Kick-off Workshop
Strategic Japanese-Danish Cooperative Program on
Molecular Diabetology
-Roles of Pancreatic Beta-cells in the Pathogenesis and Pathophysiology of Diabetes-

9:00-17:00 March 8, 2011
Translational Research Informatics Center (TRI), Kobe
Strategic Japanese-Danish Cooperative Program on

Molecular Diabetology

-Roles of pancreatic beta-cells in the pathogenesis and pathophysiology of diabetes-

The objectives of this cooperative research project are to clarify molecular mechanisms of proliferation/regeneration of pancreatic β-cells and cell signaling in insulin secretion in normal and diabetic states. This project will identify promising targets for the development of anti-diabetic drugs as well as provide greater understanding of the pathogenesis and pathophysiology of diabetes.

**Japanese Research Team**
Research Leader:
Susumu Seino (Kobe University)

Researchers:
Yasuo Terauchi (Yokohama City University)
Junta Imai (Tohoku University)
Yoshiaki Kido (Kobe University)

**Danish Research Team**
Research Leader:
Jens Høiriis Nielsen (University of Copenhagen)

Researchers:
Nils Billestrup (University of Copenhagen)
Ying C. Lee (University of Copenhagen)
Louise W. Gaarn (University of Copenhagen)

Sponsored by
Japan Science and Technology Agency (JST) and
Danish Agency for Science, Technology and Innovation (DASTI)
PROGRAM

9:00-9:05 Opening Remarks: Susumu Seino (Kobe University)

9:05-9:20 Hiroo Imura (Foundation for Biomedical Research and Innovation)  
“Importance of Preemptive Approach for Age-associated Diseases:  
Future Direction of Medical Treatments”

Session 1: Regulation of Beta Cell Function and Mass  
Chairs: Louise W. Gaarn and Susumu Seino

9:20-9:50 Yasuo Terauchi (Yokohama City University)  
“Impact of Small Molecule Glucokinase Activator on the Regulation of  
Beta Cell Function and Mass under Various Conditions”

9:50-10:20 Nils Billestrup (University of Copenhagen)  
"Regulation of Beta Cell Growth and Function by Bone Morphogenetic  
Proteins"

10:20-10:50 Yoshiaki Kido (Kobe University)  
“Regulation of Pancreatic Beta Cell Mass through ER Stress”

10:50-11:10 Coffee break

Session 2: Proliferation and Differentiation of Pancreatic Beta-Cells  
Chairs: Nils Billestrup and Yasuo Terauchi

11:10-11:40 Jens Høiriis Nielsen (University of Copenhagen)  
"Adaptation of Beta Cell Mass to Pregnancy"

11:40-12:10 Takeshi Miyatsuka (Osaka University)  
“Chronology of Endocrine Differentiation”

12:10-12:40 Louise W. Gaarn (University of Copenhagen)  
"Search for Progenitor Cells to Beta Cells in the Pancreas"

12:40-13:40 Lunch
Session 3: Cell Signaling in Insulin Secretion
Chairs: Jens Høiriis Nielsen and Yoshiaki Kido

13:40-14:10 Junta Imai (Tohoku University)
“Regulation of Insulin Secretion by Inter-organ Network”

14:10-14:40 Ying C. Lee (University of Copenhagen)
"Role of A-Kinase Anchoring Proteins (AKAPs) in Signal Transduction in the Endocrine Pancreas"

14:40-15:10 Susumu Seino (Kobe University)
“Mechanisms of Insulin Secretion: Interplay of Glucose Metabolism, cAMP Signaling, and Sulfonylurea”

15:10-15:25 Coffee break

Session 4: Presentations by Young Investigators
Chairs: Ying C. Lee and Junta Imai

15:25-15:40 Shun-ichiro Asahara (Kobe University)
“Rac1 Regulates Glucose-stimulated Insulin Secretion via Modulation of F-actin”

15:40-15:55 Eri Mukai (Oita University)
“Exendin-4 Suppresses SRC Activation and Reactive Oxygen Species Production in Diabetic Goto-Kakizaki Rat Islets in an Epac-dependent Manner”

15:55-16:10 Masahiro Iwasaki (Kobe University)
“Establishment of New Clonal Pancreatic Beta-Cell Lines (MIN6-K) useful for Study of Incretin/cAMP Signaling”

16:10-16:25 Daisuke Tanaka (Kyoto University)
“Pedigree Analysis of Highly Aggregated Japanese Families with Diabetes Mellitus”

Special Lecture: Genetics of Type 2 Diabetes
Chair: Susumu Seino

16:25-16:55 Yukio Horikawa (Gifu University)
“The Genetics of Type 2 Diabetes: What Have We Learned from GWAS? What is Next?”

16:55-17:00 Closing Remarks: Jens Høiriis Nielsen (University of Copenhagen)
List of Speakers
(Name, Institution, and E-mail address)

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This Workshop is:

Organized by Susumu Seino (Kobe University) and Jens Høiriis Nielsen (University of Copenhagen)

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