

Program

TUESDAY, SEPTEMBER 10, 2013

15:00–17:00 Registration

17:20–17:30 Opening Remarks: Yoichi UETA

17:30–18:30 Plenary Lecture

Chair: Yoichi UETA

Challenge to novel bioactive peptides24

Kenji KANGAWA

(National Cerebral and Cardiovascular Center Research Institute, Japan)

18:40–20:00 Welcome Reception

WEDNESDAY, SEPTEMBER 11, 2013

7:00–8:50 Breakfast

9:00–12:45 Session A

Molecular mechanisms of feeding behavior in the regulation of energy homeostasis

Chairs: Kendra K. BENCE

Masatomo MORI

9:00-9:30 [A-1]
Hle2 deficiency improves peripheral leptin resistance, despite central leptin resistance26

Masatomo MORI

(Department of Medicine and Molecular Science, Gunma University Graduate School of Medicine, Kitakanto Molecular Novel Research Institute for Obesity and Metabolism, Japan)

9:30-10:15 [A-2]
CNS regulation of signaling pathways and energy balance by protein tyrosine phosphatases28

Kendra K. BENCE

(Department of Animal Biology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA, USA)

10:15-10:45 [A-3]
Adipocyte-leptin-brain system as a regulator of energy metabolism30

Kiminori HOSODA

(Kyoto University Graduate School of Medicine, Japan)

- 10:45-11:00 [A-4 (PS No. 50)]**
Importance of transcriptional regulation by Dmbx1 in adult brain in AgRP-induced feeding131
Takashi MIKI
 (Department of Medical Physiology, Chiba University, Graduate School of Medicine, Japan)

11:00–11:30 Coffee Break

- 11:30-12:15 [A-5]**
Brain regulation of feeding by somatostatin and nesfatin-132
Yvette France TACHÉ
 (Department of Medicine, Digestive Diseases Division, University of California Los Angeles, USA)

- 12:15-12:45 [A-6]**
Nesfatin-oxytocin system: central and peripheral regulator of feeding and metabolism providing a target to treat obesity34
Toshihiko YADA
 (Department of Physiology, Division of Integrative Physiology, Jichi Medical University School of Medicine, Japan)

12:45–14:00 Lunch

14:00–17:45 Session B
Metabolic signals and feeding behavior
 Chairs: Tamas L. HORVATH
 Yasuhiko MINOKOSHI

- 14:00-14:30 [B-1]**
Free fatty acid receptor GPR120, physiology and drug discovery36
Akira HIRASAWA
 (Department of Genomic Drug Discovery Sciences, Kyoto University, Japan)

- 14:30-15:15 [B-2]**
Hunger-promoting hypothalamic neurons in integrative physiology40
Tamas L. HORVATH
 (Yale University, School of Medicine, USA)

- 15:15-15:45 [B-3]**
Hypothalamic Sirt1 regulates food intake and energy expenditure42
Tadahiro KITAMURA
 (Metabolic Signal Research Center, Institute for Molecular and Cellular Regulation, Gunma University, Japan)

- 15:45-16:00 [B-4 (PS No. 26)]**
Enhanced high sucrose diet preference in Elovl6 deficient mice107
Noriko SUZUKI-KEMURIYAMA
 (Department of Endocrinology and Metabolism, Faculty of Medicine, University of Tsukuba, Japan)

16:00–16:30 Coffee Break

- 16:30-17:00 [B-5]
Regulatory role of hypothalamic AMP-activated protein kinase in feeding behavior44
Yasuhiko MINOKOSHI
 (Division of Endocrinology and Metabolism, National Institute for Physiological Sciences, Japan)
- 17:00-17:45 [B-6]
Molecular targets for the effects of bariatric surgery46
Randy J. SEELEY
 (University of Cincinnati, USA)

17:45–19:00 Dinner

19:00–21:00 Poster Session I

THURSDAY, SEPTEMBER 12, 2013

7:00–8:50 Breakfast

9:00–12:45 **Session C**
Organ network of energy homeostasis
 Chairs: Matthias H. TSCHÖP
 Masamitsu NAKAZATO

- 9:00-9:30 [C-1]
Mechanism and treatment for hypothalamic insulin resistance48
Hiraku ONO
 (Department of Endocrinology and Metabolism, Saitama Medical University, Japan)
- 9:30-10:15 [C-2]
Neonatal programming of hypothalamic neurocircuits in control of energy and glucose homeostasis50
Jens C. BRÜNING
 (Max Planck Institute for Neurological Research, Cologne, Germany)
- 10:15-10:45 [C-3]
The effect of impaired energy metabolism on adult neural function52
Akiko TAGUCHI
 (Division of Neurology, Endocrinology, and Metabolism, Faculty of Medicine, University of Miyazaki, Japan)
- 10:45-11:00 [C-4 (PS No. 31)]
Suppression of AMP kinase activity in skeletal muscle improves metabolic abnormalities of streptozotocin-induced insulin-deficient diabetes mellitus in mice112
Shigefumi YOKOTA
 (Division of Endocrinology and Metabolism, Department of Developmental Physiology, National Institute for Physiological Sciences, Japan)

11:00–11:30 Coffee Break

11:30-12:00 [C-5]	Functional interaction between ghrelin and GLP-1 for feeding regulation	54
	<u>Masamitsu NAKAZATO</u> (Division of Neurology, Respiriology, Endocrinology and Metabolism, Department of Internal Medicine, Faculty of Medicine, University of Miyazaki, Japan)	
12:00-12:45 [C-6]	Novel therapies for diabetes and obesity	56
	<u>Matthias H. TSCHÖP</u> (Helmholtz Centre & Technische Universität München, Munich, Germany)	
12:45–14:00	Lunch	
14:00–17:45	Session D	
	Systemic regulation of energy metabolism	
	Chairs: Barbara CANNON Hideki KATAGIRI	
14:00-14:30 [D-1]	Neuronal information highways for systemic regulation of glucose and energy metabolism	58
	<u>Hideki KATAGIRI</u> (Division of Metabolism and Diabetes, Tohoku University Graduate School of Medicine, Japan)	
14:30-15:00 [D-2]	Mechanisms underlying glucocorticoid-induced changes in feeding behavior	60
	<u>Hiroshi ARIMA</u> (Department of Endocrinology and Diabetes, Nagoya University Graduate School of Medicine, Japan)	
15:00-15:45 [D-3]	Brain control of glucose metabolism	62
	<u>Gregory J. MORTON</u> (Department of Medicine, University of Washington, Seattle, USA)	
15:45-16:00 [D-4 (PS No. 18)]	Meal frequency patterns determine the body clocks and health, detected by in vivo imaging in mice	99
	<u>Yu TAHARA</u> (Department of Physiology and Pharmacology, School of Advanced Science and Engineering, Waseda University, Japan)	
16:00–16:30	Coffee Break	
16:30-17:00 [D-5]	Molecular mechanisms of type 2 diabetes and insulin resistance	64
	<u>Naoto KUBOTA</u> (Department of Diabetes and Metabolic Diseases, Graduate School of Medicine, The University of Tokyo, Japan)	

17:00-17:45 [D-6]
Brown adipose tissue and energy balance66
 Barbara CANNON
 (The Wenner-Gren Institute, Stockholm University, Sweden)

17:45-19:00 Dinner

19:00-21:00 Poster Session II

FRIDAY, SEPTEMBER 13, 2013

7:00-8:50 Breakfast

9:00-12:45 **Session E**
Homeostatic regulation of energy balance in the hypothalamus

Chairs: Quentin PITTMAN

Yoichi UETA

9:00-9:30 [E-1]
Stress and energy metabolisms: roles of PrRP and oxytocin68
 Tatsushi ONAKA
 (Division of Brain and Neurophysiology, Department of Physiology, Jichi
 Medical University, Japan)

9:30-10:15 [E-2]
**The regulation of energy balance via brain dietary nutrient
 sensing**70
 Lora HEISLER
 (Rowett Institute of Nutrition and Health, University of Aberdeen, UK)

10:15-10:45 [E-3]
**Roles of newly identified lateral hypothalamic peptides in the
 regulation of feeding behavior and body weight homeostasis**
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 Takeshi SAKURAI
 (Faculty of Medicine, Department of Molecular Neuroscience & Integrative Physiology,
 Kanazawa University, Japan)

10:45-11:00 [E-4 (PS No. 55)]
**The effect of maternal nutritional condition during lactation for the
 pubertal onset of offsprings of female Sprague-Dawley rats**136
 Hitoshi OZAWA
 (Department of Anatomy and Neurobiology, Graduate School of Medicine, Nippon
 Medical School, Tokyo, Japan)

11:00-11:30 Coffee Break

11:30-12:15 [E-5]
Early inflammatory and metabolic stressors: adult energy balance and metabolism74

Quentin PITTMAN

(Hotchkiss Brain Institute, Department of Physiology and Pharmacology, University of Calgary, Calgary, Canada)

12:15-12:45 [E-6]
Hypothalamic regulation of water balance related to the feeding behavior76

Yoichi UETA

(Department of Physiology, School of Medicine, University of Occupational and Environmental Health, Japan)

12:45–13:00 **Announcement**

13:00–13:05 **Closing Remarks:** Masatomo MORI

13:05–13:40 **Lunch**