

Agenda • Thursday, November 13, 2008

Pre-Meeting Workshops

Workshop A – Intellectual Property for Diabetes Technology

- 08:30 Panel 1: Overview**
Barclay Kamb, JD (Cooley Godward Kronish, LLP, Palo Alto, California)
- 08:45 Panel 2: Government and Academic Considerations**
Martha Connolly, PhD (University of Maryland, College Park, Maryland)
John Emond, MPA (NASA Headquarters, Washington, District of Columbia)
Steven Ferguson (National Institutes of Health, Rockville, Maryland)
- 09:50 Panel 3: Barriers to Developing a Product**
Bruce Bode, MD (Atlanta Diabetes Associates, Atlanta, Georgia)
Nick Pliam, MD, PhD (Bay City Capital, San Francisco, California)
Perry Bridger (Avalere Health LLC, Washington, District of Columbia)
Barclay Kamb, JD (Cooley Godward Kronish, LLP, Palo Alto, California)
- 10:55 Break**
- 11:20 Panel 4: Business Perspectives on Intellectual Property**
Mojdeh Bahar, JD, MA (National Institutes of Health, Rockville, Maryland; formerly with the US Patent and Trade Organization, Alexandria, Virginia)
Derek Brandt, JD (Sensile Medical AG, Haegendorf, Switzerland)
Sebastian la Bastide, MS, MBA (Roche Diagnostics, Palo Alto, California)
Barry Ginsberg, MD, PhD (Diabetes Technology Consultants, Wyckoff, New Jersey)
- 12:25 Conclusion**
John Emond, MS (NASA Headquarters, Washington, District of Columbia)
- 12:30 End of Workshop / Lunch**

Workshop B – Noninvasive Glucose Monitoring

Academic Panel

- 08:30 Moderators**
Mark Arnold, PhD (University of Iowa, Iowa City, Iowa)
John Pickup, MD, PhD (Guy's Hospital, London, England)
- 08:35 Issues of Measurement Variance in Noninvasive Glucose Sensing with Near-Infrared Spectroscopy**
Mark Arnold, PhD (University of Iowa, Iowa City, Iowa)
- 08:55 A Novel Ocular Technology for Measuring Glucose in Tears**
Sandy Asher, PhD (University of Pittsburgh, Pittsburgh, Pennsylvania)
- 09:15 Noninvasive Monitoring of Glucose Using Near-Infrared Reflection Spectroscopy of Skin – Pitfalls and Novel Perspectives in Multivariate Data Analysis**
H. Michael Heise, PhD (Dortmund University of Technology, Dortmund, Germany)
- 09:35 Challenges in Noninvasive Glucose Monitoring**
Joanne Wai Yee Chung, PhD (The Hong Kong Polytechnic University, Kowloon, Hong Kong)
- 09:55 Q & A and Panel Discussion**
- 10:20 Break**

Industry Panel

- 10:45 Moderators**
Mark Arnold, PhD (University of Iowa, Iowa City, Iowa)
John Pickup, MD, PhD (Guy's Hospital, London, England)

- 10:50 Requirements for Calibration in Noninvasive Glucose Monitoring by Raman Spectroscopy**
Jan Lipson, PhD (C8 MediSensors, Inc., San Jose, California)
- 11:10 Occlusion Spectroscopy for Measuring Glucose and Hemoglobin Noninvasively**
Lior Ma'ayan, MS, MBA (OrSense Ltd., Nes Ziona, Israel)
- 11:30 The Patient-Device Interface for Measuring Glucose Noninvasively**
Stephen Monfre, PhD (Sensys Medical, Inc., Chandler, Arizona)
- 11:50 Combining Exclusive Technologies – A Different Approach for Truly Noninvasive Glucose Measurement**
Avner Gal, MS, MBA (Integrity Applications, Ashkelon, Israel)
- 12:10 Q & A and Panel Discussion**
- 12:30 End of Workshop**
- 12:30 Lunch**

Workshop C – Data Management for SMBG in T2DM

Academic Panel

- 13:30 Moderators**
Michael Ackerman, PhD (U.S. National Library of Medicine, Bethesda, Maryland)
Thomas Pieber, MD (Medical University of Graz, Graz, Austria)
- 13:35 Data Mining Technologies for Interpreting Blood Glucose Data: From Diabetes Home Monitoring to ICU Patients Management**
Riccardo Bellazzi, PhD (University of Pavia, Pavia, Italy)
- 13:55 The Impact of Non-Model Related Variability on Blood Glucose Prediction**
Jonas Kildegaard, PhD (Kildegaard Consult, Frederiksberg, Denmark)
- 14:15 Decision Support Tools to Assist With Analysis of Glucose Data**
Howard Wolpert, MD (Joslin Diabetes Center, Harvard University, Boston, Massachusetts)
- 14:35 An Algorithm for Staged Management for Type 2 Diabetes**
Richard Bergenstal, MD (International Diabetes Center, Minneapolis, Minnesota)
- 14:55 FDA's Perspectives on the Challenges for Decision Making Software**
Charles Zimlik, PhD (U.S. Food and Drug Administration, Rockville, Maryland)
- 15:15 Q & A and Panel Discussion**
- 16:00 Break**

Industry Panel

- 16:25 Moderators**
Lutz Heinemann, PhD (Profil Institute, Neuss, Germany)
Svein Skeie, MD, PhD (Stavanger University Hospital, Stavanger, Norway)
- 16:30 Information-Based Tools for Patients Using SMBG**
Stan Telson, MS (Bayer HealthCare LLC – Diabetes Care, Tarrytown, New York)
- 16:40 Improved Management of Type 2 Diabetes Using Web-based Software**
Jim Mingle, BS (MyCare Team, Inc., Acton, Massachusetts)
- 16:50 Targeted Technology: The Value Chain of SMBG**
Matthias Axel Schweitzer, MD, MBA (Roche Diagnostics, Mannheim, Germany)
- 17:00 Bringing Diabetes Care into the Internet Age**
Bert van Hoof, MS (Microsoft Health Solutions Group, Seattle, Washington)
- 17:10 Q & A and Panel Discussion**
- 17:35 End of Workshop**

Thursday, November 13, 2008 *continued*

Workshop D – Measuring the Effects of Diet and Exercise on Diabetes

Diet

- 13:30 Moderator**
COL Karl Friedl, PhD (U.S. Army, TATRC, Fort Detrick, Maryland)
- 13:35 Natural Products for the Prevention and Alleviation of the Risk Factors for Diabetes: Chromium and Cinnamon**
Richard Anderson, PhD, FACN (U.S. Department of Agriculture, Beltsville, Maryland)
- 13:55 Determining the Composition and Caloric Content of Foods**
Thomas Castonguay, PhD (University of Maryland, College Park, Maryland)
- 14:15 Use of Continuous Glucose Monitoring to Assess the Effect of Low and High Glycemic Index Diets in Children with Diabetes**
Tonja Nansel, BSN, PhD (National Institutes of Health, Bethesda, Maryland)
- 14:35 Glycemia around Meals in Adults with Type 1 Diabetes: Insights from 90 Days of Home Use of the FreeStyle Navigator® Continuous Glucose Monitoring System**
Tim Dunn, PhD (Abbott Diabetes Care, Alameda, California)
- 14:55 Q & A and Panel Discussion**
- 15:20 Break**

Exercise

- 15:45 Moderator**
Robert Burk, MD (Albert Einstein College of Medicine, Bronx, New York)
- 15:50 Whole-Body Energy Expenditure**
Kong Chen, PhD, MSCI (National Institutes of Health, Bethesda, Maryland)
- 16:10 Using Continuous Glucose Monitoring to Measure the Effects of Exercise in Diabetes**
Michael Riddell, PhD (York University, Toronto, Canada)
- 16:30 Effects of Lifestyle Modification in Type 2 Diabetes: The Diabetes-MOBIL Study**
Gabriele Faber-Heinemann (Diabetes-MOBIL gGmbH, Düsseldorf, Germany)
- 16:50 Technology for Estimating Caloric Expenditure: How Accurate and Complex Does It Need to Be?**
COL Karl Friedl, PhD (U.S. Army, TATRC, Fort Detrick, Maryland)
- 17:10 Q & A and Panel Discussion**
- 17:35 End of Workshop**

Eighth Annual Diabetes Technology Meeting

- 07:00-18:00 Registration**
- 18:00 Meeting Commences**
- 18:00-20:00 Reception and Poster Presentations**
- 20:00-22:00 Posters Remain on Display for Viewing**

Agenda • Friday, November 14, 2008

Eighth Annual Diabetes Technology Meeting

07:00 Continental Breakfast

Session I – Technologies for Metabolic Monitoring

08:00 **Welcoming Remarks**

Carol Herman, RN (Food and Drug Administration, Rockville, Maryland)

08:03 **Introduction**

David Klonoff, MD, FACP (Mills-Peninsula Health Services, San Mateo; University of California, San Francisco)

08:05 **Moderator**

COL Carl Castro, PhD (U.S. Army Medical Research and Materiel Command, Fort Detrick, Maryland)

08:10 **Keynote Address: Accelerating the Availability of an Artificial Pancreas**

Aaron Kowalski, PhD (Juvenile Diabetes Research Foundation, New York, New York)

08:30 **Biomolecular Engineering for Glycemic Control Biosensing**

Koji Sode, MD (Tokyo University of Agriculture & Technology, Tokyo, Japan)

08:50 **Long-Term Results of a Subcutaneous Glucose Sensor in Animals**

Joseph Lucisano, PhD (GlySens Inc., San Diego, California)

09:10 **A Benchtop Closed-Loop System Controlled by a Bio-Inspired Silicon Implementation of the Pancreatic Beta Cell**

Nick Oliver, BSc, MBBS, MRCP (Imperial College, South Kensington, United Kingdom)

09:30 **Coalition for Clinical Research - SMBG**

David Klonoff, MD, FACP (Mills-Peninsula Health Services, San Mateo; University of California, San Francisco)

09:50 **Q & A and Panel Discussion**

10:15 **Break**

Session II – Nanotechnology for Diabetes

10:50 **Moderator**

COL Karl Friedl, PhD (U.S. Army, TATRC, Fort Detrick, Maryland)

10:45 **Various Approaches to the Noninvasive Measurement of Blood Glucose: The Need to Understand Biologic Diversity in Experimental Design**

Warren Grundfest, MD, FACS (University of California, Los Angeles, California)

11:05 **Hot Topics in Biosensing: Glucose, Lactate, and Oxygen**

W. Kenneth Ward, MD (iSense Corporation, Wilsonville, Oregon)

11:25 **Nanoparticle Delivery of Hepatic Targeted Insulin**

Blair Geho, MD, PhD (Diasome Pharmaceuticals, Conshohocken, Pennsylvania)

11:45 **Peterson Student Awards and Presentation**

Assessment of Glycemic Variability in Continuous Subcutaneous Insulin Infusion (CSII) Therapy in Type 1 Diabetes Related to Anthropometry and Complication Status

Sarah Mehdi, BSc (Imperial College, South Kensington, United Kingdom)

12:05 **Q & A and Panel Discussion**

12:25 **End of Session**

12:25 **Lunch**

Friday, November 14, 2008 *continued*

Session III – Artificial Pancreas – Current Status of CGM

- 13:55 Moderators**
 Jeffrey Joseph, DO (Thomas Jefferson University, Philadelphia, Pennsylvania)
 Marc Torjman, PhD (University of Medicine and Dentistry of New Jersey, Camden, New Jersey)
- 13:40 Results of the JDRF CGM Trial in Patients with Baseline A1c levels <7.0%**
 William Tamborlane, MD (Yale University, New Haven, Connecticut)
- 14:00 Glucose Control in the Intensive Care Unit: The Rosy Future**
 Martin Ellmerer, PhD (Medical University Graz, Austria)
- 14:20 Alarm Characterization for an Adjunctive CGM Device**
 Geoff McGarraugh, MS (Abbott Diabetes Care, Alameda, California)
- 14:40 Continuous Glucose Monitoring in Veterinary Medicine – Up and Coming**
 Charles Wiedmeyer, DVM, PhD (University of Missouri, Columbia, Missouri)
- 15:00 Q & A and Panel Discussion**
- 15:20 Break**

Session IV – Artificial Pancreas – Closed-Loop Control

- 15:55 Moderators**
 Jeffrey Joseph, DO (Thomas Jefferson University, Philadelphia, Pennsylvania)
 Marc Torjman, PhD (University of Medicine and Dentistry of New Jersey, Camden, New Jersey)
- 16:00 Barriers to Overcome in the Development of an Artificial Pancreas**
 Arleen Pinkos, MT (ASCP) (Food and Drug Administration, Rockville, Maryland)
- 16:20 Clinical Trial of Model-Predictive Control Powered by In Silico Studies**
 Claudio Cobelli, PhD (University of Padova, Padova, Italy)
 Boris Kovatchev, PhD (University of Virginia, Charlottesville, Virginia)
- 16:40 Model-Based Control of an Artificial Pancreas**
 Frank Doyle, PhD (University of California, Santa Barbara, California)
- 17:25 Bi-hormonal Closed-Loop Control of Blood Glucose Using Dual Subcutaneous Infusion of Insulin and Glucagon in Type 1 Diabetes**
 Ed Damiano, PhD (Boston University, Boston, Massachusetts)
- 17:20 Closed-Loop Insulin Delivery Utilizing Insulin Feedback**
 Cesar Palerm, PhD (Medtronic Diabetes, Northridge, California)
- 17:40 Q & A and Panel Discussion**
- 18:00 End of Session**
- 18:00-20:00 Reception and Poster Presentations**
- 20:00-22:00 Posters Remain on Display for Viewing**

Agenda • Saturday, November 15, 2008

Eighth Annual Diabetes Technology Meeting

07:00 Continental Breakfast

Session V – Insulin Delivery Technology

08:00 **Welcome**

David Klonoff, MD, FACP (Mills-Peninsula Health Services, San Mateo;
University of California, San Francisco, California)

08:05 **Moderators**

Dorian Liepmann, PhD (University of California, Berkeley, California)
Gerold Grodsky, PhD (University of California, San Francisco, California)

08:10 **Current Pharmacologic Therapy of Type 2 Diabetes, *other than Insulin!***

Wayman Wendell Cheatham, MD, FACE (U.S. Navy, Bureau of Medicine & Surgery,
Washington, District of Columbia)

08:30 **A New Rapidly-Acting Mealtime Insulin**

Sol Steiner, PhD (Biodel Inc., Danbury, Connecticut)

08:50 **Advances in Insulin Delivery**

Benny Pesach, PhD (InsuLine Medical Ltd., Petach Tikva, Israel)

09:10 **HumaPen® Memoir™ Development Lessons Learned**

Stuart Breslin (Eli Lilly and Company, Indianapolis, Indiana)

09:30 **Oral Insulin: Current State of the Art**

Lutz Heinemann, PhD (Profil Institute for Metabolic Research, Neuss, Germany)

09:50 **Q & A and Panel Discussion**

10:15 **Break**

Session VI – Tissue Engineering for Insulin Production

10:40 **Moderators**

Christine Kelley, PhD (National Institutes of Health, Bethesda, Maryland)
Athanasios Sambanis, PhD (Georgia Institute of Technology, Atlanta, Georgia)

10:50 **Cell Sources and Critical Technologies for Cell-Based Therapies for Diabetes**

Athanasios Sambanis, PhD (Georgia Institute of Technology, Atlanta, Georgia)

11:15 **The Bioartificial Pancreas: The Promise and the Reality**

David Scharp, MD (NovoCell, Inc., Irvine, California)

11:40 **Technology from the U.S. Space Program: Down-to-Earth Applications for Diabetes**

Jonathan Clark, MD, MPH (National Space Biomedical Research Institute, Houston, Texas)

12:05 **Diabetes Technology Leadership Award**

12:10 **Q & A and Panel Discussion**

12:20 **End of Session**

Saturday, November 15, 2008 *continued*

12:20 **Lunch**

Session VII – Technologies for Improving Adherence

13:10 **Moderator**

Carol Herman, RN (Food and Drug Administration, Rockville, Maryland)

13:15 **Technology and Adherence in Diabetes**

G rard Reach, MD (Hospital Avicenne, Paris, France)

13:35 **Information Tools for a Personalized and Efficient Health Care Experience**

Suzanne Boren, PhD, MHA (University of Missouri, Columbia, Missouri)

13:55 **Promoting Adherence with Serious Videogames for Health**

Debbe Thompson, PhD (Baylor College of Medicine, Houston, Texas)

14:15 **Influence of Modern Insulin Injection Devices on Treatment Adherence and Health Economics**

Morten Donsmark, PhD (Novo Nordisk A/S, Virum, Denmark)

14:35 **Online Accelerometer Technology to Promote Weight Loss, Fitness, and Diabetes Prevention**

Adam Kaufman, BA, BS (Diabetes Prevention Source, Los Angeles, California)

14:55 **Q & A and Panel Discussion**

15:20 **Break**

Session VIII – Telemedicine and Live Demonstration

15:45 **Moderators**

John Pickup, MD, PhD (Guy's Hospital, London, England)

COL Ron Poropatich, MD (U.S. Army, TATRC, Fort Detrick, Maryland)

15:50 **The Tele-Foot Program for Assessing Wound Healing**

Jan Wojcicki, PhD, DSc (Institute of Biocybernetics, Warsaw, Poland)

16:10 **A Cell Phone Intervention for Improving Adherence to Diabetes Therapy**

Robert A. Vigersky, MD, COL MC (U.S. Army, Walter Reed Army Medical Center, Washington, District of Columbia)

16:30 **Live Demonstration 1: Using Technology to Support and Evaluate Behavior Changes to Prevent and Treat Diabetes**

Kathleen McTigue, MD (University of Pittsburgh, Pittsburgh, Pennsylvania)

16:55 **Live Demonstration 2: A Novel Telemedicine System for Managing Diabetes**

Cheryl Pegus, MD, MPH (SymCare Personalized Health Solutions Inc., Westchester, Pennsylvania)

17:20 **Q & A and Panel and Discussion**

17:45 **End of Meeting**

**NINTH ANNUAL
DIABETES TECHNOLOGY MEETING
November 5-7, 2009
San Francisco Airport Hyatt Regency Hotel**