Research Symposium - Epigenetics and Epigenomics: Implications for Diabetes and Obesity
November 17-19, 2017, Boston Marriott Cambridge Hotel, Cambridge, Massachusetts

Friday, November 17, 2017

1:00 p.m. – 1:15 p.m.  Introduction and Welcome
Chairs: Evan D. Rosen, MD, PhD and Katalin Susztak, MD, PhD

1:15 p.m. – 2:00 p.m.  Keynote Lecture
The New Science of Therapeutics
Jay Bradner, MD, Novartis Institutes for BioMedical Research (NIBR), Cambridge, Massachusetts

SESSION I
Epigenomics to Understand GWAS
Chair: Evan D. Rosen, MD, PhD and Katalin Susztak, MD, PhD

2:00 p.m. – 2:30 p.m.  Distinguishing the Oncogenic Effects of a Pleiotropic Metabolic Disruption
Bradley E. Bernstein, MD, PhD, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts

2:30 p.m. – 3:00 p.m.  Managing Health and Disease Using Big Data
Michael Snyder, PhD, Stanford University, Stanford, California

3:00 p.m. – 3:15 p.m.  Networking Break

3:15 p.m. – 3:45 p.m.  Understanding GWAS in the Context of Type 2 Diabetes and Its Comorbidities
Richard Sallari, PhD, Broad Institute, Cambridge, Massachusetts

3:45 p.m. – 4:15 p.m.  One Variant, Multiple Disease Mechanisms: The Association of TCF7L2 with Type 2 Diabetes Risk
Marcelo A. Nóbrega, MD, PhD, University of Chicago, Chicago, Illinois

4:15 p.m. – 4:45 p.m.  Unravelling Causal Mechanisms for Diabetes Using the Islet Regulome
Anna L. Gloyn, PhD, University of Oxford, OCDEM, Oxford, United Kingdom

5:00 p.m. – 7:00 p.m.  Networking Poster Reception

Saturday, November 18, 2017

7:00 a.m. – 7:50 a.m.  Networking Breakfast

8:00 a.m. – 8:15 a.m.  Opening Remarks
Chairs: Evan D. Rosen, MD, PhD and Katalin Susztak, MD, PhD
**SESSION II Epigenome to Understand Biology Part 1 (Beta Cell & Periphery)**
Chair: Maike Sander, MD

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<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker/Institution</th>
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<tr>
<td>8:15 a.m. – 8:45 a.m.</td>
<td>Epigenetic Adaptation in the Beta Cell</td>
<td>Maike Sander, MD, University of California San Diego, La Jolla, California</td>
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<td>8:45 a.m. – 9:15 a.m.</td>
<td>The Dynamic Methylome of Islet Cells in Aging and Diabetes</td>
<td>Klaus H. Kaestner, PhD, MS, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania</td>
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<td>9:15 a.m. – 9:45 a.m.</td>
<td>Histone Deacetylase 3 and the Epigenomic Regulation of Integrative Physiology</td>
<td>Mitchell A. Lazar, MD, PhD, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania</td>
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<td>9:45 a.m. – 10:15 a.m.</td>
<td>Epigenomic Characterization of Beige Adipocyte Plasticity</td>
<td>Evan D. Rosen, MD, PhD, Beth Israel Deaconess Medical Center, Boston, Massachusetts</td>
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<td>10:15 a.m. – 10:45 a.m.</td>
<td>Epigenetic Response to Exercise in Skeletal Muscle</td>
<td>Romain Barrès, PhD, University of Copenhagen, Denmark</td>
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| 10:45 a.m. – 11:00 a.m. | Networking Break | |}

**SESSION III Epigenome to Understand Biology Part 2 (Complications and Metabolism)**
Chair: Rama Natarajan, PhD, FAHA, FASN

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<tr>
<td>11:00 a.m. – 11:30 a.m.</td>
<td>Epigenetics in Diabetic Kidney Disease</td>
<td>Katalin Susztak, MD, PhD, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania</td>
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<td>11:30 a.m. – 12:00 pm</td>
<td>Epigenetics and Noncoding RNAs in Diabetic Complications and Metabolic Memory</td>
<td>Rama Natarajan, PhD, FAHA, FASN, Beckman Research Institute of City of Hope, Duarte, California</td>
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<td>12:00 p.m. – 12:30 p.m.</td>
<td>Epigenetic Dysregulation of the Genome in Obesity</td>
<td>Dustin Schones, PhD, Beckman Research Institute of City of Hope, Duarte, California</td>
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<td>12:30 p.m. – 1:00 p.m.</td>
<td>Impact of Daily Eating-fasting Rhythm on Systemic Glucose Regulation</td>
<td>Satchidananda Panda, PhD, Salk Institute for Biological Studies, La Jolla, California</td>
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<td>1:00 p.m. – 2:30 p.m.</td>
<td>Networking Lunch</td>
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SESSION IV
Trangenerational Risks and Intergenerational Effects
Chair: Mary-Elizabeth Patti, MD

2:30 p.m. – 3:00 p.m.  Epigenetic Mediators of Intergenerational Metabolic Disease Risk
Mary-Elizabeth Patti, MD, Joslin Diabetes Center, Boston, Massachusetts

3:00 p.m. – 3:30 p.m.  The Black Hole of Fetal Programming and Adult Disease: Identifying the Gaps
Rebecca Simmons, MD, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania

3:30 p.m. – 3:45 p.m.  Networking Break

3:45 p.m. – 4:15 p.m.  Variable Silencing of the Repeat Genome – Implications for Non-genetic Inheritance
Anne Ferguson-Smith, PhD, University of Cambridge, Cambridge, United Kingdom

4:15 p.m. – 4:45 p.m.  Controlling Phenotype Variation – Intergenerational Mechanisms
J. Andrew Pospisilik, PhD, Max Planck Institute for Immunobiology & Epigenetics, Freiburg, Germany

4:45 p.m. – 5:15 p.m.  Daddy Issues: Paternal Effects of Environment on Offspring in Mammals
Oliver Rando, MD, PhD, University of Massachusetts Medical School, Worcester, Massachusetts

5:30 p.m. – 7:30 p.m.  Networking Poster Reception

Sunday, November 19, 2017
7:00 a.m. – 7:50 a.m.  Networking Breakfast

8:00 a.m. – 8:15 a.m.  Opening Remarks
Chairs: Evan D. Rosen, MD, PhD and Katalin Susztak, MD, PhD

SESSION V
Developing Epigenetic Therapeutics
Chair: Klaus H. Kaestner, PhD, MS

8:15 a.m. – 8:45 a.m.  How Metabolism Informs the Epigenome
John M. Denu, PhD, University of Wisconsin, Madison, Wisconsin

8:45 a.m. – 9:15 a.m.  Stem Cells, Epigenetic Regulation and Disease Research
Rudolf Jaenisch, MD, Whitehead Institute, Cambridge, Massachusetts

9:15 a.m. – 9:45 a.m.  Targeting the Epigenome for Therapy
Peter A. Jones, PhD, DSc, Van Andel Research Institute, Grand Rapids, Michigan

9:45 a.m. – 10:00 a.m.  Networking Break
10:00 a.m. – 11:30 a.m.  
**SESSION VI: Needs and Future Questions**  
Chairs: Evan D. Rosen, MD, PhD and Katalin Susztak, MD, PhD

Interactive Panel and Audience Discussion on Unmet and Future Needs*

*Outcomes from the discussion during Session VI will be published, and we encourage participation from Symposium attendees to provide input during this session.