

**Program**  
8<sup>th</sup> Helmholtz Diabetes Conference

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Date: May 10-12, 2021

Online - Munich, Germany

**Monday, May 10<sup>th</sup>**

- 11:45-12:20**     *Welcome and Opening Remarks*
- 11:45-11:50     **Opening note**  
Stephan Herzig  
*Helmholtz Center Munich*
- 11:50-11:55     **Message from the Helmholtz Munich CEO**  
Matthias Tschöp  
*CEO, Helmholtz Center Munich*
- 11:55-12:10     **Welcome remarks**  
Anja Karliczek  
*German Ministry of Health*
- 12:10-12:20     **Introduction to the conference**  
Stephan Herzig  
*Helmholtz Center Munich*
- 12:20-12:45**     *Opening Keynote Lecture*  
Chair: *Stephan Herzig*
- Eleftheria Zeggini**, Helmholtz Center Munich  
*Next generation association studies of cardiometabolic traits*
- 12:45-13:00**     *Virtual coffee break*
- 13:00-14:15**     *Session 1: Neuronal control of metabolism (1)*  
Chairs: *Timo Müller, Natalia Pellegata*
- 13:00-13:25     **Jens Brüning**, MPI for Metabolism Research  
*Molecular and functional characterization of heterogenous POMC-neuron classes*
- 13:25-13:50     **Sadaf Farooqi**, University of Cambridge  
*The hunger genes – lessons from obesity and thinness*
- 13:50-14:15     **Randy Seeley**, University of Michigan  
*Progress and pitfalls in identifying the molecular mechanisms for the potent effects of bariatric surgery*
- 14:15-14:45**     *Virtual coffee break*
- 14:45-15:50**     *Session 2: Epigenetics and pharmacogenomics*  
Chairs: *Annette Peters, Raffaele Teperino*
- 14:45-15:10     **Andrew Pospisilik**, Van Andel Institute  
*Probabilistic and intergenerational mechanisms of metabolic disease susceptibility*
- HeIDI nominees:**
- 15:10-15:20     Katrin Fischer, Sanofi

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*Transcriptional effects of recurrent hypoglycemia in Streptozotocin-induced T1D mice*

- 15:20-15:30 Qi Chen, University of California  
*Sperm RNA code: how many secrets in programming offspring metabolic health*
- 15:30-15:40 Kyle Gaulton, University of California San Diego  
*Interpreting diabetes genetics using single cell epigenomics*
- 15:40-15:50 HelDi discussion round
- 15:50-16:20** *Virtual coffee break*
- 16:20-17:40** **Session 3: Adipose tissue**  
Chairs: Siegfried Ussar, Anja Zeigerer
- 16:20-16:45 **Philipp Scherer**, University of Texas Southwestern  
*Adipose tissue – Therapeutic target for diabetes and beyond*
- 16:45-17:10 **Andreas Stahl**, University of California Berkeley  
*Organ-on-a-chip solutions for diabetes research*
- HelDi nominees:**
- 17:10-17:20 Qiong (Annabel) Wang, City of Hope National Medical Center  
*Adipose tissue remodeling and cellular heterogeneity*
- 17:20-17:30 Jang Cholsoon, University of California Irvine  
*The landscape of temperature-dependent glucose usage by brown fat in vivo*
- 17:30-17:40 HelDi discussion round

**Tuesday, May 11<sup>th</sup>**

- 11:00-11:55** **Session 4: Genetics of type 1 diabetes**  
Chairs: Anette Ziegler, Mostafa Bakhti
- 11:00-11:25 **John A. Todd**, University of Oxford  
*How has genetics helped us approach prevention of type 1 diabetes?*
- HelDi nominees:**
- 11:25-11:35 Elisa De Franco, University of Exeter  
*Using gene discovery to understand human beta-cells development and function*
- 11:35-11:45 Irina Stefana, University of Oxford  
*Cytoplasmic versus nuclear hyperphosphorylated Tau in ageing and diabetes*
- 11:45-11:55 HelDi discussion round
- 11:55-13:00** *Virtual lunch break*
- 13:00-13:55** **Session 5: Cell Metabolism, Diabetes and Cancer**  
Chairs: Mauricio Berriel-Diaz, Fabiana Perocchi
- 13:00-13:25 **Kathryn Wellen**, University of Pennsylvania

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*Metabolic compartmentalization and chromatin modification*

**HeIDI nominees:**

- 13:25-13:35 Maria Rohm, Helmholtz Zentrum München  
*How fat talks - the role of lipids in cancer and metabolic disease*
- 13:35-13:45 Edward T. Chouchani, Harvard Medical School  
*The homeostatic succinate circuit: a systemic sensor for energetic adaptation*
- 13:45-13:55 HeIDI discussion round
- 13:55-14:30** *Virtual coffee break*

**14:30-15:25** ***Session 6: Neuronal control of metabolism (2)***  
Chairs: *Sonja Schriever, Natalie Kraemer*

- 14:30-14:55 **Jeffrey Friedman**, Rockefeller University  
*Leptin mediated regulation of adipose tissue innervation*

**HeIDI nominees:**

- 14:55-15:05 Lisa Beutler, Northwestern University  
*Long-lasting modulation of gut-brain communication underlying obesity*
- 15:05-15:15 Sophie Steculorum, MPI for Metabolism Research  
*Programming sensory regulation of metabolism*
- 15:15-15:25 HeIDI Discussion
- 15:25-16:00** *Virtual coffee break*

**16:00-16:55** ***Session 7: Lipid homeostasis and insulin secretion***  
Chairs: *Henrik Semb, Ingo Burtscher*

- 16:00-16:25 **Ronald Evans**, Salk Institute  
*TBD*

**HeIDI nominees:**

- 16:25-16:35 Bengt-Frederik Belgardt, German Diabetes Center  
*The role of sphingolipids in insulin secretion and diabetic beta cell dysfunction*
- 16:35-16:45 Katrin Svensson, Stanford University  
*Hormone discovery: control of glucose and lipid homeostasis through insulin-independent pathways*
- 16:45-16:55 HeIDI discussion round
- 16:55-17:30** *Virtual coffee Break*
- 17:30-18:30** Flash Talk Presentations sponsored by ***Molecular Metabolism***

**Wednesday, May 12<sup>th</sup>**

- 12:00-13:15** ***Session 8: Genetics of Diabetes***

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Chairs: *Alberto Cebrian Serrano, Martin Hrabě de Angelis*

- 12:00-12:25 **Sir Stephen O’Rahilly**, University of Cambridge  
*How does the brain sense the health and nutritional state of the body; some new insights*
- 12:25-12:50 **Andrew Hattersley**, University of Exeter Medical School  
*Learning about the role of insulin in fetal growth from human knockouts*
- 12:50-13:15 **Mitchell Lazar**, University of Pennsylvania  
*Functional natural variation at nuclear receptor-regulated enhancers in the human genome*
- 13:15-14:00 *Virtual lunch break*
- 14:00-15:15 **Session 9: Epigenetics of Diabetes**  
Chairs: *Robert Schneider, Daphne Cabianca*
- 14:00-14:25 **Romain Barrès**, University of Copenhagen  
*DNA methylation profiling of single spermatozoa from lean and obese humans*
- 14:25-14:50 **Sarah Kimmins**, McGill University  
*A tale of mice and men: the influence of obesity on the sperm epigenome and the inheritance of metabolic disorders*
- 14:50-15:15 **Oliver Rando**, University of Massachusetts Medical School  
*Effects of paternal diets and stressors on offspring metabolism*
- 15:15-15:45 *Virtual coffee break*
- 15:45-17:00 **Session 10: Hormone action**  
Chairs: *Kenneth Dyar, Henriette Uhlénhaut*
- 15:45-16:10 **C. Ronald Kahn**, Harvard Medical School  
*Defining the cellular and molecular basis of insulin resistance in human type 2 diabetes using a disease-in-a-dish model*
- 16:10-16:35 **Dan Drucker**, University of Toronto  
*GLP-1 action – From where and how?*
- 16:35-17:00 **Hei Suk Sul**, University of California Berkeley  
*Maintaining health adipose tissue- role of Aifm2 and ARCs*
- 17:00-17:30 *Virtual coffee break*
- 17:30-18:00 **The Helmholtz Diabetes Lecture**  
Chair: *Heiko Lickert*
- Susan Bonner-Weir**, Harvard University  
*The ever changing beta cell*
- 18:00-18:05 **HelDi Award Presentation**
- 18:05-18:10 **Helmholtz Best Abstract Prize Presentation**
- 18:10-18:15 **Closing Remarks**

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18:15

*End of Conference*

**2021 Confirmed speakers** Romain Barrès, University of Copenhagen, Susan Bonner-Weir, Harvard University, Jens Brüning, MPI for Metabolism Research, Dan Drucker, University of Toronto, Ronald Evans, Salk Institute, Sadaf Farooqi, University of Cambridge, Jeffrey Friedman, Rockefeller University, Andrew Hattersley, University of Exeter Medical School, C. Ronald Kahn, Harvard Medical School, Sarah Kimmins, McGill University, Mitch Lazar, University of Pennsylvania, Sir Stephen O’Rahilly, University of Cambridge, Andrew Pospisilik, Van Andel Institute, Oliver Rando, University of Massachusetts Medical School, Philipp Scherer, University of Texas Southwestern, Randy Seeley, University of Michigan, Andreas Stahl, University of California Berkeley, Hei Suk Sul, University of California Berkeley, John A. Todd, University of Oxford, Kathryn Wellen, University of Pennsylvania, Eleftheria Zeggini, Helmholtz Center Munich.

**2021 HelDI Award Nominees** Bengt-Frederik Belgardt, German Diabetes Center, Lisa Beutler, Northwestern University, Qi Chen, University of California, Edward T. Chouchani, Harvard Medical School, Jang Cholsoon, University of California Irvine, Elisa De Franco, University of Exeter, Katrin Fischer, Sanofi, Kyle Gaulton, University of California San Diego, Maria Rohm, Helmholtz Center Munich, Sophie Steculorum, MPI for Metabolism Research, Irina Stefana, University of Oxford, Katrin Svensson, Stanford University, Qiong (Annabel) Wang, City of Hope National Medical Center