

# Keystone Symposia in Whistler

# Unraveling the Secrets of Kidney Disease

Whistler Conference Centre | Whistler, British Columbia, Canada | March 3–7, 2019

Joint with the meeting on *Unraveling the Secrets of Kidney Disease*

#### Scientific Organizers:

**Katalin Susztak**, University of Pennsylvania, USA

**Caroline Fox**, Merck Research Labs, USA

**Masaomi Nangaku**, University of Tokyo School of Medicine, Japan

*Close to 1 in 11 people in the world suffers from kidney disease, and the incidence is increasing, especially in the developing world. This issue was recently reviewed and emphasized in a Lancet article (Global Health Atlas). Acute and chronic kidney disease is associated with a highly significant increase in cardiovascular death, and chronic kidney disease (CKD) represents a leading cause of death in the United States. There is no cure for this disease, with current treatment strategies relying on blood pressure control through blockade of the renin-angiotensin system. Such approaches only delay the development of end-stage kidney disease and can be associated with serious side effects. Recent identification of several novel mechanisms contributing to CKD development - including vascular changes, loss of podocytes and renal epithelial cells, matrix deposition, inflammation and metabolic dysregulation - has revealed new potential therapeutic approaches for CKD. This conference will review clinical and observational studies in the kidney disease area, highlight recent advances in basic biology of kidney and kidney disease, assesses emerging strategies and agents for CKD treatment, and discuss major obstacles in drug development. The conference will also encourage collaborations among clinicians and researchers from academia and pharma and accelerate innovation in this field. Furthermore, since more than half of kidney disease is caused by diabetes, the symposium will greatly benefit from the joint pairing with the conference on "Diabetes: Innovations, Outcomes and Personalized Therapies."*

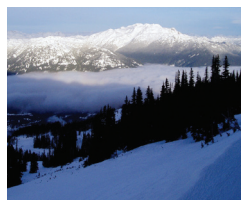
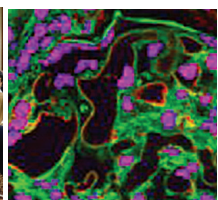
#### Plenary Session Topics:

- Podocyte Diseases
- Immune Injury
- Genetics and Epigenetics of Diabetes and Complications (Joint)
- Tubule Injury and Regeneration
- Complications of Diabetes (Joint)
- Endothelial Dysfunction in CKD
- Precision Medicine
- Novel Approaches for Drug Discovery

*plus a workshop*

Abstract Deadline: Dec 19, 2018; Discounted Registration Deadline: Jan 11, 2019

Visit [www.keystonesymposia.org/19X4](http://www.keystonesymposia.org/19X4) for more details.



**KEYSTONE SYMPOSIA™**  
on Molecular and Cellular Biology  
*Accelerating Life Science Discovery*

**a 501(c)(3) nonprofit educational organization**

Left image of fluorescent microscopy of kidney tissue courtesy of National Institutes of Health

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## Unraveling the Secrets of Kidney Disease (X4)

Scientific Organizers: Katalin Susztak, Caroline Fox and Masaomi Nangaku

Sponsored by Akebia Therapeutics and Bayer AG

## Diabetes: Innovations, Outcomes and Personalized Therapies (X3)

Scientific Organizers: Philip J. Larsen, Melina Claussnitzer and Tina Vilsbøll

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Sponsored by MedImmune

This activity is supported by an educational grant from Lilly

Abstract & Scholarship Deadline: November 19, 2018 / Abstract Deadline: December 19, 2018 / Discounted Registration Deadline: January 11, 2019

### SUNDAY, MARCH 3

#### Arrival and Registration

### MONDAY, MARCH 4

#### Welcome and Keynote Address (X4)

**Caroline S. Fox**, Merck Research Labs, USA  
*Using Genetics to Drive Drug Discovery*

#### Podocyte Diseases (X4)

**Friedhelm Hildebrandt**, Howard Hughes Medical Institute and Boston Children's Hospital, Harvard Medical School, USA  
*Monogenic causes of Podocyte Loss Reveal Targets for Personalized Treatment*

**John Cijiang He**, Icahn School of Medicine at Mount Sinai, USA  
*Potential New Therapies by Targeting on Podocyte Injury*

**Stuart J. Shankland**, University of Washington, USA  
*Understanding Podocyte Regeneration*

#### Short Talk(s) Chosen from Abstracts

#### State of the Union for Diabetes Care anno 2019: What Should We Expect from a Stellar Novel Diabetes Drug? (X3)

##### Speaker to be Announced

**Tina Vilsbøll**, Steno Diabetes Center Copenhagen, Denmark  
*How to Demonstrate Medical Value for Diabetes Drugs Fast and Convincingly*

**Brian Finan**, Novo Nordisk, USA  
*Mechanisms of GIP Induced Augmentation of GLP-1 Pharmacology*

#### Short Talk(s) Chosen from Abstracts

#### Keynote Address (X3)

**Mark I. McCarthy**, University of Oxford, UK  
*Now we have 400+ Signals for Type 2 Diabetes Risk, What on Earth are we Going to Do with Them?*

#### Workshop and Panel Discussion (X3)

##### Short Talks Chosen from Abstracts

#### Immune Injury (X4)

**Ali Gharavi**, Columbia University Medical Center, USA  
*Genetics of IgA Nephropathy/Role of Complement*

**Martin Pollak**, Beth Israel Deaconess Medical Center, USA  
*Inflammation and APOL1-associated Kidney Disease*

**David J. Salant**, Boston University School of Medicine, USA  
*PLA2R and Membranous Nephropathy*

**Matthias Kretzler**, University of Michigan, USA  
*Progression Pathways in CKD*

#### Short Talk(s) Chosen from Abstracts

#### Diabetes and Its Many Phenotypes (X3)

**Michael P. Snyder**, Stanford University School of Medicine, USA  
*Power of Personalized Genomic Medicine: How to Improve Diabetes Care*

**Tai E. Shyong**, National University of Singapore, Singapore  
*Ethnically Determined Diabetes Variants (Asian Diabetes)*

**Juleen R. Zierath**, Karolinska Institutet, Sweden  
*The Role of Diet and Exercise in Modifying the Epigenetic Landscape in Type 2 Diabetes*

#### Short Talk(s) Chosen from Abstracts

#### Poster Session 1

### TUESDAY, MARCH 5

#### Keynote Address (Joint)

**Leif C. Groop**, Lund University, Sweden  
*Diabetes Comes in Different Flavors: On the Heterogeneity of Diabetes - Time for Reclassification of a Disease*

#### Genetics and Epigenetics of Diabetes and Complications (Joint)

**Anna Köttgen**, Medical Center - University of Freiburg, Germany  
*Genetics of Kidney Disease and Metabolite Traits*

**Jose C. Florez**, Massachusetts General Hospital, USA  
*Genetics of Diabetic Kidney Disease*

**Melina Claussnitzer**, Harvard Medical School, Beth Israel Deaconess Medical Center, USA  
*Type 2 Diabetes and its Comorbidities: The Journey from GWAS to Disease Mechanism*

**Katalin Susztak**, University of Pennsylvania, USA  
*Finding the G(ene) in GWAS for Kidney Disease*

#### Short Talk(s) Chosen from Abstracts

#### Tubule Injury and Regeneration (X4)

**Benjamin D. Humphreys**, Washington University, USA  
*Mapping Cell States to Understand Human Diabetic Nephropathy and Chronic Kidney Disease using Single Cell and Single Nucleus RNA-Seq*

**Masaomi Nangaku**, University of Tokyo School of Medicine, Japan  
*The Role of Hypoxia and HIF in Tubule Injury*

**Mark Douglas Okusa**, University of Virginia, USA  
*Immune Injury in AKI*

#### Short Talk(s) Chosen from Abstracts

#### Deciphering Cellular Function of Target Tissues of Relevance for Diabetes (X3)

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**Marcelo Nobrega**, University of Chicago, USA  
*Experimental Dissection of the Cellular and Organismal Effects of T2D Genes*

**Kenichiro Furuyama**, University of Geneva, Switzerland  
*Conversion of Human non- $\beta$ -Cells into Insulin Producers*

**Chad A. Cowan**, Harvard University, USA  
*Investigating Metabolic Disease with Human Pluripotent Stem Cells*

**Short Talk(s) Chosen from Abstracts**

### Poster Session 2

### WEDNESDAY, MARCH 6

#### Complications of Diabetes (Joint)

**Susan Quaggin**, Northwestern University, USA  
*The Role of Endothelial Cell Injury in Diabetic Kidney Disease*

**Speaker to be Announced**

**Donald Kohan**, University of Utah Health Center, USA  
*Endothelin Receptors Antagonists in DKD: SONAR and Beyond*

**Farhad Danesh**, MD Anderson Cancer Center, USA  
*Podocyte and Mitochondrial Dysfunction in Diabetes*

**Short Talk(s) Chosen from Abstracts**

#### Endothelial Dysfunction in CKD (X4)

**Speaker to be Announced**

**Janos Peti-Peterdi**, University of Southern California, USA  
*The Physiological and Pathophysiological Regulation of Glomerular Blood Flow*

**Hiddo Lambers Heerspink**, University Medical Center Groningen, Netherlands

*SGLT-2 Inhibitors and the Kidney: Extending from Diabetic to Non-Diabetic Kidneys*

**Short Talk(s) Chosen from Abstracts**

#### Omics Stuff and Profiling (X3)

**Christopher B. Newgard**, Duke University Medical Center, USA  
*Biochemical Phenotyping of Metabolic Syndrome*

**Cecilia Lindgren**, Oxford University, UK  
*Identifying Metabolic Cross-Trait Signatures Using UK Biobank*

**Hans-Ulrich Häring**, Eberhard-Karls University Tübingen, Germany  
*Insulin Sensitization: Improving more than Glycemic Control*

**Short Talk(s) Chosen from Abstracts**

### Poster Session 3

### THURSDAY, MARCH 7

#### Precision Medicine (X4)

**Jonathan Himmelfarb**, University of Washington, USA  
*Kidney on Chip for Drug Development*

**Eugene Park Rhee**, Massachusetts General Hospital, USA  
*Metabolomics To Understand Kidney Function*

**Rahul Satija**, New York Genome Center, USA  
*Single Cell Immune Sequencing in Lupus Nephritis*

**Short Talk(s) Chosen from Abstracts**

#### Epigenomics of T2D (X3)

**Mitchell A. Lazar**, Perelman School of Medicine, University of Pennsylvania, USA

*Epigenomic Regulation of Metabolism*

**Maïke Sander**, University of California, San Diego, USA  
*Epigenetic Adaptation in the beta Cell*

**Evan D. Rosen**, Beth Israel Deaconess Medical Center, Harvard University, USA

*Epigenetic Variability in Insulin Resistant States*

**Short Talk(s) Chosen from Abstracts**

#### Workshop (X4)

**Short Talks Chosen from Abstracts**

#### Novel Approaches for Drug Discovery (X4)

**Alan R. Shuldiner**, Regeneron Pharmaceuticals, Inc, USA  
*Drug Discovery 2.0, the Use of Human Knock-Outs and Other Genetic Experiments of Nature*

**Carine Boustany<sup>†</sup>**, Boehringer Ingelheim, USA  
*Novel Strategies to Treat Diabetic Kidney Disease*

**Alex Bell**, Ionis Pharmaceuticals, USA  
*RNA Therapeutics for Kidney Disease*

**Stephanie Cherqui**, University of California, San Diego, USA  
*Stem Cell and Gene Therapy for Cystinosis*

**Short Talk Chosen from Abstracts**

#### Metabolic Surgery (X3)

**Lee M. Kaplan**, Massachusetts General Hospital, USA  
*Variability of Response and Prediction of Outcome*

**Filip K. Knop**, Gentofte Hospital, University of Copenhagen, Denmark  
*A Gut Feeling About Glucagon*

**Philip J. Larsen**, Grünenthal Group, Germany  
*Can We Translate Bariatric Surgery into Equi-Efficacious Pharmacotherapy*

**Short Talk Chosen from Abstracts**

#### Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (X4)

#### Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (X3)

### FRIDAY, MARCH 8

#### Departure