

Toshio Hosaka

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EDUCATION:

1994 M.D. Yamaguchi University School of
Medicine

1999 Ph.D. Yamaguchi University Graduate
School of Medicine

PROFESSIONAL EMPLOYMENT:

1994-1996 Resident
Third Department of Internal Medicine,
Yamaguchi University Hospital

1996-1998 Clinical Research Fellow
Third Department of Internal Medicine,
Yamaguchi University Hospital

1998-1999 Medical Staff
Division of Internal Medicine, Saiseikai Yamaguchi General Hospital

1999-2000 Senior Medical Staff
Division of Internal Medicine, Iwakuni Medical Center

2000-2002 Postdoctoral Research Fellow
Third Department of Internal Medicine,
Yamaguchi University School of Medicine

2002-2005 Research Associate
Department of Biochemistry, School of Medicine
Boston University

2005-2006 Research Associate
Division of Molecular Enzyme Genetics,
The Institute for Molecular Enzyme Research,
The University of Tokushima

2006-2007 Oct. Associate Professor
Department of Nutrition and Metabolism Institute of Health
Biosciences University of Tokushima Graduate School

2007 Nov.-2009 Assistant Professor
Clinical Research Center for Diabetes

2009-2011 Tokushima University Medical and Dental Hospital
Assistant Professor
Department of Public Health and Applied Nutrition, Institute of Health
Biosciences University of Tokushima Graduate School

2011-2014 Associate Professor
Department of Endocrinology and Diabetes, Saitama Medical
University Hospital

2014-2018 Sep. Associate Professor
Third Department of Internal Medicine Division of Diabetes,
Endocrinology and Metabolism, Kyorin University School of
Medicine

2018 Oct.
-present Professor of Laboratory of Clinical Nutrition,
Department of Nutrition and Life Science,
School of Food and Nutritional Sciences,
And Professor of Graduate Program in Food and Nutritional Science,
Graduate School of Integrated Pharmaceutical and Nutritional
Science, The University of Shizuoka

PROFESSIONAL SOCIETY:

Japan Diabetes Society
Japanese Society of Internal Medicine
Japanese Society for Parental and Enteral Nutrition
Japan Society of Metabolism and Clinical Nutrition
The Japan Endocrine society
Japanese Society for Treatment of Obesity
The Japan Society of Diabetic Complications
The Japanese Society of Ophthalmic Diabetology
Japan Society of Nutrition and Food Science

BOARD CERTIFICATION AND LICENSE:

Medical License : No. 361950, Japan, April 28, 1994
Coordinator of Nutrition Supports Team, Board Certified Fellow and Trainer and Councilor
of Japan Society of Metabolism and Clinical Nutrition

Board Certified Fellow of Japanese Society of Internal Medicine

Board Certified Trainer and Fellow and Councilor of Japan Diabetes Society

Board Certified Trainer and Fellow of The Japan Endocrine society
Councilor of The Japan Society of Diabetic Complications
Councilor of Japan Society of Nutrition and Food Science

MAJOR RESEARCH INTERESTS

1. Molecular mechanism of glucose transport
2. Molecular mechanism of insulin resistance
3. Molecular mechanism of organic acid receptor signaling
4. Clinical aspect of diabetes nutritional therapy

REPRESENTATIVE PUBLICATIONS

1. Kawakami Y, Yasuda A, Hayashi M, Akiyama M, Asai T, Hosaka T, Arai E : Acute effect of green tea catechins on uric acid metabolism after alcohol ingestion in Japanese men. *Clinical Rheumatology* 2021 Feb
2. Takahashi R, Yoshida T, Toku H, Otsuki N, and Hosaka T : Impact of meal timing on postprandial interstitial fluid glucose levels in young Japanese females. *J Nutr Sci Vitaminol.* 2020 Dec 6;66: 593-596
3. Morita N, Hosaka T, Yamazaki Y , Takahashi K, Sasano H, Ishida H : Abnormal glucose intolerance in a patient with pheochromocytoma and ACTH-independent subclinical Cushing's syndrome involving the same adrenal gland. *J Int Med Res.* 2019 Jul;47(7):3360-3370
4. Ishitobi M, Hosaka T, Morita N, Kondo K, Murashima T, Kitahara A, Takahashi K, Sumitani Y, Tanaka T, Yokoyama T, Kondo T, Ishida H : Serum lactate levels are associated with serum alanine aminotransferase and total bilirubin levels in patients with type 2 diabetes mellitus: A cross-sectional study. *Diabetes Res Clin Pract.* 2019 Jan 31;149:1-8.
5. Ito S, Hosaka T, Yano W, Ito T, Yasumura M, Shimizu Y, Kobayashi H, Nakagawa T, Inoue K, Tanabe S, Kondo T, Ishida H : Metabolic Effects of Tofogliflozin are Efficiently Enhanced with Appropriate Dietary Carbohydrate Ratio and are Distinct from Carbohydrate Restriction. *Physiological Reports* 2018 Mar;6(5).
6. Morita N, Hosaka T, Kitahara A, Murashima T, Onuma H, Sumitani Y, Takahashi K, Tanaka T, Kondo T, Ishida H : Novel mechanisms modulating palmitate-induced inflammatory factors in hypertrophied 3T3-L1 adipocytes by AMPK. *Journal of Diabetes Research* 2018 Mar 11;2018:9256482.
7. Sumitani Y, Hosaka T, Susaki Y, Fujisawa Y, Kuriyama K, Tsukada Y, Yokoyama T, Ogasawara J, Nishida S, Inukai K, Okajima Y, Ohno H, Ishida H : Clinical effect of real time pulse rate monitoring with portable pulsimeter on physical exercise therapy for male patients with type 2 diabetes. *Diabetology International* 7(3):228-234 2016
8. Iuchi T, Hosaka T, Shiroishi M, Ono H, Inukai K, Sumita T, Sakai G, Katayama S, Awata T: Influence of treatment with extracts of *Hypsizygus marmoreus* mushroom on body

composition during obesity development in KK-Ay mice. J Nutr Sci Vitaminol (Tokyo) 61(1) 96-100, 2015.

9. Le TKC, Hosaka T, Trung NT, Kassu A, Oanh DT, Ba TH, Phuong PT, QuangBinh T : Bifidobacterium species lower serum glucose, increase insulin signaling protein expressions and improve adipokine profile in diabetic mice. BIOMEDICAL RESEARCH 36(1) 63-70, 2015.

10. Le TKC, Hosaka T, Le TTT, Nguyen TG, Tran QB, Le THH, Pham XD: Oral administration of *Bifidobacterium* spp. improves insulin resistance, induces adiponectin and prevents inflammatory adipokine expressions. Biomed Res. 35(5) 303~10 2014.

11. Hosaka T, Sasaga S, Yamasaka Y, Nii Y, Edazawa K, Tsutsumi R, Shuto E, Okahisa N, Iwata S, Tomotake H, Sakai T : Treatment with buckwheat bran extract prevents the elevation of serum triglyceride levels and fatty liver in KK-A^y mice. The journal of medical investigation 61(3,4) 345~52 2014

12. Li Q, Hosaka T, Harada N, Nakaya Y, Funaki M: Activation of Akt through 5-HT_{2A} receptor ameliorates serotonin-induced degradation of insulin receptor substrate-1 in adipocytes. Mol Cell Endocrinol. 365(1):25~35 2013

13. Hosaka T, Nii Y, Tomotake H, Ito T, Tamanaha A, Yamasaka Y, Sasaga S, Edazawa K, Tsutsumi R, Shuto E, Okahisa N, Iwata S, Sakai T: Extracts of common buckwheat bran prevent sucrose digestion. J Nutr Sci Vitaminol (Tokyo). 57(6) 441~445 2012

14. Li Q, Hosaka T, Shikama Y, Bando Y, Kosugi C, Kataoka N, Nakaya Y, Funaki M: Heparin-binding EGF-like growth factor (HB-EGF) mediates 5-HT-induced insulin resistance through activation of EGF receptor-ERK1/2-mTOR pathway. Endocrinology 153(1) 56~68 2012.

15. Hirata Y, Hosaka T, Iwata T, Le CTK, Jambaldorj B, Teshigawara K, Harada N, Sakaue H, Sakai T, Yoshimoto K Nakaya Y: Vimentin binds IRAP and is involved in GLUT4 vesicle trafficking. Biochem Biophys Res Commun 405(1) 96~101 2011

16. Le CTK, Hosaka T, Harada N, Jambaldorj B, Fukunaga K, Nishiwaki Y, Teshigawara K, Sakai T, Nakaya Y, Funaki M, Myosin IIA participates in docking of Glut4 storage vesicles with the plasma membrane in 3T3-L1 adipocytes Biochem Biophys Res Commun 391(1) 995~999 2010

17. Hirasaka K, Kohno S, Goto J, Furochi H, Mawatari K, Harada N, Hosaka T, Nakaya Y, Ishidoh K, Obata T, Ebina Y, Gu H, Takeda S, Kishi K, Nikawa T. Deficiency of Cbl-b gene enhances infiltration and activation of macrophages in adipose tissue and causes peripheral insulin resistance in mice. 2007 56: 2511 -2522 Diabetes.

18. Gross DN, Miyoshi H, Hosaka T, Zhang HH, Pino EC, Souza S, Obin M, Greenberg AS, Pilch PF. Dynamics of lipid droplet-associated proteins during hormonally stimulated lipolysis

in engineered adipocytes: stabilization and lipid droplet binding of adipocyte differentiation-related protein/adipophilin *Molecular Endocrinology* 20 : 459-466 2006

19. Hosaka T, Brooks CC, Presman E, Kim SK, Zhang Z, Breen M, Gross DN, Sztul E, and Pilch PF. p115 interacts with the GLUT4 vesicle protein, IRAP, and plays critical role in insulin-stimulated GLUT4 translocation. *Molecular Biology of the Cell* 16 : 2882-2890, 2005