Columbia Visiting Professor Program: Contemporary Issues in Dentistry

Precise and Personalized Healthcare:

Opportunities and Challenges in Dentistry and Future Implications

Presented by

Martha J. Somerman, DDS, PhD
Director, National Institute of Dental and Craniofacial Research
National Institutes of Health

Wednesday, October 29, 2014
Columbia University Medical Center

This program is generously co-sponsored with an educational grant from Colgate-Palmolive Co.
This program is free of charge.
Register for the morning seminars and afternoon Visiting Professor Lecture at www.dental.columbia.edu/VisitingProfessorLecture.
For more information call 212-342-2964 or email: mmw7@columbia.edu.

3 Continuing Education credits will be awarded for the morning session and 1 for the afternoon session for a total of 4 CE Credits.
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Dr. Martha J. Somerman is the Director of the National Institute of Dental and Craniofacial Research, National Institutes of Health. She also is Chief of the Laboratory of Oral Connective Tissue Biology at the National Institute of Arthritis and Musculoskeletal and Skin Diseases.

Prior to becoming NIDCR's director, Dr. Somerman was dean of the University of Washington School of Dentistry, Seattle, a position she held from 2002-2011. Before joining the University of Washington, she was on the faculty of the University of Michigan School of Dentistry, Ann Arbor, from 1991 to 2002, and University of Maryland, 1984-1990. An internationally known researcher and educator, Dr. Somerman's research has focused on defining the key regulators controlling development, maintenance and regeneration of dental-oral-craniofacial tissues. She has been a recipient of numerous honors and awards throughout her academic career.

Dr. Somerman holds a D.D.S. from New York University, a certificate in Periodontology from Eastman Dental Center, Rochester, New York and a Ph.D. in Pharmacology from the University of Rochester, School of Medicine and Dentistry.

**Martha J. Somerman, DDS, PhD**

**Schedule of Events**

**Morning Session: Neurological Institute Auditorium, 710 West 168th Street**

**10:00-10:10 a.m.**
Check-in and continental breakfast

**10:10-10:20 a.m.**
Welcome & Introductions: Dr. Ralph Kaslick and Dean Christian Stohler

**10:20-11:05 a.m.**
Visiting Professor Seminar: Dr. Martha J. Somerman

*Enabling Precision Medicine through Research: Implications and Challenges for the National Institute of Dental and Craniofacial Research*

This presentation will focus on research supported by National Institute of Dental and Craniofacial Research: National Institutes of Health, with an emphasis on biological advances influencing treatment of dental-oral-craniofacial pathologies/conditions. Topics included will be: a) Salivary diagnostics for use in detecting dental-oral-craniofacial diseases, as well as systemic diseases; b) Oral tissue microarrays and biomarkers used for diagnosis and early detection of head and neck cancer; c) The oral microbiome; d) Genomic analysis/genomic wide association studies applied to analysis of dental-oral-craniofacial pathologies/anomalies/disorders; e) Omics applications for the dental-oral-craniofacial practitioner and their patients; and f) Drug development with potential application for dental-oral-craniofacial pathologies/conditions.

**11:15 a.m.-1:10 p.m.**
Student Scholar Presentations: Dr. James B. Fine

Heather Beaty, DDS ’15

*Is it worth it? The Multi-million Dollar Question Biotechnology Companies Have About Personalized Medicine*

Faculty mentor: Dr. John Grbic, Professor and Director, Division of Oral Biology

Jason Lin, DDS ’15

*From the Patient’s Frame of Reference: Personalized Healthcare*

Faculty mentor: Dr. Joseph McManus, Associate Clinical Professor, Section of Population Oral Health

Matthew Hickin, DDS ’12, Perio ’15

*The Payer’s Perspective: Cost Containment in the 21st Century*

Faculty mentor: Dr. Philip Kang, Assistant Professor, Division of Periodontics

Grace Kim, DMD, Ortho ’15

*Personalized Medicine: What Does it Mean for Healthcare Professionals?*

Faculty mentor: Dr. Jing Chen, Assistant Professor and Director, Postdoctoral Orthodontics

**1:10 -1:30 p.m.**
Discussion: Dr. James B. Fine
Afternoon Session: Alumni Auditorium, 650 West 168th Street

1:30-2:15 p.m.
Lunch for lecture attendees
Alumni Auditorium Lobby

2:20-2:30 p.m.
Welcome and Introductions: Dr. Ralph Kaslick and Dean Christian Stohler

2:30 -3:15 p.m.
Visiting Professor Lecture: Dr. Martha J. Somerman
Advancing Personalized Oral Healthcare: Gaps and Opportunities for the National Institute of Dental and Craniofacial Research
This presentation will focus on National Institute of Dental and Craniofacial Research/National Institutes of Health role as a catalyst for advancing personalized oral healthcare. Areas to be discussed include: a) oncology, including oral and pharyngeal cancer; b) caries and periodontal diseases; and c) acute and chronic pain conditions of the oral cavity e.g. temporal mandibular joint disorders. Current applications and limitations in the use of tools and technologies, e.g., 3D printing, microchips and nano-delivery systems and omics, e.g., genomics, proteomics and metabolomics and microbiomics, as well as ethical, legal, social, and economic issues will be discussed.

3:20 -3:40 p.m.
Audience Participation Debate

Visiting Professors

1980 I. Lawrence Kerr, D.D.S.
1981 Charles A. McCallum, D.M.D., M.D.
1982 D. Walter Cohen, D.D.S.
1983 Alvin L. Morris, D.D.S., Ph.D.
1984 Seymour I. Nash, D.D.S.
1985 Lawrence H. Meskin, D.D.S., M.P.H.
1986 Raymond P. White, Jr. D.D.S., Ph.D.
1987 Lois K. Cohen, Ph.D.
1988 Thomas J. Ginley, M.S., Ph.D.
1989 Irwin D. Mandel, D.D.S., D.Sc(Hon.) D.Odont. (Hon)
1990 Myron Allukian, Jr., D.D.S., M.P. H.
1991 Linda C. Niessen, D.M.D., M.P.H.
1992 David A. Nash, D.M.D. Ed.D.
1994 Dominick P. DePaola, D.D.S., Ph.D.
1996 David E. Barmes, D.D.Sc., M.P.H.
1997 Harold C. Slavkin, D.D.S.
1998 Brian A. Burt, B.D.S, M.P.H., Ph.D.
2000 Marjorie K. Jeffcoat, D.M.D.
2002 Diarmuid B. Shanley, B.D.S., M.A., MSD, D.Odont.(hon)
2003 Chester W. Douglass, D.M.D., Ph.D.
2004 Allan J. Formicola, D.D.S.
2005 Jane A. Weintraub, D.D.S., M.P.H.
2006 Richard W. Valachovic, D.M.D M.P.H
2007 Michael Glick, D.M.D.
2009 Burton Edelstein, D.D.S., M.P.H.
2010 Elizabeth A. Mertz, Ph.D.
2012 Amit Acharya, B.D.S., M.S., Ph.D.