### SESSION 1  
**20TH WCIRDC CELEBRATION – A TRIBUTE TO GERALD REAVEN**  
Chair: Ralph DeFronzo, MD

- **8:15 am**  
  Insulin Resistance in T2DM Molecular and Clinical Considerations  
  Lawrence J. Mandarino, PhD

- **8:35 am**  
  Fat/Adipocytes and Insulin Resistance  
  Philipp Scherer, PhD

- **8:55 am**  
  Insulin Resistance and Cardiovascular Disease  
  Ralph A. DeFronzo, MD

- **9:15 am**  
  Insulin Resistance, Insulin Secretion, Insulin Clearance: Who is the Culprit?  
  Steven Kahn, MD

- **9:35 am – 9:55 am**  
  Panel Discussion and Q&A

- **9:55 am – 10:25 am**  
  REFRESHMENT BREAK

### SESSION 2  
**COVID 19 & Metabolism**  
Chairs: Chris K. Guerin, MD • Ronald Krauss, MD

- **10:25 am**  
  Racial Health Disparities in Cardiovascular Disease During the COVID-19 Pandemic  
  Karol Watson, MD, PhD

- **10:45 am**  
  Obesity and Insulin Resistance in Acute and Long Covid  
  Tracey McLaughin, MD

- **11:05 am**  
  Cardiovascular Sequelae of COVID-19 in Adults – ACC Experts Pathway  
  Pam Taub, MD

- **11:25 am - 11:40 am**  
  Panel Discussion and Q&A

### MEET THE EXPERTS  
**CONCURRENT SESSIONS**

**11:40 am – 12:30 pm**  
- Ralph DeFronzo, MD  
  Insulin Resistance - Intensive Management of DM  •  Sierra C/D
- George Grunberger, MD  
  Technology  •  Club
- Norman Lepor, MD  
  Cardiac Imaging  •  Hiro
- Yehuda Handelsman, MD  
  DM-Cardio-Renal-Metabolic: Global Approach  •  Salon 6AB

### SESSION 3  
**Metabolism & WCIRDC - Joint Session**  
Chair: Christos Mantzoros, MD, PhD

- **1:30 pm**  
  Targeting Sarcopenic Obesity to Mitigate Risk of Cardiovascular Disease  
  John P. Kirwan, MSc, PhD

- **1:50 pm**  
  Glucose is not always sweet: Mechanisms, Presentation, & Treatments of DM Co-Morbidities  
  Luigi Gnudi, MD, PhD

- **2:10 pm**  
  Daily Coating of the Intestine Impact on Weight Loss and Dysglycemia  
  Ali Tavakkoli, MD

- **2:30 pm – 2:45 pm**  
  Panel Discussion and Q&A

### SESSION 4  
**GERALD REAVEN DISTINGUISHED LEADER IN INSULIN RESISTANCE – 2020 AWARD**

- **2:45 pm**  
  Presented by  
  Sonia Caprio, MD

- **2:50 pm**  
  KEYNOTE  
  Leadership in Addressing Unmet Clinical Needs in Metabolism- an American Odyssey From the Bedside to Nucleoside and Back  
  Christos Mantzoros, MD, PhD

- **3:20 pm – 3:30 pm**  
  Q&A

- **3:30 pm – 4:00 pm**  
  REFRESHMENT BREAK
SESSION 5  Diabetes Management Circa 2022
Chairs: Tracey McLaughlin, MD, MS • Richard Pratley, MD

4:00 pm  Fused Incretins - Mechanisms of Action
4:20 pm  2023 - Incretins in the Management of Diabetes
4:40 pm  2022 ADA-EASD Consensus Management of Hyperglycemia
5:00 pm  CGM - The VA Experience
5:20 pm – 5:40 pm Panel Discussion and Q&A

SESSION 6  Fatty Liver Disease & The Heart
Chairs: Derek LeRoith, MD • George Grunberger, MD

5:40 pm  New Developments in NASH
6:00 pm  Interplay Between Non-Alcoholic Fatty Liver & the Heart
6:20 pm – 6:30 pm Panel Discussion and Q&A

6:30 pm – 7:30 pm  WELCOME & POSTER RECEPTION AT EXHIBIT HALL

SESSION 7  Contemporary Approach to Heart Failure
Chairs: Vivian Fonseca, MD • Erin Michos, MD

8:10 am  Biomarkers in Early Identification, Monitoring & Prognostic Value of Heart failure
8:30 am  Management of HF - 2022 GLs and Beyond
8:50 am - 9:00 am Panel Discussion and Q&A

SESSION 8  Insulin Resistance Today & Tomorrow
Chairs: Richard Bergman, PhD • Philipp Scherer, MD

9:00 am  PATAS - Ameliorate Insulin Resistance, Diabetes and Comorbidities by Targeting Adipocytes
9:20 am  Fatty Pancreas Disease
9:40 am  Bile Acids & Gut Microbiota - Link with Metabolism and Inflammation in Insulin Resistance and NASH
10:00 am – 10:15 am Panel Discussion and Q&A
10:15 am – 10:45 am REFRESHMENT BREAK
### SESSION 9  
**From Childhood Risks to Diseases in Adults**  
Chairs: Sonia Caprio, MD • Alan Sinaiko, MD

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<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>10:45 am</td>
<td>Mechanistic Insight Into the Heterogeneity of Glucose Response in Youth with Obesity</td>
<td>Sonia Caprio, MD</td>
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<tr>
<td>11:05 am</td>
<td>Early Kidney Disease in Youth and Young Adults with Type 2 Diabetes</td>
<td>Petter Bjornstad, MD</td>
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<tr>
<td>11:25 am</td>
<td>Childhood Cardiovascular &amp; DM Risks leading to Adult Diabetes &amp; Cardiovascular Events</td>
<td>Alan Sinaiko, MD</td>
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<td>11:45 am – 12:00 pm</td>
<td>Panel Discussion and Q&amp;A</td>
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### SESSION 10  
**The Early Intervention**  
Chair: Peter Grant, MD  
Yehuda Handelsman, MD

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<th>Time</th>
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<tr>
<td>12:00 pm – 12:25 pm</td>
<td>The Early Intervention &amp; Intensive Therapy in T2D Cardio Renal Metabolic Disease</td>
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<td>12:25 pm – 12:30 pm</td>
<td>Q&amp;A</td>
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<td>12:30 pm – 1:30 pm</td>
<td>LUNCH BREAK</td>
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### SESSION 11  
**A New Frontier in Microvascular Complications of T2DM**  
Chairs: Mark Kearney, MD • Peter Grant, MD

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<th>Time</th>
<th>Topic</th>
<th>Speaker(s)</th>
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<tr>
<td>1:30 pm</td>
<td>Microvascular Disease: The Wrong Targets?</td>
<td>Peter J. Grant, MD</td>
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<td>1:50 pm</td>
<td>Cardiac Microvascular Disease: Cinderella Comes to the Ball</td>
<td>Robert Chilton, DO</td>
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<td>2:10 pm</td>
<td>Unifying Mechanisms of Endothelial Cell Crosstalk</td>
<td>Mark T Kearney, MD</td>
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<td>2:30 pm – 2:45 pm</td>
<td>Panel Discussion and Q&amp;A</td>
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### SESSION 12  
**Cardiometabolic Associated Women Health**  
Chairs: Pam R. Taub, MD • Matthew Budoff, MD

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<th>Time</th>
<th>Topic</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>2:45 pm</td>
<td>Lipids in Women Across the Lifespan</td>
<td>Erin Michos, MD</td>
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<tr>
<td>3:05 pm</td>
<td>Contemporary Approach to Cardiovascular Care for Women</td>
<td>Martha Gulati, MD</td>
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<tr>
<td>3:25 pm</td>
<td>Preeclampsia: Pathophysiology, Prevention and Prognosis</td>
<td>Erin Michos, MD</td>
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<td>3:45 pm – 4:00 pm</td>
<td>Panel Discussion and Q&amp;A</td>
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<td>4:00 pm – 4:30 pm</td>
<td>REFRESHMENT BREAK</td>
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### SESSION 13  
**A Glimpse into the Future - What’s in the Pipeline? Non-CME**  
Chairs: Ralph DeFronzo, MD • Christos Mantzoros, MD, PhD

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<tr>
<th>Time</th>
<th>Company/Research Institution</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>4:30 pm</td>
<td>AstraZeneca</td>
<td>Helen Yeh, PhD</td>
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<td>4:45 pm</td>
<td>Amgen</td>
<td>Erik Magnus Ohman, MD</td>
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<td>5:00 pm</td>
<td>Abbot</td>
<td>Marc Toub, PhD</td>
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<td>5:15 pm</td>
<td>Bayer</td>
<td>Martin Van Eickels, MD</td>
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<td>5:30 pm</td>
<td>Novo Nordisk</td>
<td>Kevin Grove, PhD</td>
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<td>5:45 pm – 6:00 pm</td>
<td>Panel Discussion and Q&amp;A</td>
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### NEW HORIZONS IN THE MANAGEMENT OF DIABETES KIDNEY DISEASE

**Chairs:** Matthew Weir, MD | Yehuda Handelsman, MD

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<th>Time</th>
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<tr>
<td>6:00 pm</td>
<td><strong>CME DINNER SYMPOSIUM</strong></td>
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<td><strong>NEW HORIZONS IN THE MANAGEMENT OF DIABETES KIDNEY DISEASE</strong></td>
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<td><strong>Chairs:</strong> Matthew Weir, MD</td>
<td>Yehuda Handelsman, MD</td>
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<tr>
<td>6:00 pm</td>
<td>Introduction &amp; Pre CME Questions</td>
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<td>6:10 pm</td>
<td>CKD in Diabetes-Prevalence, Pathophysiology Impact on Cardiometabolic Diseases</td>
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<td>6:25 pm</td>
<td>Diagnosing DKD- Screening, Methodology Role of Guidelines</td>
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<td>6:45 pm</td>
<td>New Treatment Paradigm of DKD the Role of Non-Steroidal MRA</td>
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<td>7:05 pm</td>
<td><strong>Q&amp;A Panel Discussion:</strong> The Future is Here- Management of DKD</td>
<td>Matthew Weir, MD</td>
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<td>7:25 pm</td>
<td>Post CME Questions</td>
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<td>7:30 pm</td>
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**Supported by Educational Grant from BAYER**

**NEW HORIZONS IN THE MANAGEMENT OF DIABETES KIDNEY DISEASE**

**Chairs:** Matthew Weir, MD | Yehuda Handelsman, MD

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<tr>
<td>7:30 pm</td>
<td><strong>ABSTRACT ORAL PRESENTATION</strong></td>
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<td><strong>Sierra C/D Cheese and Wine</strong></td>
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<td><strong>Abstract Committee:</strong> Vivian Fonseca, MD • George Grunberger, MD • Derek LeRoith, MD</td>
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<td>Philip Levy, MD • Christian Mende, MD • Richard Pratley, MD • Matthew Weir, MD</td>
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<td></td>
<td><strong>Abstracts are published in Metabolism</strong> Editor-in-Chief: Christos S. Mantzoros, MD, PhD</td>
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<tr>
<td>7:00 am</td>
<td><strong>Registration</strong></td>
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<td>7:00 am</td>
<td><strong>BREAKFAST SESSION NON-CME PRODUCT THEATER HALL</strong></td>
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<td></td>
<td><strong>Title:</strong> Collaborative Care for T2DM: The Importance of a Multidisciplinary</td>
<td>Pamela R. Kushner, MD</td>
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<td><strong>Care Team to Improve T2DM Patient Outcomes</strong></td>
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<td><strong>Supported by:</strong> Boehringer Ingelheim and Lilly Inc</td>
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<td>7:55 am</td>
<td>Summary of Day 2</td>
<td>Zachary Bloomgarden, MD</td>
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<td>8:00 am</td>
<td>Oral Abstract Winner Award Presentation</td>
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<td>8:10 am</td>
<td>Pre-CME Questions</td>
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<td>8:15 am</td>
<td><strong>SESSION 14 Implementations Approach to Clinical Care</strong></td>
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<td><strong>Chairs:</strong> Robert Chilton, DO • Erin Michos, MD</td>
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<td>8:15 am</td>
<td>Cardiometabolic Alliance Patient-Level Registry Data</td>
<td>Mikhail Kosiborod, MD</td>
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<td>8:35 am</td>
<td>Remote, Algorithmic Management of Cardio-Metabolic Disorders at Scale: Disrupting Medicine?</td>
<td>Jorge Plutzky, MD</td>
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<td>8:55 am</td>
<td>Panel Discussion and Q&amp;A</td>
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<td>9:05 am</td>
<td><strong>SESSION 15 CKD in Obesity &amp; Diabetes</strong></td>
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<td><strong>Chairs:</strong> Samuel Klein, MD • Christian Mende, MD</td>
<td>Matthew Weir, MD</td>
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<td>9:05 am</td>
<td>Obesity and Dysmetabolism as Risk Factors for CKD</td>
<td>Matthew Weir, MD</td>
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<td>9:25 am</td>
<td>CKD 3 as CV Risk Equivalent</td>
<td>Matthew Budoff, MD</td>
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<td>9:45 am</td>
<td>Panel Discussion and Q&amp;A</td>
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<td>9:55 am</td>
<td><strong>REFRESHMENT BREAK</strong></td>
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<td>10:10 am</td>
<td><strong>SESSION 16 Atherosclerosis Cardiovascular Disease</strong></td>
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<td><strong>Chairs:</strong> Mikhail Kosiborod, MD • Jorge Plutzky, MD</td>
<td>Naomi M. Hamburg, MD</td>
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<td>10:10 am</td>
<td>Contemporary Management of Peripheral Artery Disease</td>
<td>Martha Gulati, MD</td>
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<td>10:30 am</td>
<td>CVOT – 2022 Update</td>
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<td>10:50 am</td>
<td>Panel Discussion and Q&amp;A</td>
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## SESSION 17
**GERALD REAVEN DISTINGUISHED LEADER IN INSULIN RESISTANCE – 2022 AWARD**

**Presented by:** Peter Grant, MD  
**KEYNOTE:** Using Predictive Analytics to Improve Diabetes Care  
**Q&A:** Vivian Fonseca, MD

### 11:45 am - 12:30 pm
**LUNCH BREAK / CHECK OUT**

### 11:55 am – 12:40 pm
**LUNCH SESSION**  
**NON-CME**  
**PRODUCT THEATER HALL**  
**Title:** An Overview of the FreeStyle Libre 3 system  
**Supported by:** Abbott Diabetes  
**George Grunberger, MD**

## SESSION 18
**Lancet, Diabetes and Endocrinology & WCIRDC Joint Session**

**Contemporary Issues in Diabetes**  
**Chairs:** Marta Koch, PhD • Derek LeRoith, MD

### 12:45 pm  
**Epidemiology of Diabetes and Clinical Characteristics**  
**Shivani Misra, MD**

### 1:05 pm  
**Heterogeneity of Type 2 Diabetes Phenotypes**  
**Paul Franks, MD, PhD**

### 1:25 pm  
**The Role of Non Insulin Interventions in T1D**  
**Michelle Van Name, MD**

### 1:45 – 2:00 pm  
**Panel Discussion and Q&A**

## SESSION 19
**Dyslipidemia and ASCVD**  
**Chairs:** Paul Jellinger, MD • Chris Guerin, MD

### 2:00 pm  
**Remnant Lipoproteins: The Rediscovered CVD Risk Factor**  
**Norman Lepor, MD**

### 2:20 pm  
**LDL and Lp(a) – The Interplay of the Bad and “Badder” Approach to Management**  
**Christie Ballantyne, MD**

### 2:40 pm – 2:50 pm  
**Panel Discussion and Q&A**

## SESSION 20
**Mitochondria, NAFLD/NASH & Cardiometabolic Disease**  
**Chair:** Bart Staels, MD

### 2:50 pm – 3:10 pm  
**Targeting Hepatic Mitochondrial Metabolism to Treat NAFLD/NASH and Cardiometabolic Disease**  
**Gerald Shulman, MD, PhD**

### 3:10 pm – 3:15 pm  
**Q&A**

### 3:15 pm – 3:30 pm  
**REFRESHMENT BREAK**

## SESSION 21
**Obesity, Diets & Health**  
**Chairs:** Bart Staels, MD • Richard Pratley, MD

### 3:30 pm  
**Late Breaking: A Phase 1 Study of AMG 133 in Subjects with Obesity**  
**Jane Parnes, MD**

### 3:40 pm  
**Energy Balance of Obesity and Weight Loss**  
**Kevin Hall, PhD**

### 4:00 pm  
**Effect of Weight Loss Induced by Diet +/- Exercise on Metabolic Function**  
**Samuel Klein, MD**

### 4:20 pm  
**Clinical Efficacy of Time Restricted Eating in People: Hope or Hype?**  
**Max Petersen MD, PhD**

### 4:40 pm  
**Managing Obesity Circa 2022 - The New & the Newer**  
**Eduardo Grunvald, MD**

### 5:00 pm – 5:15 pm  
**Panel Discussion and Q&A**

### 5:15 pm - 6:00 pm  
**CLINICAL WORKSHOP**

**Diabetes**  
**Yehuda Handelsman, MD • George Grunberger, MD**

**Lipids**  
**Paul Jellinger, MD • Paul Rosenblit, MD**

**Hypertension/Kidney**  
**Christian Mende, MD • Sierra B**

### Concurrent Sessions

**Sierra C/D**

**Club**

**Sierra B**

### Cheese & Wine