Clinical and Molecular Endocrinology

1. Staffs and Students (April, 2010)

Professor	Yukio Hirata	
Junior Associate Professor	Isao Uchimura	
	Hajime Izumiyama	
Assistant Professor	Takanobu Yoshimoto,	Masatomo Mihara,
Project Junior Associate Professor	Toru Sugiyama	
Resident	Junichiro Adachi,	Miho Sugiyama,
	Mina Yamaguchi,	Tadao Iburi
	Kenichi Kawabori	
Graduate Students	Kiichiro Hiraishi,	Michiya Kida
	Naoko Sekizawa,	Yuji Tani,
	Eri Hayakawa,	Noriko Suzuki,
	Tae Nakano,	Masako Kato,
	Yuko Tateishi,	Takako Asano,
	Kenji Ikeda,	Katsuhiko Hamada
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・scitentist' in the field of endocrinology and metabolism.

3. Research Subjects

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

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. Akaza I, Yoshimoto T, Tsuchiya K, Hirata Y: Endothelial dysfunction aassociated with hypercortisolism is reversible in Cushing's syndrome. Encocr J 2010;57:245-252
2. Doi M, Sugiyama T, Izumiyama H, Yoshimoto T, Hirata Y: Clinical features and management of ectopic ACTH syndrome at a single institute in Japan. Endocr J 2010;57:1061-1069
3. Gotyo N, Hiyama M, Adachi J, Watanabe T, Hirata Y: Respiratory failure with myxedema ascites in a patient with idiopathic myxedema. Intern Med 2010;49:1991-1996
4. Hayashi Y, Katsumoto Y, Omori S, Yasuda A, Asami K, Kaibara M, Uchimura I: Dielectric coagulometry: A new approach to estimate venous thrombosis risk. Anal Chem 2010;82:9769-9774
5. Ikebukuro M, Akaza I, Yoshimoto T, Tsuchiya K, Hirata Y: Correlation between Endothelial Dysfunction and Hypercalcemia in Patient with Primary Hyperparathyroidism. Jpn. J. Clin. Physiol 2010;40:75-81

6. Ito T, Sasano H, Tanaka M, Osamura RY, Sasaki I, Kimura W, Takano K, Obara T, Ishibashi M, Nakao K, Doi R, Shimatsu A, Nishida T, Komoto I, Hirata Y, Nakamura K, Igarashi H, Jensen RT, Wiedenmann B, Imamura M: Epidemiological study of gastroenteropancreatic neuroendocrine tumors in Japan. J Gastroenterol 2010;45:234-243
7. Iwasaki H, Kovacic JC, Olive M, Beers JK, Yoshimoto T, Crook MF, Tonelli LH, Nabel EG: Disruption of protein arginine N-methyltransferase 2 regulates leptin signaling and produces leanness in vivo through loss of STAT3 methylation. Circ Res 2010;107:992-1001
8. Kaibara M Hayashi Y, Shinozuka T, Uchimura I, Ujiie H, Suzuki Y: Simultaneous measurement of blood coagulation and erythrocyte sedimentation by means of a rheological technique. J Biorheol 2010;24:36-41
9. Sakihara S, Kageyama K, Oki Y, Doi M, Iwasaki Y, Takayasu S, Moriyama T, Terui K, Nigawara T, Hirata Y, Hashimoto K, Suda T: Evaluation of plasma, salivary, and urinary cortisol levels for diagnosis of Cushing's syndrome. Endocr J 2010;57:331-337
10. Sakurada M, Yoshimoto T, Sekizawa N, Hirono Y, Suzuki N, Hirata Y: Vasculoprotective effect of cilostazol in aldosterone-induced hypertensive rats. Hypertens Res 2010;33:229-235
11. Sekizawa N, Yoshimoto T, Izumiyama H, Hirata Y: Distinct Uptake of 18F-fluorodeoxyglucose by brown adipose tissue with a catecholamine-secreting tumor. Intern Med 2010;49:2363
12. Sugiyama M, Sugiyama T, Yamaguchi M, Izumiyama H, Yoshimoto T, Kishino M, Akashi T, Hirata Y: Successful localization of ectopic ACTH-secreting bronchial carcinoid by selective pulmonary arterial sampling. Endocr J 2010;57:959-964
13. Sugiyama T, Kouyama R, Tani Y, Izumiyama H, Akashi T, Kishimoto S, Arii S, Hirata Y: Giant malignant insulinoma which developed from a non-functioning pancreatic tumor over a long period of time. Intern Med 2010;49:1573-1579
14. Sugiyama T, Michel T: Thiol-metabolizing proteins and endothelial redox state: differential modulation of eNOS and biopterin pathways. Am J Physiol Heart Circ Physiol 2010;298:H194-201
15. Tani Y, Inoshita N, Sugiyama T, Kato M, Yamada S, Shichiri M, Hirata Y: Upregulation of CDKN2A and suppression of cyclin D1 gene expressions in ACTH-secreting pituitary adenomas. Eur J Endocrinol 2010;163:523-529.
16. Tani Y, Sugiyama T, Hirooka S, Izumiyama H, Hirata Y: Ectopic ACTH syndrome caused by bronchial carcinoid tumor indistinguishable from Cushing's disease. Endocr J 2010;57:679-686
17. Tateno T, Kato M, Tani Y, Yoshimoto T, Oki Y, Hirata Y: Processing of high-molecular-weight form adrenocorticotropin in human adrenocorticotropin-secreting tumor cell line (DMS-79) after transfection of prohormone convertase 1/3 gene. J Endocrinol Invest 2010;33:113-117
18. Wago T, Yoshimoto T, Akaza I, Tsuchiya K, Izumiyama H, Doi M, Hirata Y: Improvement of endothelial function in patients with hypertension and type 2 diabetes after treatment with telmisartan. Hypertens Res 2010;33:796-801
19. Yamazaki Y, Kamei Y, Sugita S, Akaike F, Kanai S, Miura S, Hirata Y, Troen BR, Kitamura T, Nishino I, Suganami T, Ezaki O, Ogawa Y: The cathepsin L gene is a direct target of FOXO1 in skeletal muscle. Biochem J. 2010;427:171-178
20. Suzuki N, Shichiri M, Tateno T, Sato K, Hirata Y: Distinct systemic distribution of salusin-α and salusin-β in the rat. Peptides 2010 (E-pub ahead of print)

2) International Meeting

1. Uchimura I: SMBG with Internet Data Management improved Glycemic control in Type 2 Diabetes treated with insulin. 3rd International Conference on Advanced Technologies & Treatments for Diabetes Basel, Germany (2010.2)
2. Akaza I, Yoshimoto T, Tsuchiya K, Hirata Y: Endothelial dysfunction in Cushing's syndrome. 14th International Congress of Endocrinology Kyoto, Japan (2010.3)
3. Hayakawa E, Yoshimoto T, Sekizawa N, Tsuchiya K, Sugiyama T, Hirata Y: Enhanced expression of monocyte chemoattractant protein(MCP)-1 in vascular smooth muscle cells with overexpressed receptor for advanced glycation end products(RAGE). 14th International Congress of Endocrinology Kyoto, Japan (2010.3)
4. Hiraishi K, Yoshimoto T, Tsuchiya K, Izumiyama H, Doi M, Sasano H, Hirata Y: Primary aldosteronism is frequently associated with subclnical Cushing's syndrome. 14th International Congress of Endocrinology Kyoto, Japan (2010.3)
5. Hirata Y: ACTH-dependent Cushing's Syndrome - Ectopic ACTH Syndrome -. 14th International Congress of Endocrinology Kyoto, Japan (2010.3)
6. Sekizawa N, Izumiyama H, Yoshimoto T, Hirata Y: Distinct Uptake of 18F-Fluorodeoxyglucose by Brown Adipose

Tissue in Catecholamine-Secreting Tumor. 14th International Congress of Endocrinology Kyoto, Japan (2010.3)

7. Suzuki N, Shichiri M, Nakano T, Nakayama C, Hirata Y: Distinct tissue distribution of salusin-α and salusin-β expression in the rat. 14th International Congress of Endocrinology Kyoto, Japan (2010.3)
8. Tani Y, Kato M, Tateno T, Shichiri M, Oyama K, Yamada S, Hirata Y: Differential gene expression of transcription factors in adrenocorticotropin (ACTH) -secreting pituitary and non-pituitary tumors. 14th International Congress of Endocrinology Kyoto, Japan (2010.3)
9. Sekizawa N, Yoshimoto T, Hayakawa E, Sugiyama T, Hirata Y: Aldosterone induced genes expression in human endothelial cell line stably expressing mineralocorticoid receptor gene. The 14th Annual Scientific Session of the Society of Cardiovascular Endocrinology and Metabolism Nara, Japan (2010.3)
10. Sugiyama T, Kida M, Yoshimoto T, Hirata Y: Hydrogen sulfide induces calcium-dependent activation of endothelial nitric oxide synthase. The 6th International Conference on the Biology, Chemistry, and Therapeutic Applications of Nitric Oxide Kyoto, Japan (2010.6)
11. Uchimura I, Hayashi Y, Kaibara M: Dielectric spectroscopy measurement of blood coagulation in diabetes mellitus. 70th Scientific Sessions, American Diabetes Association Orlando, USA (2010.6)
12. Hayashi Y, Katsumoto Y, Brun MA, Omori S, Kaibara M, Uchimura I: Venous thrombosis risk assessment by dielectric spectroscopy. The 6th Conference of the International Dielectric Society Madrid, Spain (2010.9)