

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Frontiers in Islet Biology and Diabetes (B3)

February 4-8, 2018 • Keystone Resort • Keystone, Colorado, USA

Scientific Organizers: Matthias Hebrok, Seung K. Kim, Felicia Pagliuca and Anil Bhushan

Supported by the Directors' Fund

Abstract & Scholarship Deadline: October 5, 2017 / Abstract Deadline: November 7, 2017 / Discounted Registration Deadline: December 7, 2017

SUNDAY, FEBRUARY 4

Arrival and Registration

MONDAY, FEBRUARY 5

Welcome and Keynote Address

Ronald M. Evans, Howard Hughes Medical Institute, Salk Institute, USA

Defining Regulators of beta Cell Maturation

Beta Cell Development/Maturation

Danwei Huangfu, Memorial Sloan-Kettering Cancer Institute, USA
Human Pancreas Development Through the Lens of Pluripotent Stem Cells

Chris Wright, Vanderbilt University Medical Center, USA
Transcriptional Regulation of beta Cell Formation

Anne Grapin-Botton, University of Copenhagen, Denmark
The Role of Planar Cell Polarity in Endocrine Cell Development

Short Talk(s) Chosen from Abstracts

Human Islet Biology

Alvin C. Powers, Vanderbilt University School of Medicine, USA
Lessons from Early Human Pancreatic Islet Development and Function

Anath Shalev, University Alabama at Birmingham, USA
Clinical Trials Promoting beta Cell Survival

Peter C. Butler, University of California, Los Angeles, USA
Mitochondrial Function in Human beta Cells

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, FEBRUARY 6

Alpha Cells/Intracellular Islet Communication

Patrick MacDonald, University of Alberta, Canada
Alpha Cell Function and Identity in Human T2D

Lori Susse, University of Colorado, USA
lncRNA in Cell Fate Determination

Roland W. Stein, Vanderbilt University Medical Center, USA
Maf Function in Islet Cells

Mark O. Huising, University of California, Davis, USA
Urocortin3-Mediated Feedback Regulation of Insulin Secretion

Short Talk(s) Chosen from Abstracts

Emerging Technologies and Disease Modeling

Speaker to be Announced

Juan Carlos Izpisua-Belmonte, The Salk Institute for Biological Studies, USA
Regenerative Strategies to Tissue Engineering

Clive N. Svendsen, Cedars-Sinai Regenerative Medicine Institute, USA

Building Organs on Chips

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, FEBRUARY 7

Keynote Address

Speaker to be Announced

Progenitor to Islet Cells

Markus Grompe, Oregon Health & Science University, USA
Gallbladder to Pancreas Transdifferentiation

Anil Bhushan, University of California, San Francisco, USA
Molecular Mechanisms of beta Cell Maturation

Matthias Hebrok, University of California, San Francisco, USA
Functional Analysis of Human Stem Cell Derived beta Cells

Short Talk(s) Chosen from Abstracts

Workshop 1: Single Cell Analysis of Islet Cell Constituencies

Short Talks Chosen from Abstracts

Inter-Organ Signaling Islet Biology

Guy A. Rutter, Imperial College London, UK
Role and Regulation of Beta Cell Pacemakers

Rohit N. Kulkarni, Joslin Diabetes Center, Harvard Medical School, USA

Liver-Derived Signals Regulating beta Cell Function

Seung K. Kim, Stanford University, USA

Evidence that the Hormone NMU Is Mammalian Decretin

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, FEBRUARY 8

Immunology/Clinical Trials

Anette G. Ziegler, Helmholtz Zentrum München, Germany
Prevention and Treatment of Early Stage Type 1 Diabetes

Jane H. Buckner, Benaroya Research Institute at Virginia Mason, USA

Durable Regulatory Cell Therapy of T1D Using Gene Editing

Kevan C. Herold, Yale University, USA

Clinical Trials with Checkpoint Inhibitors

Everett H. Meyer, Stanford University, USA

CAR T-Cell Immunomodulation in Diabetes

Short Talk(s) Chosen from Abstracts

Workshop 2: Big Data and Personalized Approaches to Diabetes

Short Talks Chosen from Abstracts

Bioengineering/Encapsulation

Felicia Pagliuca, Semma Therapeutics, Inc, USA
Macroencapsulated Stem Cell Derived Islets for the Treatment of Diabetes

Tejal A. Desai, University of California, San Francisco, USA
Nanoporous Injectable Thin Film Devices for Islet Encapsulation

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Cherie Stabler, University of Florida, USA

Engineering Bioactive Encapsulation Platforms for Islet Transplantation

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

FRIDAY, FEBRUARY 9

Departure