



DIABETES TECHNOLOGY SOCIETY

DTM 2023

23RD ANNUAL DIABETES TECHNOLOGY MEETING AGENDA

THURSDAY, NOVEMBER 2, 2023

WORKSHOP A: DIGITAL HEALTH TOOLS

PANEL 1: INTERACTIVE APPS FOR BEHAVIORAL CHANGE

Can apps modify behavior?

8:00

Moderators

William Polonsky, PhD

Behavioral Diabetes Institute, San Diego, California, USA

Michelle L. Litchman, PhD, FNP-BC, FAANP, FADCES, FAAN

The University of Utah College of Nursing, Salt Lake City, Utah, USA

Panelists

Andrew Farmer, DM, FRCGP

Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, United Kingdom

Felix Lee, MPharm, MSc, MBA

Sanofi, Bridgewater, New Jersey, USA

David T. Ahn, MD

Mary & Dick Allen Diabetes Center, Hoag Memorial Hospital Presbyterian, Newport Beach, California, USA

9:40

Break

PANEL 2: TELEHEALTH AND COACHING

How to apply coaching to improve diabetes outcomes?

9:55

Moderators

Warris Bokhari, MBBS

Amazon, Seattle, Washington, USA

David Kerr, MBChB, DM, FRCP, FRCPE

Sutter Health, Santa Barbara, California, USA

Panelists

Wei-An (Andy) Lee, DO

Los Angeles General Medical Center, Los Angeles, California, USA

Anand K. Iyer, PhD, MBA

WellDoc, Inc., Columbia, Maryland, USA

Sacha Uelmen, RDN, CDCES

Association of Diabetes Care & Education Specialists, Chicago, Illinois, USA

11:30

Lunch

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WORKSHOP B: METRICS FOR ASSESSING GLYCEMIA AND COMPLICATIONS

PANEL 1: ANALYTICAL AND CLINICAL CGM METRICS

What are the latest metrics for CGM?

- 12:30 **Moderators**
Guillermo Umpierrez, MD
Emory University School of Medicine, Atlanta, Georgia, USA

Eda Cengiz, MD, MHS, FAAP
University of California, San Francisco, School of Medicine, San Francisco, California, USA
- 12:35 **The Glycemia Risk Index**
David Klonoff, MD, FACP, FRCP (Edin), Fellow AIMBE
Mills-Peninsula Medical Center, San Mateo, California, USA
- 12:50 **Update on Time in Range**
Richard M. Bergenstal, MD
International Diabetes Center, HealthPartners Institute, Minneapolis, Minnesota, USA
- 13:05 **Tight Time in Range**
Viral N. Shah, MD
Barbara Davis Center for Diabetes, University of Colorado, Aurora, Colorado, USA
- 13:20 **Continuous Glucose Deviation Interval and Variability Analysis (CG-DIVA)**
Manuel Eichenlaub, PhD
Institut für Diabetes-Technologie, Forschungs- und Entwicklungsgesellschaft mbH an der Universität Ulm,
Ulm, Germany
- 13:35 **Glycemic Ratio for Critically Ill People**
James S. Krinsley, MD
Division of Critical Care, Stamford Hospital, Columbia University College of Physicians and Surgeons,
Stamford, Connecticut, USA
- 13:50 **Q&A / Panel Discussion**
- 14:10 **Break**

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PANEL 2: SENSORS FOR DIAGNOSING COMPLICATIONS IN DIABETES

How can technology identify complications of diabetes?

- 14:25 **Moderators**
Michael J. McShane, PhD
Department of Biomedical Engineering, Texas A&M University, College Station, Texas, USA
Andjela Drincic, MD
Department of Diabetes, Endocrinology, and Metabolism, University of Nebraska Medical Center,
Omaha, Nebraska, USA
- 14:30 **External Eye Screening as an Adjunct to Retinal Screening**
Jorge A. Cuadros, OD, PhD
Herbert Wertheim School of Optometry and Vision Science, University of California, Berkeley,
Berkeley, California, USA
- 14:45 **Monitoring Exercise for Precision Diabetes**
Michael C. Riddell, PhD
Department of Kinesiology & Health Science, Muscle Health Research Centre, York University,
Toronto, ON, Canada
- 15:00 **A Multimodal Sensor Panel for Diabetes**
Gerard L. Coté, PhD
Department of Biomedical Engineering, Texas A&M University, College Station, Texas, USA
- 15:15 **IEEE 2621: The Diabetes Device Cybersecurity Standard**
Ted Osinski
Institute of Electrical and Electronics Engineers, Piscataway, New Jersey, USA
- 15:30 **Racial-Ethnic Disparities in Wearable Diabetes Devices**
Devin W. Steenkamp, MBChB
Boston University Chobanian & Avedisian School of Medicine, Boston, Massachusetts, USA
- 15:45 **Q&A / Panel Discussion**
- 16:05 **Adjourn**

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FRIDAY, NOVEMBER 3, 2023

- 8:00 **Introduction**
David Klonoff, MD, FACP, FRCP (Edin), Fellow AIMBE
Mills-Peninsula Medical Center, San Mateo, California, USA
- 8:05 **iCoDE 1 and 2**
Juan Espinoza, MD, FAAP
Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois, USA
- 8:25 **Q&A**

SESSION 1: DIABETES DATA SCIENCE

- 8:30 **Moderators**
William T. Cefalu, MD
Division of Diabetes, Endocrinology, & Metabolic Diseases, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland, USA
John C. Pickup, MA, DPhil, FRCPath
King's College London School of Medicine, London, UK
- Panelist**
Eirik Årsand, PhD
UiT Arctic University of Norway, Tromsø, Norway
- 8:35 **Overview of Diabetes Data Science**
Boris Kovatchev, PhD
University of Virginia, Charlottesville, Virginia, USA
- 8:55 **Precision Monitoring in Diabetes**
Norbert Hermanns, PhD
Research Institute of the Diabetes Academy Mergentheim (FIDAM), Bad Mergentheim, Germany
- 9:15 **Digital Twinning Technologies in Type 1 Diabetes**
Andrea Facchinetti, PhD
Department of Information Engineering, University of Padova, Padova, Italy
- 9:35 **Q&A / Panel Discussion**

SESSION 2: NOVEL INDICATIONS FOR CGM

How can people without diabetes benefit from CGM?

- 9:50 **Moderators**
Julia K. Mader, MD
Division of Endocrinology and Diabetology, Department of Internal Medicine, Medical University of Graz, Austria
Kong Y. Chen, PhD
National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, Maryland, USA
- 9:55 **CGM in People without Diabetes**
Tracey L. McLaughlin, MD, MS
Stanford University School of Medicine, Stanford, California, USA

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- 10:10 **CGM in Pregnancy**
Stephanie A. Fisher, MD, MPH
Northwestern University Feinberg School of Medicine, Chicago, Illinois, USA
- 10:25 **CGM in Kidney Disease**
Connie M. Rhee, MD, MSc
VA Greater Los Angeles Healthcare System, Los Angeles, California, USA and David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, California, USA
- 10:40 **The Use of CGM in the Hospital**
Kathleen M. Dungan, MD, MPH
The Ohio State University, Columbus, Ohio, USA
- 10:55 **Q&A / Panel Discussion**
- 11:10 **Break**

SESSION 3: REGULATION OF DIABETES DEVICES AND DRUGS

What are new trends in FDA regulation of diabetes devices and drugs?

- 11:25 **Moderators**
Alberto Gutierrez, PhD
NDA Partners LLC, Bethesda, Maryland, USA
Naomi Schwartz, MS
Medcrypt, Inc., San Diego, California, USA
- 11:30 **Update in Digital Health Regulation**
Matthew C. Diamond, MD, PhD
Center for Devices and Radiological Health, United States Food and Drug Administration, Silver Spring, Maryland, USA
- 11:40 **Medical Device Cybersecurity**
Jessica Wilkerson, JD
Center for Devices and Radiological Health, United States Food and Drug Administration, Silver Spring, Maryland, USA
- 11:50 **Regulatory Considerations for Comparator Glucose Technology**
Deanna Bousalis, PhD
Center for Devices and Radiological Health, United States Food and Drug Administration, Silver Spring, Maryland, USA
- 12:00 **Regulation of Diabetes Drugs**
Zan Fleming, MD
Kinexum, Harpers Ferry, West Virginia, USA
- 12:15 **Q&A / Panel Discussion**
- 12:30 **Lunch**

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SESSION 4: PUMP TECHNOLOGY

What are the challenges to building a commercially successful insulin pump?

- 13:00 **Moderators**
Robert A. Gabbay, MD, PhD
American Diabetes Association, Arlington, Virginia, USA
Douglas Muchmore, MD
La Jolla Endo, LLC, La Jolla, California, USA
- 13:05 **Advances in Infusion Sets**
Sarnath Chattaraj, PhD
Medtronic Diabetes, Northridge, California, USA
- 13:15 **Advances in Infusion Set Needles and Cannulas**
Jeffrey Joseph, DO
Jefferson Artificial Pancreas Center, Sidney Kimmel Medical College of Thomas Jefferson University, Philadelphia, Pennsylvania, USA
- 13:25 **Combining Glucose Monitoring and Insulin Infusion in an Integrated Device: Challenges and Solutions**
Lutz Heinemann, PhD
Science Consulting in Diabetes, Düsseldorf, Germany
- 13:35 **Determining Flow Rate from an Insulin Pump**
Ralph Ziegler, MD
Diabetes Clinic for Children and Adolescents, Muenster, Germany
- 13:45 **Last Things First – the Importance of Design for Manufacturability**
Michael Schoemaker, PhD
Pharmasens AG, Biel, Switzerland
- 13:55 **Q&A / Panel Discussion**

SESSION 5: BLOOD GLUCOSE MONITORING TECHNOLOGY

What is the role of BGM in various parts of the world?

- 14:10 **Moderators**
Hubert W. Vesper, PhD
Centers for Disease Control and Prevention, Atlanta, Georgia, USA
Halis K. Aktürk, MD
Barbara Davis Center for Diabetes, University of Colorado, Aurora, Colorado, USA
- 14:15 **Reference Comparators for BG Sensor Testing**
Timothy S. Bailey, MD, FACE, CPI
AMCR Institute, Escondido, California, USA
- 14:25 **Interfering Substances**
Andreas Pfützner, MD, PhD
Pfützner Science and Health Institute, Mainz, Germany
- 14:40 **Platforms to Present Glucose Data**
Mark A. Clements, MD, PhD, CPI, FAAP
Children's Mercy Hospitals & Clinics, Kansas City, Missouri, USA

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- 14:55 **The Role of BGM in Today's World**
Yong Mong Bee, MBBS, MRCP(UK), FRCP Edin
Department of Endocrinology, Singapore General Hospital, Singapore
- 15:10 **Q&A / Panel Discussion**
- 15:20 **Break**

SESSION 6: EMERGING AID TECHNOLOGY

What are the features of a successful AID algorithm?

- 15:35 **Moderators**
Jeffrey Joseph, DO
Jefferson Artificial Pancreas Center, Sidney Kimmel Medical College of Thomas Jefferson University, Philadelphia, Pennsylvania, USA

Carol Levy, MD, CDCES
Division of Endocrinology, Diabetes, and Metabolism, Icahn School of Medicine at Mount Sinai, New York City, New York, USA
- 15:40 **Bihormonal Systems: Automating Both Insulin and Glucagon Delivery**
Steven J. Russell, MD, PhD
Massachusetts General Hospital Diabetes Research Center, Boston, Massachusetts, USA
- 15:50 **The Loop Algorithm**
Rayhan A. Lal, MD
Stanford University, Stanford, California, USA
- 16:00 **AID systems. Are we there yet? A clinician's perspective.**
David N. O'Neal, MD, FRACP, FRCP (Edin)
University of Melbourne, Melbourne, VIC, Australia
- 16:10 **Improving the Performance of an AID system with SGLT2i**
Ahmad Haidar, PhD
McGill University, Quebec, Canada
- 16:20 **Personal Patient Experience with Loop**
Patient 1
- 16:25 **Personal Patient Experience with Loop**
Patient 2
- 16:30 **Q&A / Panel Discussion**
- 16:45 **Adjourn**

SATURDAY, NOVEMBER 4, 2023

SESSION 7: DRUGS FOR DIABETES

Which new drugs or indications for diabetes look promising?

- 8:00 **Moderators**
Mohammed E. Al Sofiani, MBBS, MSc
King Saud University, Riyadh, Saudi Arabia / Johns Hopkins University, Baltimore, Maryland, USA
Signe Schmidt, MD, PhD
Steno Diabetes Center Copenhagen (SDCC), Copenhagen, Denmark
- 8:05 **Gold Student Award Winner: DR-CIB: an Algorithm for the Preventive Administration of Corrective Insulin Boluses in Type 1 Diabetes based on Dynamic Risk Concept and Patient-Specific Timing**
Elisa Pellizzari, MSc
University of Padova, Padova, Italy
- 8:20 **Tirzepatide / Semaglutide for Obesity and T2DM**
Eric Zijlstra, PhD
Profil, Neuss, Germany
- 8:35 **Weekly Insulin for Type 1 and Type 2 Diabetes**
Ronald Goldenberg, MD, FRCPC, FACE
LMC Diabetes & Endocrinology, Concord, Ontario, Canada
- 8:50 **Inhaled Insulin**
Alfonso Galderisi, MD, PhD
Yale University, New Haven, Connecticut, USA
- 9:05 **Tzield/Teplizumab - Why and for Whom?**
Stephen E. Gitelman, MD
Division of Endocrinology, Department of Pediatrics, University of California, San Francisco, San Francisco, California, USA
- 9:20 **Q&A / Panel Discussion**

SESSION 8: ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

What is the role of AI/ML in diabetes management?

- 9:35 **Moderators**
Boris Kovatchev, PhD
University of Virginia, Charlottesville, Virginia, USA
Riccardo Bellazzi, PhD
Università di Pavia, Pavia, Italy
- 9:40 **Bridge to Artificial Intelligence**
Xujing Wang, PhD
Division of Diabetes, Endocrinology, & Metabolic Diseases, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland, USA
- 9:55 **Consensus Guidelines for Using Artificial Intelligence and Machine Learning to Improve Glucose Management in Diabetes: Best Practices, Pitfalls and Opportunities**
Peter G. Jacobs, PhD
Oregon Health & Science University, Portland, Oregon, USA

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- 10:10 **Uncertainty-aware Nocturnal Hypoglycemia Prediction in People with Type 1 Diabetes on Multiple Daily Injections**
Clara Mosquera-Lopez, PhD
Oregon Health & Science University, Portland, Oregon, USA
- 10:25 **Artificial Intelligence for Treating Diabetes**
Moshe Phillip, MD
Schneider Children's Medical Center of Israel, Petah Tikva, Israel
- 10:40 **Q&A / Panel Discussion**
- 10:55 **Break**

SESSION 9: NOVEL ANALYTES FOR DIABETES

What should be measured for diabetes besides blood glucose?

- 11:15 **Moderators**
Guillermo Arreaza-Rubín, MD
Division of Diabetes, Endocrinology, and Metabolic Diseases, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland, USA
Alan H.B. Wu, PhD
University of California, San Francisco, San Francisco, CA, USA
- 11:20 **Noninvasive Glucose Monitoring - When Will It Arrive?**
Mark A. Arnold, PhD
The University of Iowa, Iowa City, Iowa, USA
- 11:35 **Continuous Ketone Monitoring**
Shridhara Alva, PhD
Abbott Diabetes Care, Alameda, California, USA
- 11:50 **Biomarkers Screening for Asymptomatic Heart Failure**
Ambarish Pandey, MD
UT Southwestern Medical Center, Dallas, Texas, USA
- 12:05 **Q&A / Panel Discussion**
- 12:20 **Lunch**

SESSION 10: NEW TECHNOLOGY DEVELOPMENTS IN COMMERCIAL CGMS

What is new in CGM technology?

- 12:50 **Moderators**
Nestoras Mathioudakis, MD, MHS
Johns Hopkins University School of Medicine, Baltimore, Maryland, USA
Elias K. Spanakis, MD
Baltimore VA Medical Center and School of Medicine, University of Maryland, Baltimore, Maryland, USA
- 12:55 **Abbott Technology**
Anila Bindal, MD
Abbott Diabetes Care, Alameda, California, USA

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- 13:07 **Dexcom Technology**
Danny Cherňavsky, MD
Dexcom, Inc., San Diego, California, USA
- 13:19 **Medtronic Technology**
Robert Vigersky, MD
Medtronic, Washington, D.C., USA; Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA
- 13:31 **Senseonics Technology**
Hari Sree, PhD
Senseonics Inc., Germantown, Maryland, USA
- 13:43 **Pacific Diabetes Technologies**
Thomas Seidl, PhD
Pacific Diabetes Technologies, Portland, Oregon, USA
- 13:55 **Q&A / Panel Discussion**

SESSION 11: SKIN PHYSIOLOGY

How does diabetes affect skin health?

- 14:10 **Moderators**
Gerald R. Sydorak, MD, FACS
Seton Medical Center, Daly City, California, USA
Bijan Najafi, PhD, MSc
Baylor College of Medicine, Houston, Texas, USA
- 14:15 **Device Induced Inflammation**
Ulrike Klueh, PhD
Department of Biomedical Engineering, Integrative Biosciences Center, Wayne State University, Detroit, Michigan, USA
- 14:30 **Identifying and Preventing Lipohypertrophy**
Jane Jeffrie Seley, DNP, MPH, MSN, GNP, BC-ADM, CDCES
Weill Cornell Medicine, Division of Endocrinology, Diabetes & Metabolism, New York City, New York, USA
- 14:45 **Effects of Infusion Pumps**
Jannet Svensson, MD, PhD
Steno Diabetes Center Copenhagen, Herlev, Denmark
- 14:55 **Glycemic and Geriatric Challenges: Understanding Wound Healing Dynamics in Frail Diabetic Patients**
Bijan Najafi, PhD, MSc
Baylor College of Medicine, Houston, Texas, USA
- 15:05 **Q&A / Panel Discussion**
- 15:20 **Break**

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SESSION 12: HOT TOPICS

What are promising new technologies for diabetes?

- 15:40 **Moderators**
Umesh Masharani, MB, BS
University of California, San Francisco, San Francisco, California, USA

Geoff Chase, PhD
University of Canterbury, Christchurch, New Zealand
- 15:45 **How Can Technology Improve Patient Adherence to Offloading?**
Bijan Najafi, PhD, MSc
Baylor College of Medicine, Houston, Texas, USA
- 15:55 **Peritoneal Insulin Delivery**
Diane J. Burgess, PhD
University of Connecticut, Storrs, Connecticut, USA
- 16:05 **Machine Learning for Multiple Sensor Datastreams and Explainable AI**
Ali Cinar, PhD
Illinois Institute of Technology, Chicago, Illinois, USA
- 16:15 **Green Diabetes**
Ed Krisiunas, MLS(ASCP), MPH
WNWN International, Burlington, Connecticut, USA
- 16:25 **Q&A / Panel Discussion**

SESSION 13: LIVE DEMONSTRATION

What is a new carbohydrate dispensing product for diabetes?

- 16:40 **Moderators**
Dorian Liepmann, PhD
University of California, Berkeley, Berkeley, California, USA

Jane Jeffrie Seley, DNP, MPH, MSN, GNP, BC-ADM, CDCES
Weill Cornell Medicine, Division of Endocrinology, Diabetes & Metabolism, New York City, New York, USA
- 16:45 **House of Carbs - Personalized Carbohydrate Dispenser for People with Diabetes**
Eirik Årsand, PhD
UiT Arctic University of Norway, Tromsø, Norway

Pietro Randine
UiT Arctic University of Norway, Tromsø, Norway
- 17:00 **Closing Statement and Adjourn**
David Klonoff, MD, FACP, FRCP (Edin), Fellow AIMBE
Mills-Peninsula Medical Center, San Mateo, California, USA