

# Innovative approaches to understanding pancreatic $\beta$ -cell function

Date: January 28<sup>th</sup>, 2013

Location: Ritsumeikan University (BKC), Epock Ritsumei 21 (1F), Epock Hall

[http://www.ritsumei.jp/accessmap/accessmap\\_bkc\\_j.html](http://www.ritsumei.jp/accessmap/accessmap_bkc_j.html)

~ Opening ~ 10:00~10:15

## Oral Presentations:

**"Protecting pancreatic islets with immuno-privileged cell types: co-aggregation and manipulation of emergent organization."**

**Ian Torao Hoffecker** Graduate student, Institute for Frontier Medical Sciences, Kyoto University 10:15~11:00

**"Application of metabolomics to the study of insulin secretion."**

**Susumu Seino** Professor of Divisions of Diabetes and Endocrinology/Cellular and Molecular Medicine, Kobe University 11:00~11:45

~ Lunch Break ~ 11:45~13:00

**"Measuring the beta cell reaction by the micro device."**

**Hidetoshi Kotera** Executive Vice-President for External Strategy, Knowledge & Technology Transfer and Innovation, Kyoto University 13:00~13:45

**"Non-Selective Cation Channels and Store-Operated Ca-Entry in pancreatic beta cells."**

**Colin A. Leech** Associate Professor, State University of New York Upstate Medical University 13:45~14:30

**"A modeling analysis of GLP-1 effects on membrane excitability in pancreatic  $\beta$ -cells."**

**Yukari Takeda** Postdoctoral Fellow of Ritsumeikan Global Innovation Research Organization, Ritsumeikan University 14:30~15:15

~ Poster session & Coffee break ~ 15:15~16:15

**"Genetically-encoded biosensor for ATP: Development and its application to insulin-secreting cells."**

**Hiroimi Imamura** Associate Professor, The Hakubi Center for Advanced Research & Graduate School of Biostudies, Kyoto University 16:15~17:00

**"A Novel Phosphoinositide-Specific Phospholipase C-Epsilon Links Epac2 Activation to Islet Insulin Secretion."**

Presentation include:

1. Overview of beta-cell stimulus-secretion coupling.
2. Potential Role of Epac2/PLC-epsilon in Ca<sup>2+</sup> handling, excitability, and exocytosis.
3. New Epac2 inhibitors / Collaboration with Dr. Xiaodong Cheng.  
B12-GLP-1 / Collaboration with Dr. Robert P. Doyle.  
Regulation of GLP-1 biosynthesis by GPR119 in L-cells.
4. Conclusion : Insights concerning how to model beta-cell function: interaction of glucose and GLP-1.

**George G. Holz** Professor of Medicine and Pharmacology, State University of New York Upstate Medical University 17:00~18:00

~ Reception at Epock Ritsumei 21 (3F) for invited guests ~ 18:15~20:30

## Poster Presentations:

1) **"Activation of non-selective cation channels by GLP-1 exposure sensitizes glucose-stimulated insulin secretion via membrane depolarization in pancreatic  $\beta$ -cells."**

**Masashi Yoshida**, Jichi Medical University, Saitama Medical Center

2) **"Actin dynamics regulated by N-WASP and cofilin determines the phasic response of glucose-induced insulin secretion."**

**Tadao Shibasaki**, Division of Cellular and Molecular Medicine, Kobe University Graduate School of Medicine

3) **"Interaction of sulfonylurea and cAMP through Epac2 in insulin secretion."**

**Harumi Takahashi**, Division of Cellular and Molecular Medicine, Kobe University Graduate School of Medicine

4) **"Palmitate Induces Beta-Cell Dysfunction by Activating HADPH Oxidase Through via the Src Kinase Signaling."**

**Yuichi Sato**, Department of Diabetes and Clinical Nutrition, Graduated School of Medicine, Kyoto University

5) **"The Effect of High-Fat Diet Induced Obesity on GIP Secretion from K-Cells."**

**Kazuyo Suzuki**, Department of Diabetes and Clinical Nutrition, Graduated School of Medicine, Kyoto University

6) **"Assessment of Gene Expression in Enteroendocrine K-Cells."**

**Kazuki Sasaki**, Department of Diabetes and Clinical Nutrition, Graduated School of Medicine, Kyoto University

7) **"Lowering GIP Secretion has Beneficial Role in Reducing Obesity and Insulin Resistance Without Impairing Glucose Tolerance and Osteogenesis."**

**Daniela Nasteska**, Department of Diabetes and Clinical Nutrition, Graduated School of Medicine, Kyoto University

8) **"SKIP Inhibits Glucose-Stimulated and Incretin-Enhanced Insulin Secretion."**

**Yu Wang**, Department of Diabetes and Clinical Nutrition, Graduated School of Medicine, Kyoto University