WORKSHOP A: Increasing Adoption of Diabetes Technology

Panel 1: Better Science

08:00  Moderators:
COL Karl Friedl, PhD
U.S. Army TATRC, Fort Detrick, Maryland

Carol Herman, RN
AAMI, Arlington, Virginia

08:05  How Cardiologists Have Successfully Adopted Technology for Atherosclerosis:
Lessons for Diabetes Technology
Naomi Hamburg, MD
Boston University Medical Center, Boston, Massachusetts

08:15  New End Points for Diabetes Trials
Natalie Wisniewski, PhD
Medical Device Consultancy, San Francisco, California

08:25  Engaging Payers to Support Diabetes Technology
Bruce Quinn, MD, PhD
Foley Hoag LLP, Boston, Massachusetts

08:35  Q & A/Panel Discussion

Panel 2: Better Products

09:05  Human Factors for Diabetes Devices
Quynh-Nhu Nguyen, BS
U.S. Food and Drug Administration, Silver Spring, Maryland

09:20  Social Media to Promote Better Products
Amy Tenderich, MA
Alliance Health Networks, San Francisco, California

09:35  Q & A/Panel Discussion

10:05  Break
Panel 3: Better Marketing

10:30  Nonmedical Products: Marketing Ideas for Diabetes Products
      Ronald Goodstein, PhD
      Georgetown University, Washington, DC

10:40  Marketing Medical Products
      Anton Petkov, MD
      Sanofi, Frankfurt, Germany

10:50  Social Media Marketing
      Kelly Close, MBA
      Close Concerns, San Francisco, California

11:00  Q & A/Panel Discussion

11:30  End of workshop/Lunch

WORKSHOP B: The Sensor–Tissue Interface

Panel 1: Academic

08:00  Moderators:
      Christine Kelley, PhD
      National Institutes of Health, Bethesda, Maryland
      Yogish C. Kudva, MBBS
      Mayo Clinic, Rochester, Minnesota

08:05  Biomechanics of the Sensor-Tissue Interface
      Kristen Helton, PhD
      University of Washington, Seattle, Washington

08:22  Single-Port Subcutaneous Glucose Monitoring at the Site of Insulin Delivery
      Julia Mader, MD
      Medical University of Graz, Graz, Austria

08:39  Tissue Pathology
      Jeffrey Joseph, DO
      Thomas Jefferson University, Philadelphia, Pennsylvania

08:56  Tissue Engineering
      Kaiming Ye, PhD
      National Science Foundation, Arlington, Virginia

09:13  Q & A/Panel Discussion

09:35  Break
Panel 2: Industry

09:55 Moderators:
Dorian Liepmann, PhD
University of California, Berkeley, Berkeley, California
Mike McShane, PhD
Texas A&M University, College Station, Texas

10:00 Inflammation, Miniaturization, and Sensitivity: The Three Critical Issues for a Robust Implantable Glucose Sensor
Fotios Papadimitrakopoulos, PhD
Biorasis Inc., Storrs/Mansfield, Connecticut

10:17 Application of the Implantable Continuous Glucose Monitoring System in a Human Subject
Joseph Lucisano, PhD
GlySens Inc., San Diego, California

10:34 Improved Sensor Materials and Interface Demonstrate Improved Performance and Reliability in the DexCom G4 System
Robert Boock, PhD
DexCom, San Diego, California

10:51 A Percutaneous Optical Fiber Glucose Sensor for Continuous Glucose Monitoring
Achim Mueller, PhD
EyeSense GmbH, Grossostheim, Germany

11:08 Q & A/Panel Discussion

11:30 End of workshop/Lunch

WORKSHOP C: Bolus Calculators for Insulin Dosing

Panel 1: Physiology

12:30 Moderators:
Kong Chen, PhD
National Institutes of Health, Bethesda, Maryland
Tessa Lebinger, MD
U.S. Food and Drug Administration, Silver Spring, Maryland

12:35 How the Pancreas Calculates Mealtime Release of Insulin
Arthur Sherman, PhD
National Institutes of Health, Bethesda, Maryland

12:52 The Impact of Fat on Bolus Calculators
Howard Wolpert, MD
Joslin Diabetes Center, Boston, Massachusetts

13:09 The Impact of Fat and Protein on Bolus Calculators
Ewa Pankowska, MD, PhD
Medical Academy in Warszawa, Warsaw, Poland
Bolus Calculators: The Good, The Bad, and The Ugly
Bruce Bode, MD
Atlanta Diabetes Associates, Atlanta, Georgia

Q & A/Panel Discussion

Break

Panel 2: Clinical Applications

14:25 Insulin Titration Supported by Automated Systems
Frank Flacke, PhD
Sanofi, Frankfurt, Germany

14:47 Regulatory Aspects of Bolus Calculators for Insulin Dosing
Patricia Beaston, MD, PhD
U.S. Food and Drug Administration, Silver Spring, Maryland

15:04 Glucose-Information-Based Therapy Support: Evidence Base and Medical Value of Automated Insulin Bolus Calculation
Matthias Axel Schweitzer, MD, MBA
Roche Diagnostics GmbH, Mannheim, Germany

15:21 Clinical Outcomes from Using Bolus Calculators
Signe Schmidt, MD
Hvidovre Hospital, Copenhagen, Denmark

15:38 Q & A/Panel Discussion

End of workshop

Poster Session

Posters remain on display for viewing
WORKSHOP D: Glycemic Variability

Panel 1: Clinical Applications

12:30  Moderators: Howard Zisser, MD  Judith Fradkin, MD
       Sansum Diabetes Research Institute, National Institutes of Health,
       Santa Barbara, California  Bethesda, Maryland

12:35  Measuring Glycemic Variation: Metrics and Glycemic Data Sets—Limitations and Pitfalls
       Fergus Cameron, MD
       Royal Children’s Hospital-Parkville, Melbourne, Australia

12:52  The Effect of Islet Transplantation on Glycemic Variability
       Horacio Rilo, MD
       University of Arizona, Tucson, Arizona

13:09  The Impact of Glycemic Variability on Hospital Mortality
       James Krinsley, MD
       Stamford Hospital, Stamford, Connecticut

13:26  Glycemic Variability in Obese Patients
       Stephanie Fonda, PhD
       Walter Reed Army Medical Center, Washington, DC

13:43  Q & A/Panel Discussion

14:05  Break

Panel 2: New Metrics to Quantify Glycemic Variability

14:25  Moderators: Guillermo Arreaza-Rubin, MD  Marc Breton, PhD
       National Institutes of Health, Bethesda, Maryland  University of Virginia, Charlottesville, Virginia

14:30  A Novel Metric for Glycemic Variability
       Thomas Peyser, PhD
       DexCom, San Diego, California

14:47  Quantifying the Distribution of Blood Glucose
       Lane Desborough, MSc, PEng
       Medtronic, Northridge, California

15:04  Real-Time Calculation of Glycemic Variability to Improve Intensive Care Unit Patient Outcomes
       Francesco Valgimigli, PhD
       A. Menarini Diagnostics, Florence, Italy

15:21  Glycemic Variability Measured with Self-Monitoring of Blood Glucose
       Holly Schachner, MD
       Bayer, Tarrytown, New York

15:38  Q & A/Panel Discussion

16:00  End of workshop

16:00–18:30  Poster session

18:30–20:00  Posters remain on display for viewing
## DIABETES TECHNOLOGY MEETING AGENDA

**FRIDAY, NOVEMBER 9, 2012**

### SESSION 1: Diabetes Telemedicine Infrastructure

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Welcome&lt;br&gt;Athanassios Sambanis, PhD&lt;br&gt;Regenerative Engineering and Medicine (REM) Center at Georgia Tech, Atlanta, Georgia</td>
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<tr>
<td>08:05</td>
<td>Opening Remarks&lt;br&gt;David C. Klonoff, MD, FACP&lt;br&gt;Mills-Peninsula Health Services, San Mateo, California&lt;br&gt;University of California, San Francisco, San Francisco, California</td>
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<td>08:10</td>
<td>Keynote Address&lt;br&gt;Jeffrey Shuren, MD, JD&lt;br&gt;U.S. Food and Drug Administration, Silver Spring, Maryland</td>
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<td>08:35</td>
<td>Moderators:&lt;br&gt;Riccardo Bellazzi, PhD&lt;br&gt;Kang Lee, MSc (Eng)&lt;br&gt;University of Pavia, Pavia, Italy&lt;br&gt;National Institute of Standards and Technology, Gaithersburg, Maryland</td>
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<td>08:40</td>
<td>Wireless Solutions for Improved Self-Management of Diabetes&lt;br&gt;Sven Bursell, PhD&lt;br&gt;University of Hawaii, Honolulu, Hawaii</td>
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<tr>
<td>08:55</td>
<td>How Future Diabetes Care Will Be Managed Wirelessly&lt;br&gt;Don Jones, JD, MBA&lt;br&gt;Qualcomm Life, San Diego, California</td>
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<tr>
<td>09:10</td>
<td>The Future of Diabetes Will be Wireless&lt;br&gt;Brad Thompson, JD, MBA&lt;br&gt;Epstein Becker Green, Washington, DC</td>
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<tr>
<td>09:25</td>
<td>Q &amp; A/Panel Discussion</td>
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<td>09:45</td>
<td>End of session/Break</td>
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### SESSION 2: Technologies for Metabolic Monitoring

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:10</td>
<td>Moderators:&lt;br&gt;Rich Williams, MD&lt;br&gt;NASA Headquarters, Washington, DC&lt;br&gt;Ananda Basu, MD, FRCP&lt;br&gt;Mayo College of Medicine, Mayo Clinic, Rochester, Minnesota</td>
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<tr>
<td>10:15</td>
<td>Diabetes Technology Society Leadership Award</td>
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<tr>
<td>10:20</td>
<td>Using a Blood Glucose Monitor to Measure Analytes other than Glucose&lt;br&gt;Yi Lu, PhD&lt;br&gt;University of Illinois at Urbana-Champaign, Urbana, Illinois</td>
</tr>
<tr>
<td>10:35</td>
<td>A Novel Continuous Glucose Monitor for the Intensive Care Unit&lt;br&gt;James Causey, BS&lt;br&gt;OptiScan Biomedical, Inc., Hayward, California</td>
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<td>10:50</td>
<td>Transdermal Continuous Glucose Monitoring: A Needle-Free Alternative to Invasive Sensors&lt;br&gt;Wayne Menzie, BS&lt;br&gt;Echo Therapeutics, Inc., Franklin, Massachusetts</td>
</tr>
<tr>
<td>11:05</td>
<td>Q &amp; A/Panel Discussion</td>
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<tr>
<td>11:30</td>
<td>End of session/Lunch</td>
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SESSION 3: Artificial Pancreas: Engineering Aspects

12:40    Moderators:
    Jeffrey Joseph, DO
    Thomas Jefferson University, Philadelphia, Pennsylvania
    Eyal Dassau, PhD
    University of California, Santa Barbara, Santa Barbara, California

12:45    Artificial Pancreas Award

12:50    Moving the Closed-Loop Artificial Pancreas from the Clinic to the Home: Algorithmic Developments
    Frank Doyle III, PhD
    University of California, Santa Barbara, Santa Barbara, California

13:05    Robustly Adaptive Closed-Loop Blood Glucose Control in Children and Adults with Type 1 Diabetes Using a Bihormonal Bionic Pancreas
    Edward Damiano, PhD
    Boston University, Boston, Massachusetts

13:20    Outpatient Artificial Pancreas: Technology and Clinical Trials
    Boris Kovatchev, PhD
    University of Virginia Health System, Charlottesville, Virginia

13:35    Outpatient Artificial Pancreas: Smart Sensors and Algorithms
    Claudio Cobelli, PhD
    University of Padova, Padova, Italy

13:50    Q & A/Panel Discussion

14:20    End of session/Break

SESSION 4: Artificial Pancreas: Clinical Aspects

14:45    Moderators:
    Roman Hovorka, PhD, MSc, BSc
    University of Cambridge, Cambridge, United Kingdom
    Arleen Pinkos, BS
    U.S. Food and Drug Administration, Silver Spring, Maryland

14:50    In-Home Use of a Predictive Nocturnal Pump Shut-Off Algorithm
    Bruce Buckingham, MD
    Stanford University, Stanford, California

15:05    Results from the AP@home Project
    J. Hans DeVries, MD
    Academic Medical Center, Amsterdam, The Netherlands

15:20    Moving to Artificial Pancreas as a Therapy for Type 1 Diabetes: How to Select and Qualify the Candidates
    Eric Renard, MD, PhD
    Hospital Lapeyronie, Montpellier, France

15:35    Q & A/Panel Discussion

16:00    Adjourn

16:00–18:30    Poster Session

18:30–20:00    Posters remain on display for viewing
07:00  Continental Breakfast

**SESSION 5: Insulin Delivery Technology**

08:00  Moderators:  
Gerold Grodsky, PhD  
University of California, San Francisco, San Francisco, California  
Graham B.I. Scott, PhD  
National Space Biomedical Research Institute, Houston, Texas

08:05  Local Warming Improves Insulin Absorption  
Andreas Pfützner, MD, PhD  
IKFE GmbH, Mainz, Germany

08:20  Insulin Delivery with Microneedles  
Ronald Pettis, PhD  
BD Technologies, Research Triangle Park, North Carolina

08:35  Insulin Pump Use in 1182 Young Children in the Type 1 Diabetes Exchange Clinic Registry Is Associated with Lower Hemoglobin A1c Levels  
Scott Blackman, MD, PhD  
Johns Hopkins Children Center, Baltimore, Maryland

08:50  Technical Specification of the DiaPort  
Thomas Frei, BS  
Roche Diabetes Care AG, Burgdorf, Switzerland

09:05  Q & A/Panel Discussion

09:30  End of session/Break

**SESSION 6: Novel Insulins**

09:55  Moderators:  
G. Alexander Fleming, MD  
Kinexum, Harpers Ferry, West Virginia  
Poul Strange, MD, PhD  
Integrated Medical Development, Princeton Junction, New Jersey

10:00  Biosimilar Insulins  
Lutz Heinemann, PhD  
Profil Institute for Metabolic Research, Neuss, Germany

10:15  Ultra-Long-Acting Insulins: Do We Need Them?  
Tim Heise, MD  
Profil Institute for Metabolic Research, Neuss, Germany

10:30  Anhydrous Glucagon to Treat Hypoglycemia  
Steve Prestrelski, PhD  
Xeris Pharmaceuticals, Austin, Texas

10:45  Juvenile Diabetes Research Foundation (JDRF) Student Research Award
SESSION 7: Reference Methods for Assessing Performance of Blood Glucose Monitors

12:40 Moderators: Darrell Wilson, MD
Stanford University and the Lucile Packard Children’s Hospital at Stanford, Stanford, California
George Cembrowski, MD, PhD
University of Alberta Hospital, Edmonton, Alberta, Canada

12:45 A Laboratory Perspective on Reference Methods for Blood Glucose Monitoring
Mitchell Scott, PhD
Washington University School of Medicine, St. Louis, Missouri

13:00 A Regulatory Perspective on Reference Methods for Blood Glucose Monitoring
Alberto Gutierrez, PhD
U.S. Food and Drug Administration, Silver Spring, Maryland

13:15 Benefits of Using the YSI as a Reference Method
Jay Johnson, PhD; Jamie Lussier, MS
YSI Life Sciences, Yellow Springs, Ohio

Guido Freckmann, MD
Institute for Diabetes Technology, Ulm, Germany

13:45 Q & A/Panel Discussion

14:20 End of session/Break

SESSION 8: Continuous Glucose Monitoring

14:45 Moderator: Steven Russell, MD, PhD
MGH Diabetes Associates, Boston, Massachusetts

14:50 Update on the Performance of VEO
John Mastrototaro, PhD
Medtronic Diabetes, Northridge, California

15:05 Intensive Care Unit Management Using the SPRINT
Geoff Chase, PhD
University of Canterbury, Christchurch, New Zealand

15:20 Taking Continuous Glucose Monitoring to a New Dimension with Geographic Information
Sean Doherty, PhD
Wilfrid Laurier University, Waterloo, Canada

15:35 Q & A/Panel Discussion

15:55 Stretch Break
SESSION 9: Live Demonstrations

16:00  Moderator:
      David C. Klonoff, MD, FACP
      Mills-Peninsula Health Services, San Mateo, California
      University of California, San Francisco, San Francisco, California

16:05  Pressure-Sensing Insoles for Neuropathic Ulcer Prevention
      Breanne Everett, MD
      Orpyx Medical Technologies Inc., Calgary, Alberta, Canada

16:20  A New Device for Activity Measurement to Assess Caloric Expenditure
      Kong Chen, PhD
      National Institutes of Health, Bethesda, Maryland

16:35  Automated Glycemic Pattern Analysis using the OneTouch® Verio™IQ Blood Glucose Monitoring System
      Larry Katz, PhD
      LifeScan, Inc., Wayne, Pennsylvania

16:50  Meeting Summary

17:05  End of Meeting