

Clinical and Molecular Endocrinology

1. Staffs and Students (April, 2009)

Professor	Yukio Hirata	
Associate Professor	Masayoshi Shichiri	
Lecturer	Isao Uchimura	
Assistant Professor	Takanobu Yoshimoto, Hajime Izumiyama	Ryuji Koyama,
Resident	Toru Sugiyama, Tadao Iburi, Mina Yamaguchi, Maiko Nishizawa	Masatomo Mihara, Miho Sugiyama, Koichi Itoh,
Graduate Students	Kiichiro Hiraishi, Naoko Sekizawa, Eri Hayakawa Noriko Suzuki, Yoshihiro Yamazaki, Yuko Tateishi,	Michiya Kida Yuji Tani, Itaru Akaza, Tae Nakano Masako Kato Takako Asano
Research Students	Munehiro Ikebukuro,	Koji Hagiwara
Secretaries	Kimie Takano,	Yasuko Tsuchiya

2. Purpose of Education

Our training program enables postdoctoral trainees to prepare for the future academic careers and the clinical practice in the broad discipline of endocrinology and metabolism. The research program provides mentor-based training in experimental design, laboratory and clinical research techniques and methodology, and interpretation and analysis of the results obtained from cellular and molecular biology, physiology, clinical physiology, clinical therapeutics, and health sciences. This training program is designed to educate and establish 'physician · scientist' in the field of endocrinology and metabolism.

3. Research Subjects

- 1) Physiological and pathophysiological role(s) of vasoactive hormones
- 2) In-silico analysis of novel bioactive peptides
- 3) Mechanism of endothelial dysfunction in diabetes, endocrine and metabolic diseases
- 4) Mechanism of pathogenesis in endocrine tumors
- 5) Development of novel diagnostic and therapeutic tools in endocrine and metabolic diseases

4. Clinical Services

Comprehensive inpatient and outpatient services in the area of endocrine and metabolic disorders, including:

- diseases of the thyroid, pituitary and adrenal glands.
- diabetes mellitus, diabetic complications, metabolic syndrome, and obesity
- primary and secondary hypertension
- disorders of calcium metabolism

5. Publications

1) Peer-reviewed Journal

1. Oki Y, Hashimoto K, Hirata Y, Iwasaki Y, Nigawara T, Doi M, Sakihara S, Kageyama K, Suda T. Development and validation of a 0.5 mg dexamethasone suppression test as an initial screening test for the diagnosis of ACTH-dependent Cushing's syndrome. *Endocr J* 2009;56:897-894.
2. Sekizawa N, Hayakawa E, Tsuchiya K, Yoshimoto T, Akashi T, Fujii T, Yamada S, Hirata Y: Acromegaly associated with multiple tumors. *Intern Med* 2009;48:1273-1278.
3. Akaza I, Tsuchiya K, Akaza M, Sugiyama T, Izumiyama H, Doi M, Yoshimoto T, Hirata Y: Improvement of congestive heart failure after octreotide and transsphenoidal surgery in a patient with acromegaly. *Intern Med* 2009;48:697-700.

4. Sugiyama T, Levy BD, Michel T. Tetrahydrobiopterin recycling, a key determinant of endothelial nitric-oxide synthase-dependent signaling pathways in cultured vascular endothelial cells. *J Biol Chem* 2009;284:12691-700.
5. Ikeda M, Kawata A, Nishikawa M, Tateishi Y, Yamaguchi M, Nakagawa K, Hirabayashi S, Bao Y, Hidaka S, Hirata Y, Hata Y. Hippo pathway-dependent and-independent roles of RASSF6. *Sci Signal* 2009;2:ra59.
6. Gotyo N, Kida M, Horiuchi T, Hirata Y. Torsade de Pointes associated with recurrent ampulla cardiomyopathy in a patient with idiopathic ACTH deficiency. *Endocr. J* 2009;56:807-815.
7. Nakayama C, Shichiri M, Sato K, Hirata Y. Expression of prosalusin in human neuroblastoma cells. *Peptides* 2009;30:1362-1367.
8. Tsuchiya K, Akaza I, Yoshimoto T, Hirata Y. Pioglitazone improves endothelial function with increased adiponectin and high-density lipoprotein cholesterol levels in type 2 diabetes. *Endocr J* 2009;56:691-698.
9. Tsuchiya K, Yoshimoto T, Hirata Y. Endothelial dysfunction is related to aldosterone excess and raised blood pressure. *Endocr J* 2009;56:553-559.
10. Tateno T, Kato M, Tani Y, Oyama K, Yamada S, Hirata Y. Differential expression of somatostatin and dopamine receptor subtype genes in adrenocorticotropin (ACTH)-secreting pituitary tumors and silent corticotroph adenomas. *Endocr J* 2009;56:579-584.
11. Katagiri S, Nitta H, Nagasawa T, Uchimura I, Izumiyama H, Inagaki K, Kikuchi T, Noguchi T, Kanazawa M, Matsuo A, Chiba H, Nakamura N, Kanamura N, Inoue S, Ishikawa I, Izumi Y. Multi-center intervention study on glycohemoglobin (HbA1c) and serum, high-sensitivity CRP (hs-CRP) after local antiinfectious periodontal treatment in type 2 diabetic patients with periodontal disease. *Diabetes Res Clin Pract* 2009;83:308-315.
12. Sato K, Sato T, Susumu T, Koyama T, Shichiri M. Presence of immunoreactive salusin-beta in human plasma and urine. *Regul Pept.* 2009;158:63-67.
13. Fukai N, Kenagy RD, Chen L, Gao L, Daum G, Clowes AW. Syndecan-1: an inhibitor of arterial smooth muscle cell growth and intimal hyperplasia. *Arterioscler Thromb Vasc Biol.* 2009;29:1356-1362.

2) International Meeting

1. Yoshimoto T, Hayakawa E, Sekizawa N, Tsuchiya K, Suzuki N, Hirata Y: Overexpression of receptor for advanced glycation endproduct (RAGE) in vascular smooth muscle cells. The Endocrine Society's Annual Meeting Washington D.C., USA (2009.6)
2. Hayakawa E, Yoshimoto T, Sekizawa N, Tsuchiya K, Shichiri M, Hirata Y: Retroviral gene delivery of receptor for advanced glycation end products (RAGE) into rat vascular smooth muscle cells. 10th International Symposium on Mechanisms of Vasodilatation Miyagi, Japan (2009. 6)
3. Kato M, Tateno T, Oyama K, Yamada S, Sano T, Shichiri M, Hirata Y: Differential gene expression in sparsely-granulated and densely-granulated growth hormone-producing pituitary adenomas. The 11th International Pituitary Pathology Society Hyogo, Japan (2009.10)
4. Uchimura I, Hayashi Y, Shiga Y, Kaibara M: Glycemic control, antiplatelet therapy and blood coagulation activity in diabetes. 20th World Diabetes Congress of International Diabetes Federation Montreal, Canada (2009.10)