



VIRTUAL

20TH ANNUAL

**MARK WILSON
CONFERENCE**

FEBRUARY 10 & 11, 2021

31st Annual Meeting
**of the Oral Immunology/
Microbiology Research Group**

THE ANNUAL MEETING OF
**THE ORAL IMMUNOLOGY/
MICROBIOLOGY RESEARCH GROUP**
IS DEDICATED TO THE MEMORY OF ITS FOUNDER, MARK.

MARK E. WILSON (1950-2000)



Photo taken at Fort Sumter in Charleston Harbor, SC, during one of several OIMRG meetings that were held in the “Low Country” of South Carolina in the early 1990s.

Photo and caption courtesy of Edward “Ned” Lally, PhD (1943-2019).

ABOUT

MARK

Mark E. Wilson received his Bachelor of Science (1972) and his Master of Science degrees (1975) from the University of Maryland. He then earned his PhD at the University of West Virginia in 1978 and did his post-doctoral training in the Department of Immunology at The Scripps Research Institute, La Jolla, CA (1978-1980). He then followed his mentor David Morrison to Emory University and continued there from 1980-1982. His PhD thesis and post-doctoral training focused on neutrophil biology; first studying neutrophil chemoluminescence and then studying the interaction of endotoxin and complement on neutrophil oxidative capacity.

In 1982 Mark accepted an appointment with the Department Oral Biology, State University of New York at Buffalo where, in 1996, he achieved the title of full professor. While at Buffalo he continued his studies on the effects of endotoxin on neutrophil function and became interested in IgG subclass responses to *Aggregatibacter* (then known as *Actinobacillus*) *actinomycetemcomitans*. During that period he published 37 manuscripts; authored 8 book chapters and trained several PhD students among whom are; Ken Miyasaki, Casey Chen, Pam Baker and Andrew Dentino.

Mark was recruited to the University of Medicine and Dentistry of New Jersey in 1997 as a Professor in the Department of Oral Biology and continued his work on *A. actinomycetemcomitans* /IgG interactions.

Mark's last work focused on IgG2 mediated opsonization of *A. actinomycetemcomitans* and the influence of genetically defined polymorphisms in the FcγRIIA on PMN function.

Aside from the considerable contribution Mark made to the overall understanding of mucosal infections in general and oral infections in particular, he founded and assumed the position of director of the Oral Immunology and Microbiology Research Group (and Annual Meeting, now called the Mark Wilson Conference), which started in 1991. He worked tirelessly to recruit outstanding guest speakers to the meeting and held firm to the belief that this meeting should provide scientific exchange in a friendly and warm environment (he was in Buffalo when he started the meeting) for the betterment of scientific collegiality in microbiology and immunology. On a personal note, Mark was an idealist and a humanitarian with a keen sense of humor that was often unpredictable. In fact, he made extraordinary efforts to mask his unique way of looking at the world around him. Those who knew him sorely miss his presence but his contribution to our scientific community survives in the form of this meeting.

Biography courtesy of Dan Fine, PhD.

THE MEETING

This is the 31st year of the Oral Immunology/Microbiology Research Group Annual Meeting, holding fast to its original goals:

- 1) To foster interaction and collaboration among scientists interested in oral immunology and microbiology.
- 2) To promote information exchange and collaboration between academicians and their colleagues in the private sector who are engaged in basic and clinical studies pertaining to oral health and disease.
- 3) To provide a forum through which new investigators entering the field can begin to network with more established investigators and to establish contact with potential sources of funding for future studies.

Over the years the meeting has retained the same format: an opening reception on Friday evening, sessions from morning till noon for three days (Saturday, Sunday and Monday), and a banquet on either Saturday or Sunday evening. The three sessions are divided into microbes, the host, and host/microbial interactions. Each year there are at least two invited speakers from outside our group. Invited speakers have included; Clark Anderson, Bruce Beutler, Andrew Camilli, Brett Findlay, Jorge Galan, E Peter Greenberg, Richard Lehrer, Virginia Miller, David Morrison, Joost Oppenheim, George O'Toole, Daniel Portnoy, Abigail Salyers, and Elaine Tuomanen, to name a few.

The meeting has been universally praised for its focus and scientific rigor and we have Mark to thank for his vision and stewardship.

Wednesday, February 10

Plenary Session I

Session Moderator: *Luciana Shaddox*

Invited Speaker: Hyun “Michel” Koo

Spatial design of polymicrobial communities: the ‘form and function’ of oral biofilms

11:30 AM	Ann Progulske-Fox	Welcome
11:45 AM	Hyun "Michel" Koo	Keynote: Spatial design of polymicrobial communities: the 'form and function' of oral biofilms
12:45 AM	Break	
1:00 PM	Matthew Ramsey	Mechanisms underlying spatial interaction in the oral microbiota
1:15 PM	Mark Herzberg	How <i>Streptococcus gordonii</i> discriminates and responds to surface environmental cues
1:30 PM	Angela Nobbs	Bend don't break: new insights into <i>Streptococcus gordonii</i> adhesin CshA
1:45 PM	Zezhang Wen	Deficiency of SufCDSUB in <i>Streptococcus mutans</i> is viable, but causes major defects in growth, stress tolerances, and biofilm formation
2:00 PM	Jessica Kajfasz	The importance of manganese homeostasis to the fitness of <i>Streptococcus mutans</i>
2:15 PM	Justin Kaspar	Interactions of mutans group streptococci in the oral cavity
2:30 PM	Break	
2:45 PM	Samantha King	A novel sialic acid-binding adhesin present in multiple oral commensals
3:00 PM	Jessica Scoffield	Nitrosative stress resistance in oral commensal bacteria

Wednesday, February 10 (cont.)

3:15 PM	Batbileg Bor	The role of saccharibacteria and their bacterial hosts in inflammatory disease
3:30 PM	Xuesong He	The epiparasite TM7x protects bacterial host from acid stress via arginine deiminase system
3:45 PM	Richard Darveau	Experimental gingivitis: could be more than we thought
4:00 PM	Jonathon Baker	Using Nanopore sequencing to improve genome assembly for oral bacteria
4:15 PM	Sarah Gaffen	Oral Immunity to <i>Candida albicans</i> : the curious case of IL-17F
4:30 PM	Break	

Mentoring for Young Investigators

4:45 PM	Dennis Mangan	Bacteria talk to each other, why don't we? A modest request to integrate advanced communication skill-building into our career development plans
5:00 PM		Mentoring for young investigators - an opportunity to engage with established members of the Oral Immunology/ Microbiology Research Group

* All times are Eastern Standard time

Thursday, February 11

Plenary Session II

Session Moderator: Dennis Mangan

Invited Speaker: Lauren Bakaletz

Development of DNABII protein-targeted therapeutic and prevention approaches for biofilm diseases

11:30 AM	Dennis Mangan	Welcome
11:45 AM	Lauren Bakaletz	Development of DNABII protein-targeted therapeutic and prevention approaches for biofilm diseases
12:45 AM	Break	
1:00 PM	Grace Spatafora	Spring cleaning: sorting through gene regulation in <i>Streptococcus mutans</i>
1:15 PM	Ping Xu	How essential genes may prevent the next pandemic
1:30 PM	Gill Diamond	An update on viruses and antivirals in the oral cavity
1:45 PM	Caroline Genco	<i>Porphyromonas gingivalis</i> - mediated disruption of bacterial oral and gut communities - impact on systemic health
2:00 PM	Jeffrey Ebersole	Mucosal circadian rhythm pathway genes altered by aging and periodontitis
2:15 PM	Hajime Sasaki	Periapical inflammation in diet-induced obesity
2:30 PM	Break	
2:45 PM	Jeannine Brady	Toward understanding <i>Streptococcus mutans</i> extracellular membrane vesicle biogenesis including proteomic and lipidomic characterization

Thursday, February 11 (cont.)

3:00 PM	Frank Gibson	Sphingolipid-containing OMVs of <i>Porphyromonas gingivalis</i> modulate the host inflammatory response
3:15 PM	Bruce Shenker	Can lessons learned from research on the pathogenesis of periodontal disease provide insight into SARS-CoV-2 infection
3:30 PM	Nataliya Balashova	Approaches to model <i>Kingella kingae</i> bone infection
3:45 PM	Patricia Diaz	<i>Veillonella parvula</i> enables the cell-density-dependent growth and <i>in vivo</i> virulence of <i>Porphyromonas gingivalis</i>
4:00 PM	Ping Zhang	<i>P. gingivalis</i> infection and regulation of osteoclast precursors
4:15 PM	Christopher Fenno	<i>Treponema denticola</i> dentilisin disrupts cellular homeostasis and upregulates a tissue-destructive program in human oral cells
4:30 PM	Break	
4:45 PM	Virtual Mixer	

* All times are Eastern Standard time

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*For information about the Oral Immunology/Microbiology Research
Group, the Mark Wilson Conference or to request inclusion on the
email list, please contact [Jacob Burks](#).*

MANY THANKS TO OUR SPONSORS



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and Craniofacial Research



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ANNOUNCEMENT

6th Mini-Symposium for Young Investigators

Tuesday, July 20, 2021 8:00 AM ~ 3:00 PM

John B. Hynes Veterans Memorial Convention Center
(room location TBA) Boston, MA

The purpose of this mini-symposium is to provide an informal platform for pre-and post-doctoral students and entry-level faculty (within ten years of completing their terminal degree or medical residency) to introduce themselves to current members of the AADR Microbiology/Immunology (M/I) subgroup and share/exchange ideas that are relevant to dental science research. The symposium will provide opportunities for interaction among young investigators and senior members of the M/I group based on their shared research interests in oral microbiology and immunology. The objectives of the symposium include promoting information exchange among scientists who engage in basic science research and clinical studies pertaining to oral health and disease, and providing a forum through which new investigators entering the field can begin to network with established investigators and so establish contacts that can help nurture their research progress and productivity.

The symposium will convene at 8:00 AM on Tuesday, July 20, 2021 (the day before the start of the 2021 IADR/AADR/CADR meetings) at the John B. Hynes Veterans Memorial Convention Center (located in the Prudential Center). Meeting participants will be asked to deliver a brief 10- minute oral presentation of their ongoing (or recently completed) research, followed by 10 minutes for discussion/Q and A. Interested participants should submit a presentation title (no abstract necessary) on or before Monday, June 14, 2021 to Grace Spatafora at spatafor@middlebury.edu.

*Please share this announcement with junior/early entry oral microbiology and immunology researchers at your institution who might be interested in participating.

