

The Tissue Response to Implanted Active Medical Devices Meeting Herndon, Virginia, May 9-10, 2014

AGENDA

Friday, May 9, 2014

- 08:00 **Welcome and “Why Are We Here?”**
David Klonoff, MD, FACP, Fellow AIMBE
Mills-Peninsula Health Services, San Mateo, California
- 08:10 **Using Nothing to Improve the Performance of Implanted Glucose Sensors
and Insulin Delivery Systems**
Buddy Ratner, MD
University of Washington, Seattle, Washington

SESSION 1: Biological-Biomaterial Interactions

- 08:50 **Biological-Implant Interactions**
SuPing Lyu, PhD
Medtronic, Inc., Minneapolis, Minnesota
- 09:25 **Cell Biomaterial Interactions**
Andres Garcia, PhD
Georgia Institute of Technology, Atlanta, Georgia
- 10:00 **Break**
- 10:25 **Macrophage Function**
Steve Badylak, DVM, PhD, MD
University of Pittsburgh, Pittsburgh, Pennsylvania
- 11:00 **Fully Implanted Sensors**
David Gough, PhD
University of California, San Diego, San Diego, California
- 11:35 **Tissue Response to Vascular Sensor Implantation**
Jeffrey Joseph, DO
Thomas Jefferson University, Philadelphia, Pennsylvania
- 12:10 **Q & A/Panel Discussion**
- 12:25 **End of Session/Lunch**

SESSION 2: Characterization of the Foreign Body Response

- 13:25 **Tissue-Integrating Sensors**
Kristen Lloyd Helton, PhD
ProFusa, Seattle, Washington
- 14:00 **Biomaterials which Elicit No Immune Response**
Shaoyi Jiang, PhD
University of Washington, Seattle, Washington
- 14:35 **Break**
- 15:00 **Modeling Lag Time for Glucose Sensors**
William "Monty" Reichert, PhD
Duke University, Durham, North Carolina
- 15:35 **Regulatory Challenges Associated with Materials/Tissue Interface in Active Implantable Devices**
Jeffrey Toy, PhD
Center for Devices and Radiological Health, Silver Spring, Maryland
- 16:10 **Standards for Implanted Medical Devices**
Joseph Carraway, DVM, MS
NAMSA, Northwood, Ohio
- 16:45 **Q & A/Panel Discussion**
- 17:00 **Adjourn**

Saturday, May 10, 2014

- 08:10 **Neural Electrodes**
Ravi Bellamkonda, PhD
Georgia Institute of Technology, Atlanta, Georgia

SESSION 3: Acute vs. Chronic Inflammation

- 08:50 **Local Inflammatory Response to Implanted Sensors**
Peter Simpson, M.Eng
Dexcom, Inc., San Diego, California
- 09:30 **Role of Immune Cells**
Dianne Burgess, PhD
University of Connecticut, Storrs, Connecticut
- 10:10 **Break**
- 10:35 **Role of Implant Size and Compliance**
Daryl Kipke, PhD
University of Michigan, Ann Arbor, Michigan

11:15 **Diabetes vs Non-Diabetes Wound Healing**
Bruce Klitzman, MD
Duke University, Durham, North Carolina

11:55 **Q & A/Panel Discussion**

12:20 **End of Session/Break**

SESSION 4: Emerging Concepts and New Technologies

13:25 **Tissue Responses to 3D Printed Tissue Constructs**
Thomas Boland, PhD
The University of Texas at El Paso, El Paso, Texas

14:00 **Novel Nano- and Pico- Technology Medical Devices: The Future is Here**
Thomas Webster, MD
Northeastern University, Evanston, Illinois

14:35 **Break**

15:00 **Novel Bioluminescence and Other Techniques for Tissue Analyte Mapping Around Biosensors**
Thies Schroeder, PhD
Duke University, Durham, North Carolina

15:35 **Integration of Sub-millimeter Implanted Wireless Sensors**
Axel Scherer, PhD
California institute of Technology, Pasadena, California

16:10 **Ultra-low Power Sub-threshold Electronics for Injectable Sensors**
Jeremy Muldavin, PhD
MIT Lincoln Laboratory, Lexington, Massachusetts

16:45 **Q&A/Panel Discussion**

17:00 **Adjourn**