



James L Ratcliff

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Bacteria that talk and bacteria that sleep: Implications for effective oral care

What happens when you apply an antimicrobial to an oral biofilm? You may expect the bacteria to die and perhaps the biofilm to degrade. But do they? Certain oral pathogens can communicate and build resistance to the antimicrobial treatment. Other oral pathogens may go dormant to resist the effects of the antimicrobial. This session examines biofilm evolution, bacterial quorum sensing, and bacterial dormancy. What we are learning about the evolution of polymicrobial communities within oral biofilms may shape the future of sanitizing and debriding office procedures as well as home oral care. The address concludes with an examination of the implications for the design of antimicrobials for dental office and home oral care use.

Speaker Biography

James L Ratcliff is Chairman and CEO of Rowpar Pharmaceuticals, Inc., Scottsdale, AZ, maker of the Dentists Choice and ClōSYS brands of oral care products. In 2014, Rowpar received the US Small Business Administration's Exporter of the Year Award. In 2017, Rowpar was received the Arizona Fast Track Leader Award. From 1989 to 2000, he served as Senior Research Scientist, Professor and Director, Center for the Study of Higher Education at the Pennsylvania State University. From 1979 to 1989, he was Professor and Program Head for higher education at Iowa State University. He is the author of 120 articles, books, book chapters, is co-inventor on over 24 patents and few patents are pending. He is an Active Member of the Arizona Biotechnology Assn., American Academy of Oral and Systemic Health, American Education Research Assn., and the International Association for Dental Research. He holds a PhD in Higher Education from Washington State University, a MA in History from Washington State University, and a BA from Utah State University.

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