of new markets, including the dental water jet, power flosser and pulsating shower massage. With the number one recommended dental water jet, Waterpik® is one of the most trusted oral health brands of dental professionals throughout the world. The Company’s products are sold through a variety of channels, including mass-merchandisers, drug store chains and specialty retailers. Headquartered in Fort Collins, CO, the Company operates facilities in the United States, Canada and the United Kingdom. For more information, visit the Water Pik, Inc. Web site at [www.waterpik.com](http://www.waterpik.com).

#### **About USC School of Dentistry**

The University of Southern California School of Dentistry is a private professional school dedicated to the advancement of quality oral health education, research and patient care. For more than a century, the USC School of Dentistry has committed itself to developing skilled dental professionals able to meet the unique challenges of a rapidly changing oral health field. The School of Dentistry has research facilities and centers on both the Health Science and University Park campuses. Research conducted at the Center for Biofilms located in the Norris Dental Science Center on the University Park Campus is devoted to understanding the clinical, cellular and molecular characterization of biofilms, the microbes that grow on or in our bodies in complex communities. The USC School of Dentistry continues to be a major recipient of federally sponsored biomedical research funds, ranking among the top quartile among all dental school institutions receiving funding from the National Institutes of Health. For more information on the University of Southern California, visit the Web site at [www.dentistry.usc.edu](http://www.dentistry.usc.edu).

1. Gorur A, Lyle DM, Schaudinn C, Costerton JW. Biofilm removal with a dental water jet. *Compend Contin Educ Dent* 2009;30(Special Issue 1):1-6.