

Joint Meeting of the EASD Islet Study Group & Beta Cell Workshop

Westin Bellevue, Dresden, May 7-10th, 2017

SUNDAY, MAY 7th 2017

From 16:00h REGISTRATION AND DISTRIBUTION OF MEETING MATERIAL

18:30h OPENING

Michele Solimena (for the BCW) (Dresden, DE)

Pierre Maechler (for the EASD) (Geneva, CH)

18:45h KEYNOTE LECTURE

Chair: Pierre Maechler (Geneva, CH)

Phase transition-driven protein assembly: a new view on intra-cellular compartmentalization

Anthony Hyman (Dresden, DE)

19:30h WELCOME RECEPTION

MONDAY, MAY 8th 2017

From 8:00h REGISTRATION AND POSTER MOUNTING

8:30h-10:30h SESSION 1: BETA CELL DEVELOPMENT

Chair: Leif Groop (Malmö, SE)

8:30h *Nkx2.2 acts downstream of Neurog3 to specify pancreatic endocrine lineages*

Lori Sussel (Denver, CO)

9:00h *Beyond transcription factors in the lineage selection and differentiation of pancreas progenitors*

Anthony Gavalas (Dresden, DE)

9:30h *Myelin transcription factors repress precocious stress responses for the function and survival of pancreatic beta cells*

Guoqiang Gu (Nashville, TN)

10:00h *Phosphoinositide 3Kinase (PI3K) regulates endocrine cell motility and pancreatic islet morphogenesis (Short Talk)*

Robin Kimmel (Innsbruck, AT)

10:15h *Synaptotagmin 13 regulates endocrine cell delamination during pancreas development (Short Talk)*

Mostafa Bakhti (Munich, DE)

10:30h COFFEE BREAK

MONDAY, MAY 8th 2017

11:00h-13:00h SESSION 2: BETA CELL MATURATION AND REGENERATION

Chair: Christopher Wright (Nashville, TN)

11:00h *Generating functionally mature beta cells from human stem cells*
Matthias Hebrok (San Francisco, CA)

11:30h *Glucotoxic block of beta cell regeneration*
Yuval Dor (Jerusalem, IS)

12:00h *mTOR signaling regulates the metabolic programming of beta cells
leading to functional maturation*
Anil Bhushan (San Francisco, CA)

12:30h *Heterogeneous NFkB activity balances proliferation and function in
aging beta cells (Short Talk)*
Sharan Janjuha (Dresden, DE)

12:45h *Transcriptome analysis of pancreatic cells across distant species
highlights novel important regulator genes (Short Talk)*
Bernard Peers (Liège, BE)

13:00h LUNCH

MONDAY, MAY 8th 2017

14:00h-16:00h SESSION 3: BETA CELL FUNCTION I

Chair: Shanta Persaud (London, UK)

14:00h *New and unexpected roles for SNARE proteins in the preservation of functional beta cell mass*

Debbie Thurmond (Los Angeles, CA)

14:30h *Longitudinal in vivo imaging of islets reveals a dominant role of beta cell function in diabetes pathogenesis*

Stephan Speier (Dresden, DE)

15:00h *Regulation of beta-cell function and fate by insulin*

James Johnson (Vancouver, CA)

15:30h *Reversal of human beta cell functional damage induced by lipoglutotoxic conditions or type 2 diabetes*

Piero Marchetti (Pisa, IT)

16:00h COFFEE BREAK

MONDAY, MAY 8th 2017

16:30h-18:30h SESSION 4: BETA CELL FUNCTION II

Chair: Hindrik Mulder (Malmö, SE)

16:30h *Why are large islets unresponsive to incretins?*

Susumu Seino (Kobe, JP)

17:00h *From absence to hyperactivity of glutamate dehydrogenase and the
hypo to hyperinsulinism*

Pierre Maechler (Geneva, CH)

17:30h *Genetic and nutritional control of beta cell connectivity*

Guy Rutter (London, UK)

18:00h *Glucose dependent granule docking limits insulin secretion and is
decreased in human type 2 diabetes (Short Talk)*

Nikhil Gandasi (Uppsala, SE)

18:15h *Primary cilia dysfunction disrupts glucose tolerance and beta cell
function (Short Talk)*

Francesco Volta (Munich, DE)

**18:30-20:30h POSTER PRESENTATION SESSION A (ODD NUMBERS) AND
REFRESHMENTS**

TUESDAY, MAY 9th 2017

8:30h-13:00h **CITY TOUR DRESDEN WITH EXHIBITION *NEW MASTERS OR OLD MASTERS***

13:00h **LUNCH**

14:00h **KEYNOTE LECTURE**

Chair: Stefan Bornstein (Dresden, DE)

From membrane rafts to lipidomics: a life-long journey

Kai Simons (Dresden, DE)

14:45h-15:45h **SESSION 5: BETA CELL MASS VS. DEDIFFERENTIATION IN T2D**

Chair: Gil Leibowitz (Jerusalem, IS)

14:45h *Beta cell loss in type 2 diabetes is not accounted for by dedifferentiation*

Peter Butler (Los Angeles, CA)

15:15h *When beta cells fail: lessons from dedifferentiation*

Domenico Accili (New York, NY)

15:45h **COFFEE BREAK**

TUESDAY, MAY 9th 2017

16:15h-18:15h SESSION 6: GENETICS & EPIGENETICS OF BETA CELLS IN T2D

Chair: Maureen Gannon (Nashville TN)

16:15h *Using human genetics and genomics to unravel causal mechanisms for diabetes*

Anna Gloyn (Oxford, UK)

16:45h *Systems biology on organ donor and surgical pancreas specimens defines a transcriptomic signature of type 2 diabetic islets*

Anke Schulte (Frankfurt, DE)

17:15h *Non-coding RNAs and beta cell function*

Lena Eliasson (Malmö, SE)

17:45h *Monogenic diabetes as models of beta cell organelle dysfunction in type 2 diabetes*

Miriam Cnop (Brussels, BE)

18:15h-20:15h POSTER PRESENTATION SESSION B (EVEN NUMBERS) AND REFRESHMENTS

WEDNESDAY, MAY 10th 2017

9:00h-10:30h SESSION 7: THE SOCIAL ENVIRONMENT OF THE BETA CELLS

Chair: Eduard Montanya (Barcelona, SP)

9:00h *Sharing is caring: how beta cell function depends on the islet environment*

Alejandro Caicedo (Miami, FL)

9:30h *Molecular and functional interplay between alpha- and beta-cellular clocks in mouse and human models*

Charna Dibner (Geneva, CH)

10:00h *Elucidating the role of pancreatic pericytes in diabetes-associated beta cell dysfunction (Short Talk)*

Limor Landsman (Tel Aviv, IS)

10:15h *PYY modulates pancreatic islet secretory function and acts as a DPP-IV substrate to regulate insulin secretion (Short Talk)*

Claudia Guida (Oxford, UK)

10:30h COFFEE BREAK

WEDNESDAY, MAY 10th 2017

11:00h-13:00h SESSION 8: BETA CELL THERAPY

Chair: Ole Madsen (Copenhagen, DK)

11:00h

Reconstructing human pancreatic organogenesis

Raphael Scharfmann (Paris, FR)

11:30h

*Drug design for beta cell protection in diabetes mellitus: NMDA
receptor antagonists*

Eckhard Lammert (Düsseldorf, DE)

12:00h

*Advances in pharmacologic therapy for human beta cell
regeneration*

Andrew Stewart (New York, NY)

12:30h

*Current status and future perspectives in diabetes therapy- from
cells, pills, and chimera*

Barbara Ludwig (Dresden, DE)

13:00h

LUNCH

WEDNESDAY, MAY 10th 2017

14:00h-16:00h SESSION 9: BETA CELL IMMUNE INTERACTION

Chair: Ezio Bonifacio (Dresden, DE)

- 14:00h *The resident phagocytes of pancreatic islets have a seminal role in islet development and inflammation*
Emil Unanue (St. Louis, MO)
- 14:30h *Complexities of beta cell failure in type 1 diabetes*
Clayton Mathews (Gainesville, FL)
- 15:00h *Coordinated analysis using complementary methodologies reveals a viral signature and demonstrates a low level enteroviral infection in the pancreas in type 1 diabetes*
Teresa Rodriguez-Calvo (Munich, DE)
- 15:30h *A novel, highly proliferative population of islet endocrine cells in adolescent and adult human pancreata (Short Talk)*
Jake Kushner (Houston, TX)
- 15:45h *Exosome-mediated transfer of microRNAs from lymphocytes to beta cells contributes to type 1 diabetes development (Short Talk)*
Claudiane Guay (Lausanne, CH)
- 16:00h **COFFEE BREAK**

WEDNESDAY, MAY 10th 2017

16:30h-17:30h SESSION 10: THE ROLE OF ALPHA CELLS IN ISLET FUNCTION

Chair: Anders Tengholm (Uppsala, SE)

16:30h *Beta cell reconstitution by modulation of islet cell-type
interconversion*

Pedro Herrera (Geneva, CH)

17:00h *Somatostatin mediates glucagonostatic effect of insulin*

Patrik Rorsman (Oxford, UK)

17:30h-18:30h KEYNOTE LECTURE AND CLOSING REMARKS

Chair: Michele Solimena (Dresden, DE)

17:30h *Control of pancreatic hormone secretion by brain glucose sensing
networks*

Bernard Thorens (Lausanne, CH)

19:30h-24:00h FAREWELL DINNER AT "SCHLOSS ALBRECHTSBERG"

Thursday, MAY 11th 2017

9:00h-17:00h DEPARTURE OR OPTIONAL TOURS TO...

...Dresden Museums

...City of Meissen

...Pillnitz Castle

...Saxonian Switzerland