

Dear Colleagues:

During the past two decades, direct observations of bacteria in a large number of natural and pathogenic ecosystems have shown that the majority of these organisms actually grow in matrix-enclosed biofilms adherent to surfaces. While this preponderance of biofilms is widely accepted by Microbial Ecologists, and while the predominance of biofilm infections is widely accepted in the health professions such as Dentistry and Medicine, we have only recently realized that traditional microbiological methods are unsuitable for the study of biofilms. Excellent molecular-based direct methods are available for the study of biofilms but, while these techniques are extensively used in studies of natural and engineered systems, they are just beginning to make inroads in the study of dental and medical biofilm diseases. The central theme of this conference will be to present modern biofilm concepts and methods to the dental and medical communities, in both theoretical (symposium) and practical (workshops) formats, so that they may select new and effective methods to study the etiology and pathogenesis of biofilm diseases.

In the two full years that will have passed between the ASM-sponsored Biofilms 2003 meeting in Victoria B.C. and this meeting in Los Angeles, many new concepts and methods have been added to our armamentarium. New methods have allowed us to study biofilm structure and "behavior", we are now able to speciate and enumerate bacterial cells in situ in mixed-species communities, and new molecular-based methods facilitate the analysis of natural and pathogenic biofilm communities. These concepts and methods arise in one of more of the anthropocentric divisions (e.g. Soil, or Dental Microbiology) into which Microbiology has fragmented, and a conference that ties all of these advances together and makes them available to the whole biofilm community is urgently needed. The next ASM-sponsored general biofilm meeting will be in Copenhagen in March of 2007.



J. William Costerton, PhD
Chair

Biofilm Conference

Biofilm Symposium
Monday - Tuesday, October 24 - 25, 2005

Workshops
Wednesday, October 26, 2005

Invitational Retreat
Thursday - Friday, October 26, 2005

Online registration at www.biofilmsymposium.org

UPCOMING EVENTS

THE ARTISTIC DENTIST: EXCELLENCE IN DIRECT ANTERIOR AND POSTERIOR COMPOSITES

Friday - Saturday, August 26 - 27, 2005

THE FUNDAMENTALS OF IMPLANT THERAPY AND PROSTHETICS

Friday - Sunday, September 9 - 11, 2005
Friday - Sunday, October 7 - 9, 2005
Friday - Sunday, November 18 - 20, 2005

BUILDING YOUR DREAM ESTHETIC TEAM

Friday - Saturday, September 23 - 24, 2005

DIGITAL RADIOGRAPHY IN DENTISTRY: TODAY AND TOMORROW

Friday, September 30, 2005

EMERGING DISEASES, INFECTION CONTROL AND CALIFORNIA LAW

Saturday, October 1, 2005

THE PREVENTION AND EARLY DETECTION OF ORAL CANCER

Saturday, October 15, 2005

ADVANCE BONE GRAFTING FOR IMPLANT SITE PREPARATION

Saturday, October 15, 2005

THE USC FOURTH INTERNATIONAL ENDODONTIC SYMPOSIUM

Friday - Saturday, October 21 - 22, 2005

PAIN MEDICATIONS UPDATE FOR DENTISTS TREATING CHRONIC PAIN AND MUCOSAL DISEASE

Friday - Saturday, October 21 - 22, 2005



USC School of Dentistry is an ADA CERP, CDA and AGD recognized provider

USC School of Dentistry
Office of Continuing Education
Phone: 213.821.2127
Fax: 213.740.3973
E-mail: cedental@usc.edu
Website: www.uscdentalce.org



Refunds are granted only if a written cancellation notification is received at least 21 days before the course. 50% of the tuition fee will be refunded if cancellation occurs within 14 days before this course. No refund is granted afterwards. A \$50 fee is withheld for processing. For additional registrations, xerox this form and send.



108 Years of
Tradition and Excellence

BIOFILM CONFERENCE

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Thursday - Friday, October 27 - 28, 2005



ORGANIZING COMMITTEE

- Bill Costerton (Chair) - University of Southern California
- Dennis Cvitkovitch - University of Toronto
- Steve Goodman - University of Southern California
- Tony Michaels - University of Southern California
- Ken Nealson - University of Southern California
- Dianne Newman - California Institute of Technology
- Fred Sattler - University of Southern California
- Wenyuan Shi - University of California, Los Angeles
- Phil Stewart - Montana State University

MICROBIAL BIOFILMS SYMPOSIUM

Systems Biology Affecting Humans and the Environment

Monday- Tuesday, October 24th & 25th
Davidson Conference Center,
University of Southern California
University Park Campus, Los Angeles, California
14 Hours of Continuing Education
Tuition Before/After September 24, 2005: \$250/\$295

The symposium will consist of plenary sessions, with 30 minute presentations of original data and correlative comments.

SPEAKERS

Rob Palmer: National Institute for Dental and Craniofacial Research

- organization of supra-gingival plaque

Dennis Cvitkovitch: University of Toronto

- quorum sensing control of biofilm formation

Mark Shirtliff: University of Maryland

- identification of pathogens by sensitive molecular methods

Mike Givskov: Danish Technical University, Lyngby

- infection control by signal manipulation

Annette Moter: Charite Hospital, Berlin

- location and enumeration of pathogens by 16 S RNA methods

Naomi Balaban: Tufts University

- prevention of biofilm formation by specific signal inhibitors

Satoshi Okabe: University of Hokaido, Japan

- identification of physiological groups by FISH probing

Michael Wagner: University of Vienna (deputized)

- detection of metabolic activity by autoradiography

Niels Hoiby: Rigshospitalet, Copenhagen

- role of biofilms in cystic fibrosis and other pulmonary diseases

Bill Costerton: University of Southern California

- role of biofilms in chronic infections

Sam Silverstein: Columbia University, New York

- enhanced phagocytosis of biofilm bacteria by activated leukocytes

Laura Selan: La Sapienza University, Rome

- diagnosis of biofilm infections by immunological methods

WORKSHOPS

The hands-on workshops will be conducted in the Norris Dental building for USC School of Dentistry on the University Park campus and in the laboratories of the House Ear Institute in the downtown area of Los Angeles and UCLA campus. Complimentary transportation will be provided to off-campus venues. The following workshops will be offered:

Workshop # 1: Cultivation of bacterial biofilms in vitro

9:00 am - Noon, USC School of Dentistry

Registration Limit: 15

3 Hours of Continuing Education

Tuition Before/After September 24, 2005: \$100/\$145

This workshop will demonstrate various apparatus for the cultivation of biofilms in flow regimens that are realistic a propos of specific disease states, and will provide hands-on experience in the quantitation of the biofilm populations by traditional (culture) and novel methods.

Workshop # 2: Molecular methods for the analysis of biofilm communities

1:30 pm - 4:30 pm, USC School of Dentistry

Registration Limit: 15

3 Hours of Continuing Education

Tuition Before/After September 24, 2005: \$100/\$145

This workshop will provide hands-on experience in the use of the DGGE and DHPLC methods of identifying the

bacterial species, and species groups, that comprise biofilms of interest to the participants. New 16 S RNA-based methods for the rapid detection of specific organisms in clinical specimens will be discussed and demonstrated.

Workshop # 3: Direct microscopic visualization of biofilms

9:00 am - Noon, House Ear Institute

Registration Limit: 10

3 Hours of Continuing Education

Tuition Before/After September 24, 2005: \$100/\$145

This workshop will provide hands-on experience in the visualization of bacterial biofilms by light and confocal laser microscopy, and demonstrations of their visualization by both transmission and scanning electron microscopy. Numerical systems for the analysis of biofilm structure will be presented in silico.

Workshop # 4: Direct identification and quantitation of bacteria in biofilms

1:30 pm - 4:30 pm, UCLA Campus

Registration Limit: 8

3 Hours of Continuing Education

Tuition Before/After September 24, 2005: \$100/\$145

This workshop will provide hands-on experience in the use of FISH probes to speciate bacterial cells in mixed-species populations, and demonstrations of the design of 16 S RNA and antibody-based probes for the same purpose. New techniques for the collection of images of mixed species biofilms, showing the number and location of cells of particular species will also be demonstrated.

INVITATIONAL RETREAT

Thursday-Friday, October 27th & 28th

Wrigley Environmental Center, Santa Catalina Island

Paul Stoodley and Bill Costerton have been commissioned, by Springer Publications, to design and edit a book on Biofilm Methods, for the Springer series of books on biofilms for which Bill will serve as the series editor. Paul and Bill will invite potential contributors to a retreat at the Wrigley Environmental Sciences Center on Santa Catalina Island at which the methods to be presented in the book will be selected, grouped, and assigned to specific authors.