October 2 (Fri.) 16：40–16：50 Hall 3 (Reception Hall (West), 4F, Bldg. 1)

The 46th NIPS International Symposium Opening Remarks

October 2 (Fri.) 16：50–18：50 Hall 3 (Reception Hall (West), 4F, Bldg. 1)

The 46th NIPS International Symposium Session 1

Chairs：Toshihiko Yada
Department of Physiology, Division of Integrative Physiology Jichi Medical University, School of Medicine, Japan
Fei-Fan Guo
Institute for Nutritional Sciences, Shanghai Institute for Biological Sciences, Chinese Academy of Sciences, China

NIPS1-1 **The neurobiology of homeostatic hunger**
Scott M. Sternson
Janelia Research Campus, HHMI, USA

NIPS1-2 **Pathophysiological roles of adipokine and epigenome dysregulation in obesity**
Toshimasa Yamauchi
Department of Diabetes and Metabolic Diseases, The University of Tokyo, Japan

NIPS1-3 **Inter-organ neural network mediate the regulation of systemic energy metabolism**
Tetsuya Yamada
Department of Metabolism and Diabetes, Tohoku University Graduate School of Medicine, Japan

NIPS1-4 **Regulation of skeletal muscle mass and fat mass by myokines and origin of ectopic fat accumulation in skeletal muscle**
Kunihiro Tsuchida
Division for Therapies against Intractable Diseases, Institute for Comprehensive Medical Science, Fujita Health University, Japan

NIPS1-5 **Hepatokine selenoprotein P and skeletal muscle receptor LRP1 induce exercise-insensitivity by inhibition of ROS and AMPK**
Hirofumi Misu
Department of Comprehensive Metabology, Kanazawa University Graduate School of Medical Sciences, Japan
PRESTO, Japan Science and Technology Agency, Japan

NIPS1-6 **Role of novel variants of PGC-1α in the regulation of energy metabolism**
Kazuhiro Nomura
Division of Diabetes and Endocrinology, Department of Internal Medicine, Kobe University Graduate School of Medicine, Japan

October 3 (Sat.) 8：10–9：34 Hall 3 (Reception Hall (West), 4F, Bldg. 1)

The 46th NIPS International Symposium Session 2

Chairs：Shin-Ichiro Imai
Department of Developmental Biology, Department of Medicine (Joint), Washington University School of Medicine, USA
Michihiro Matsumoto
Departments of Molecular Metabolic Regulation, Diabetes Research Center, Research Institute, National Center for Global Health and Medicine, Japan

NIPS2-1 **AMP-activated protein kinase in CRH neurons in the PVH controls food selection behavior**
Shiki Okamoto
Division of Endocrinology and Metabolism, National Institute for Physiological Sciences
Department of Physiological Sciences, SOKENDAI, The Graduate University for Advanced Studies, Japan

NIPS2-2 **Discovery and characterization of a novel class of endogenous lipids**
Alan Saghatelian
The Salk Institute for Biological Studies, Peptide Biology Laboratory, USA

NIPS2-3 **Role of dsRNA-mediated immunometabolic regulation in obesity**
Takahisa Nakamura
Divisions of Endocrinology and Developmental Biology, Cincinnati Children's Hospital Medical Center, USA

NIPS2-4 **The transcriptional coregulator CITED2 regulates adipose tissue mass by enhancing preadipocyte proliferation and PPARγ expression through Rb inactivation**
Michihiro Matsumoto
Department of Molecular Metabolic Regulation, Diabetes Research Center, Research Institute, National Center for Global Health and Medicine, Japan

October 3 (Sat.) 9 : 34-10 : 40 Hall 3 (Reception Hall (West), 4F, Bldg. 1)

The 46th NIPS International Symposium Session 3

Chairs : Shingo Kajimura
University of California, San Francisco UCSF Diabetes Center and Department of Cell and Tissue Biology, USA
Takahisa Nakamura
Divisions of Endocrinology and Developmental Biology Cincinnati Children's Hospital Medical Center, Japan

NIPS3-1 **Adipose tissue controls systemic NAD^+ biosynthesis through the secretion of extracellular nicotinamide phosphoribosyltransferase (eNAMPT)**
Shin-ichiro Imai
Department of Developmental Biology, Department of Medicine (Joint), Washington University School of Medicine, USA

NIPS3-2 **Engineering fat cell fate to fight obesity and metabolic diseases**
Shingo Kajimura
University of California, UCSF Diabetes Center and Department of Cell and Tissue Biology, USA

NIPS3-3 **Regulation of higher-order chromatin structure during thermogenesis in brown adipocytes**
Takeshi Inagaki
Division of Metabolic Medicine, Research Center for Advanced Science and Center, Technology, The University of Tokyo, Japan

October 3 (Sat.) 14 : 20-15 : 32 Hall 3 (Reception Hall (West), 4F, Bldg. 1)

The 46th NIPS International Symposium Session 4

Chairs : Tetsuya Yamada
Department of Metabolism and Diabetes, Tohoku University Graduate Shcool of Medicine, Japan
Takeshi Inagaki
Division of Metabolic Medicine, Research Center for Advanced Science and Technology, The University of Tokyo, Japan

NIPS4-1 **Amino acid regulation of metabolism**
Fei-Fan Guo
Institute for Nutritional Sciences, Shanghai Institute for Biological Sciences, Chinese Academy of Sciences, China

NIPS4-2 **Regulation of hepatic glucose production by central insulin action through vagus and kupffer cells**
Hiroshi Inoue
Metabolism and Nutrition Research Unit, Innovative Integrated Bio-research Core, Institute for Frontier Science Initiative, Kanazawa University, Japan

NIPS4-3 **Mechanisms by which PTP1B affects energy balance**

Ryoichi Banno

Department of Endocrinology and Diabetes, Nagoya University Graduate School of Medicine, Japan

NIPS4-4 **Impact of successful leptin replacement therapy in Japan on adult and child, systemic and partial lipodystrophy**

Kiminori Hosoda

Faculty of Human Health Science, Kyoto University Graduate School of Medicine, Japan

October 3 (Sat.) 15：32-16：38 Hall 3 (Reception Hall (West), 4F, Bldg. 1)

The 46th NIPS International Symposium Session 5

Chairs：Masamitsu Nakazato

Division of Neurology, Respirology, Endocrinology and Metabolism, Department of Internal Medicine, Faculty of Medicine, University of Miyazaki, Japan

Hiroshi Inoue

Metabolism and Nutrition Research Unit, Innovative Integrated Bio-Research Core, Institute for Frontier Science Initiative, Kanazawa University, Japan

NIPS5-1 **Neural dynamics underlying hunger**

Zachary A. Knight

Department of Physiology, University of California, USA

NIPS5-2 **Gut hormones regulating energy homeostasis**

Masamitsu Nakazato

Division of Neurology, Respirology, Endocrinology and Metabolism, Department of Internal Medicine, Faculty of Medicine, University of Miyazaki, Japan

NIPS5-3 **Na^+,K^+-ATPase in the arcuate nucleus senses systemic energy states to regulate feeding behavior**

Toshihiko Yada

Department of Physiology, Division of Integrative Physiology, Jichi Medical University School of Medicine, Japan

October 3 (Sat.) 16：40-16：50 Hall 3 (Reception Hall (West), 4F, Bldg. 1)

The 46th NIPS International Symposium Closing Remarks