

# Kanazawa Medical University Research Activities and Publications

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Kanazawa Medical University

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# Liberal Arts

## 0010 Department of Human Science (Humanities)

### Faculty

Title	Name	Field of Specialization
	HIRAGUCHI Tetsuo	environmental-ethnoarchaeology, peace studies.
	TAKEDA Koichi	Philosophy , History of logic

### Keywords of Research

zoo-archaeology, cetacean, dolphin, whale, faunal remains, environmental archaeology, whaling, ancient diet, Palaeolithic period, Jomon period, ethno-archaeology, anthropological education, peace study, logic, metaphysics, form, content, predicate, category, deduction, induction, matter, being, substance, definition

### Outline of Research

Hiraguchi:Environmental and ethnological archaeology (especially prehistoric whaling), anthropological education for medical students, and peace studies.

Takeda:It has been asserted that logic and metaphysics are different to each other in Aristotle because his logic is a organon of science. However, his logic is the system where reasonings are dependent on the contents of propositions, while modern formal logic involves abstraction of any content. In Aristotle, Metaphysics studies the order of things which are contents of logic. From this point, I aim to explicate the relation between logic and metaphysics in Aristotle.

### Publications

#### Originals

0010B001 Koichi TAKEDA: Per Se Being in Aristotle's Metaphysics, Mem. Lib. Kanazawa Med. Univ., 37:1-10, 2009 (in Japanese) .

## 0030 Department of Human Science (Mathematics)

### Faculty

Title	Name	Field of Specialization
	MATSUDA Hiroo	Lorentz manifolds, Curves in Euclidean space
	YOSHINO Kenichi	Algebra theory, number theory

### Keywords of Research

Bertrand curve, Mannheim curve, isotropy group, harmonic form, class number, ideal class group, cyclotomic field, Mannheim curve, Frenet frame, curvature, Lie group, Lorentzian manifold, harmonic analysis, isometry group, abelian field, class number parity, cyclotomic unit

### Outline of Research

Matsuda : We define a generalized Mannheim curve in Euclidean space. And we give characterizations of generalized Mannheim curve and examples of generalized Mannheim curve.

Yoshino : The determination of class number and the ideal class group of the cyclotomic field

### Publications

#### Originals

- 0030B001 (Y.Koyama), K.Yoshino: Prime divisors of the class number of the real  $p$ 'th cyclotomic field and characteristic polynomials attached to them, RIMS Kôkyûroku Bessatsu., B12:149-172, 2009.
- 0030B002 H.Matsuda, S.Yorozu: On generalized mannheim curves in euclidean 4-space, Nihonkai Math. J., 20:33-56, 2009.
- 0030B003 K.Yoshino: The determination of the  $n$ -cyclotomic fields with  $h-n=n$ , where  $n$  is an odd integer, Mem. Lib. Kanazawa Med. Univ., 37:11-24, 2009 (in Japanese) .

## 0040 Department of Life Science (Natural Science:Physics)

### Faculty

Title	Name	Field of Specialization
	SUGITANI Michio	Optical imaging of signal propagation in the piriform cortex
	NAKAMURA Kiyoshi	Study on Physics Education for Medical College, Study on Room Acoustics

### Keywords of Research

piriform cortex, signal propagation, physical experiment, demonstration, elementary particle physics, acoustic environment, optical recording

### Outline of Research

Sugitani: Optical imaging of signal propagation in the piriform cortex

Nakamura: In order that the student who majors in life science may deepen an understanding of a lecture, and in order to enable independent learning, we are developing the student support which used a demonstration experiment and intranet.

### Publications

#### Originals

0040B001 K.Nakamura: Teaching Physics at Kanazawa Medical University, Mem. Lib. Kanazawa Med. Univ., 37:25-31, 2009 (in Japanese).

## 0050 Department of Life Science (Natural Science:Chemistry)

### Faculty

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Title	Name	Field of Specialization
	MAEDA Masayo	Molecular oncology, Metastasis of Cancer Cells

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### Keywords of Research

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Metastasis, Metastasis Inducing Gene, RhoGDI  $\beta$  (LyGDI/D4GDI/RhoGDI2)

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### Outline of Research

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Rho guanine nucleotide dissociation inhibitors (RhoGDIs) regulate the activity of Rho family GTPases. Our studies have indicated that RhoGDI  $\beta$  (LyGDI/D4GDI/RhoGDI2) plays a role in cancer metastasis.

Further investigation of the details of RhoGDI  $\beta$ 's role in cancer progression and metastasis is important. It will lead to a better treatment for cancer.

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## 0060 Department of Life Science (Natural Science: Biology)

### Faculty

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Title	Name	Field of Specialization
	HORI Isao	Development of ascidians
	SHOJI Hiroki	Developmental Biology, Molecular Biology, Biochemistry

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### Keywords of Research

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planaria, acoel, regeneration, differentiation, ultrastructure, pharynx, sponge, metamorphosis, immunoelectron microscopy, neurosynaps, neurosecretory cell, lectin, galectin,  $\beta$ -galactoside, Xenopus, development, placenta, trophoblast

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### Outline of Research

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- 1) Functional analysis of Galectins, a family of  $\beta$ -galactosides binding proteins.
    - a) Roles of Galectins in animal development.
    - b) Roles of Galectins in the formation of placenta.
    - c) Regulations of virus growth by Galectins.
  - 2) Electron microscopic analysis of the mechanisms of regeneration of planarians.
- 

### Publications

#### Originals

- 0060B001 H.Shoji, L.Deltour, T.Nakamura, S.Tajbakhsh, F.Poirier: Expression pattern and role of Galectin1 during early mouse, Dev. Growth Differ., 51:607-615, 2009.

## 0070 Department of Human Science (Foreign Languages:English)

### Faculty

Title	Name	Field of Specialization
	SHIBUYA Yoshiho	English linguistics, Phonetics
	KAKIZAKI Kenichi	Contemporary Jewish American Authors' Works
	BURKE STEVEN Thomas	English

### Keywords of Research

articulatory phonetics, acoustic phonetics, English phonology, Japanese phonology, pronunciation, L2 research, language acquisition, medical research article, novel, individualism, quest, existentialism, Bildungsroman, humor, irony, narration, suffering, humanity cross-cultural differences, cultural variation

### Outline of Research

Shibuya: Main research topic is Japanese speakers' pronunciation of English. How phonology (what is in the mind of speakers) and phonetics (mostly the gestural movement of articulators) of L1 (here, Japanese) influence the pronunciation of Japanese speakers of English is studied.

kakizaki: To understand about contemporary American Jewish author and a Nobel laureate, Saul Bellow's idea on the fundamental questions about human existence: "Where are we going? What are we doing here?" To understand his writing technique of novels and his idea on the art.

Burke: My most recent research interest has been the connection and power that extensive reading has on English acquisition for EFL students.

### Books

- 0070A001 K.Kakizaki: Projective Identification in *The Victim*, *The Psychoanalytic Study of English Literature*, 423-37, Tokyo, 2009.

### Publications

#### Originals

- 0070B001 K.Kakizaki: Rediscovering the Inner Girl in *A Theft*, *Shlemiel.*, 8:57-69, 2009.
- 0070B002 K.Kakizaki: Healing from Childhood Psychological Maltreatment in "What Kind of Day Did You Have.", *Journal of English Language and Literature*, 57:15-30, 2009.
- 0070B003 K.Kakizaki: Strength of Love in "A Worn Path.", *Mem. Lib. Kanazawa Med. Univ.*, 37:33-44, 2009.
- 0070B004 K.Kakizaki: Father's Legacy in "Something to Remember Me By.", *Mem. Lib. Kanazawa Med. Univ.*, 37:45-55, 2009.

## 0080 Department of Human Science (Foreign Languages:German)

### Faculty

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Title	Name	Field of Specialization
	HARA Akira	Austria literature led by Hofmannsthal
	KOCHI Munehiro	Interpretationen von Goethes Werken, Begriff von Bildung

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### Keywords of Research

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end of the century, culture, the middle Ages, Modern times, Europe

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### Outline of Research

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Hara : In the German-language area from the end of the 19th century to the beginning of the 20th century, many prominent intellects appeared in various fields of culture. Hofmannsthal is also one of such intellects in the field of literature. He almost spent the entirety of his life in Vienna, but his influence reaches the whole spiritual world of modern Europe. I analyze his acquaintanceship with intellects of that time and extract the essence of the modern culture in the German-language area and furthermore in all Europe.

Kouchi : Das Europa im zweiten Hälfte des 18. Jahrhunderts ist die Wendezeit von der noch einflussreichen mittelalterlichen Denkweise zur neuen modernen, wie sie der Historiker Reinhart Koselleck die „Sattelzeit“ nennt. Wie man sich damals mit dem Wechsel des Paradigmas auseinander setzte, möchte ich im Fall vom deutschen Dichter Goethe untersuchen und in seinen Werken wie Romanen und Dramen zeigen.

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### Publications

#### Originals

- 0080B001 Munehiro KOUCHI: Wilhelm Mommsen : Die politischen Anschauungen Goethes(3), Mem. Lib. Kanazawa Med. Univ., 37:67-89, 2009 (in Japanese) .
- 0080B002 Munehiro KOUCHI: Der Damon und das Damonische bei Goethe, Mem. Lib. Kanazawa Med. Univ., 37:57-66, 2009 (in Japanese) .

## 0081 Department of Human Science (Linguistics)

### Faculty

Title	Name	Field of Specialization
	AINODA Noriko	How do the Japanese medical students acquire medical terms in English as a second language? My research focuses on this question using both linguistic and phonetic knowledge, with the research evidence in cognitive science.

### Keywords of Research

linguistics, phonetics, teaching of English, medical education

### Outline of Research

Metacognition is an essential factor for lifelong learning of which skills should be fostered during undergraduate medical education. To seek longitudinal changes in metacognitive processes through problem-based learning (PBL), the year 3 students' reflective comments were categorically analyzed. The results showed that "knowledge of ignorance," one of metacognitive skills, could be fostered in PBL.

## 0090 Department of Life Science (Physical Education)

### Faculty

Title	Name	Field of Specialization
	TAMURA Nobuki	OtherGraduate School, Division of Physical Recreation
	UEDA Fumio	Physical strength and a study about the athletic capability, A basketball competition

### Keywords of Research

hygiene of exercise, physical fitness, near-infrared spectroscopy, muscle strength, small group learning, health related training, prescribed exercise, wheel chair basketball, sports medicine, motor ability, working skeletal muscle oxygenation, lower leg, problem learning, effects in iron deficiency, prescription of exercise program

### Outline of Research

Tamura : I do the exercise tolerance test for the people who must attempt the healthy physical fitness. Based on the result, I make the appropriate prescription in the people and guide them in the motion. After two, four, six and twelve month, I investigate the effects of the motion. The prescription is made again again, if the good effect by the motion is not obtained.

Yamashina : To find an effective way to prevent falling ,I have studied the ability to sustain a standing posture and falling mechanism.

To clarify the association between antigravity muscles and the ability to sustain static and active standing posture.

Ueda : To evaluate the students' physical fitness and healthcondition collectively,Ipractice the physical fitness and the motor ability test, measure their physique, and understand their condition. Making them as a basis on the guidance of teaching , I try to promote the students physical fitness and health condition.

# Basic Medicine

## 0100 Department of Molecular and Cell Structural Science (Anatomy I)

### Faculty

Title	Name	Field of Specialization
	HATTA Toshihisa	developmental biology, neuroscience
	HIGASHI Nobuaki	macroscopic anatomy,embryology.
	SHIMADA Hiroki	Medical science of free radical
	SIMAMURA Eriko	Medical science of free radical

### Keywords of Research

exo utero development, embryo, fetus, neurogenesis, cytokines, growth factors, hormones, stereology, ELISA, antioxidant, apoptosis, bcl-2, enzyme cytochemistry, electron microscopy, furanonaphthoquinone, free radical, immunohistochemistry, human macroscopic anatomy, mitochondria, NADH-quinone oxidoreductase, paraquat, reactive oxygen species, superoxide, scavenger, VDAC, anomaly of muscles and blood vessels

### Outline of Research

1. Studies on the feto-maternal signal transductions contributing to the fetal development via neuro-immune-endocrine network.
2. Cytochemical study of the cytotoxicity by reactive oxygen species.
3. Biological functions of VDAC family proteins.
4. Macroscopic studies on the variations of muscles and blood vessels.
5. Comparative anatomical studies on the brain evolution

### Publications

#### Originals

- 0100B001 H.Shimada, K-I.Hirai, E.Simamura, T.Hatta, H.Iwakiri, K.Mizuki, T.Hatta, T.Sawasaki, S.Matsunaga, Y.Endo, S.Shimizu: Paraquat toxicity induced by voltage-dependent anion channel 1 acts as an NADH-dependent oxidoreductase, *J. Biol. Chem.*, 284: 28642-28649, 2009.
- 0100B002 (M.Daisu), T.Hatta, Y.Sakurai-Yamashita, T.Nabika, K.Moritake: Quantitative analysis of delayed neuronal death in the hippocampal subfields of SHRSP and SHR, *Cell. Mol. Neurobiol.*, 29:557-562, 2009.
- 0100B003 N.Higashi, H.Shimada, E.Simamura, T.Hatta: Branching patterns of the celiac artery as the hepato-gastro-splenic trunk, *Acta Anatomica Nipponica.*, 84:7-10, 2009 (in Japanese) .

### Presentations at Conference

#### International Conference (Presentations)

- 0100I001 J. Hatta, T.Hatta, S.Miyagawa, Y.Kitahara, T.Hirota, K.Anzawa, T.Mochizuki: Quantitative image analysis of effects of antimycotic agents on the hyphal growth in *Trichophyton rubrum*, The 17th Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).

- 0100I002 T.Hatta, E.Simamura, H.Shimada, M.Uchishiba, N.Higashi: Maternal leukemia inhibitory factor enhances proliferation of neuronal progenitors of forebrain in rat fetuses., Society for NEUROSCIENCE 2009, (Chicago, '09.10).
- 0100I003 E.Simamura, H.Shimada, N.Higashi, H.Otani, T.Hatta: Leukemia inhibitory factor level in cerebrospinal fluid is elevated via placental adrenocorticotrophic hormone in rat fetuses., Society for NEUROSCIENCE 2009, (Chicago, '09.10).



## 0110 Department of Molecular and Cell Structural Science (Anatomy II)

### Faculty

Title	Name	Field of Specialization
	SHINOHARA Harumichi	gross anatomy,embryology,lymphatic vessels,microscopy.
	SHIMOKAWA Takashi	regeneration of skeletal muscle,development of peripheral nerve.
	YASUTAKA Satoru	gross anatomy,central nervous system.
	KOMINAMI Rieko	immunocytochemistry,pituitary,cell proliferation,electron microscopy.

### Keywords of Research

arthrology, osteology, clinical anatomy, development, lymphatic vessels, muscle, innervation, nerve, pituitary, ACTH, LH, GH, ontogenesis, immunocytochemistry, bromodeoxyuridine, proliferation, electron microscopy, rat, PCNA

### Outline of Research

Theme of researches

- 1) Anatomical study of brain white matter by using fiber dissection technique
- 2) Immuno-histochemical study of pituitary gland
- 3) Tissue regeneration in urodele amphibian

### Publications

#### Reviews

- 0110C001 H.Shinohara: Fundamentals of white matter dissection, Japanese journal of neurosurgery., 18:749-754, 2009 (in Japanese) .

#### Case Reports

- 0110D001 (H.Takiguchi), T.Shimokawa: A clinical and anatomical study on the causes of temporomandibular disorders type III, J.J.A.O.H, 15:1-4, 2009 (in Japanese) .

### Presentations at Conference

#### International Conference (Presentations)

- 0110I001 K.Fukui, A.Kaneuji, T.Sugimori, T.Ichiseki, K.Kitamura, R.Kominami, H.Shinohara, T.Matsumoto: Glucocorticoid induces micro-fat embolism in the rabbit: a scanning electron microscopic study, Association Research Circulation Osseous 15th International Symposium on Bone Circulation (ARCO 2009), (Yokohama, '09.11), ARCO 2009 Program, 47, 2009.

## 0120 Department of Physiology I

### Faculty

Title	Name	Field of Specialization
	KATO Nobuo	Brain Science
	SUGAI Tokio	Neurophysiology
	YAMAMOTO Ryo	Neuroscience
	ADACHI Hiroshi	Neuroscience

### Keywords of Research

central nervous system, neurophysiology, electrophysiology, immunohistochemistry, optical imaging, optical recording, olfactory system, olfactory center, chemical sense, vomeronasal organ, vomeronasal nerve, vomeronasal nerve layer, main olfactory bulb, accessory olfactory bulb, piriform cortex, field potential, propagating signal, horizontal propagation, oscillation, rat, guinea pig, slice preparation, in vitro, voltage-sensitive dye, subdivision, intracellular recording, intracellular staining, GABA, GABA<sub>A</sub> receptor, GABA<sub>B</sub> receptor

### Outline of Research

The brain is often regarded as a microcosmos, which contains more than a million neurons. Each neuron, however, is not a mere stardust. A single neuron integrates many inputs thereunto, so as to determine whether the output signal is released or not. Neurons are connected to each other by synapses to build neuron network, which underlies brain function. Our primary research interest is to elucidate, in molecular terms, how one or more neurons are able to regulate neuron excitability and synaptic efficiency. In particular, we are interested in studying in vitro how the versatile intracellular messenger calcium ion mediates a number of signals differentially, thereby achieving adequate regulation of synaptic efficiency and neuron excitability. As another research topic, we are also studying feature detection mechanisms in pheromone-based olfactory sensation by using in vivo preparation.

### Publications

#### Reviews

- 0120C001 N.Kato: Neurophysiological mechanisms of electroconvulsive therapy for depression., *Neurosci. Res.*, 64:3-11, 2009.

### Presentations at Conference

#### International Conference (Presentations)

- 0120I001 H.Yoshimura, T.Sugai, N.Segami, N.Kato: Input frequency-and NMDA receptor activity-dependent determination of signal-traveling routes between primary and secondary visual cortices, The 36th International Congress of Physiological Sciences, (Kyoto, '09.07), "J.Physiol. Sci. Suppl.", 59:S284, 2009.
- 0120I002 T.Sugai, R.Yamamoto, Y.Ueta, H.Yoshimura, N.Kato: The endopiriform nucleus functionally connects the olfactory and gustatory information the rat, The 36th International Congress of Physiological Sciences, (Kyoto, '09.07), J.Physiol. Sci. Suppl, 59:S202, 2009.

- 0120I003 R.Yamamoto, T.Sugai, Y.Ueta, N.Kato: Serotonergic modulation on the excitability of lateral amygdala neurons, The 36th International Congress of Physiological Sciences, (Kyoto, '09.07), J.Physiol. Sci. Suppl, 59:S288, 2009.
- 0120I004 (K.Yamamoto), Y.Ueta, R.Yamamoto, N.Inoue, K.Inokuchi, N.Kato: Electroconvulsive stimulation blocks intracellular amyloid-beta-mediated suppression of bk channels in neocortical pyramidal neurons, The 36th International Congress of Physiological Sciences, (Kyoto, '09.07), J.Physiol. Sci. Suppl, 59:S514, 2009.

## 0130 Department of Physiology II

### Faculty

Title	Name	Field of Specialization
	SHIBAMOTO Toshishige	Circulatory Physiology
	KURATA Yasutaka	Cardiac Electrophysiology
	MIYAMAE Shunichi	Cardiac Electrophysiology
	KAMIKADO Chiaki	Circulatory Physiology

### Keywords of Research

physiology, hepatic circulation, pulmonary circulation, sympathetic nervous system, isolated perfused liver, circulatory shock, triple vascular occlusion pressure, pulmonary edema, microcirculation, capillary pressure, vascular resistance distribution, pulmonary circulation, triple vascular occlusion pressure, cardiac electrophysiology, ion channels, pacemaker mechanisms, cardiac arrhythmias, biological pacemaker, mathematical modeling, bifurcation analysis, nonlinear dynamics, computer simulation, smooth muscle, vascular electrophysiology, artery, vein

### Outline of Research

Our works widely cover the area of cardiovascular physiology. We are particularly interested in the mechanisms of regulations of hepatic circulation under normal and anaphylactic conditions, and the mechanisms of cardiac automaticity and arrhythmias as well as their regulations. Using liver perfusion system for rats, we recently elucidated the effects of vasoconstrictive lipid mediators such as PAF on the vascular resistance and oxygen consumption, the attenuating effect of NO on anaphylactic hepatic venoconstriction, and the decreased oxygen consumption during hepatic anaphylaxis. We also explored the inhibitory effect of angiotensin II on inward rectifier K<sup>+</sup> currents via AT1 receptors in rat atrial myocytes, and the possible roles of pacemaker currents in robust pacemaking and driving of biological pacemakers.

### Publications

#### Originals

- 0130B001 W.Zhang, T.Shibamoto, S.Cui, H.Takano, Y.Kurata: 7-nitroindazole, but not L-name or aminoguanidine, attenuates anaphylactic hypotension in conscious rats, *Shock*, 31:201–206, 2009.
- 0130B002 H.Takano, T.Shibamoto, W.Zhang, Y.Kurata, H.Toga: Hepatic microvascular pressure during anaphylactic shock in anesthetized rats, *Microvasc. Res.*, 78:169–173, 2009.
- 0130B003 ZS.Zhao, T.Shibamoto, M.Tsutsumi, S.Cui, WM.Zhang, H.Takano, Y.Kurata: Mouse hepatic portal venoconstrictive response to vasoconstrictors is much weaker than that in rat, *J. Cardiovasc. Pharmacol.*, 54:421–426, 2009.
- 0130B004 (S.Koshida), Y.Kurata, T.Notsu, Y.Hirota, TY.Kuang, P.Li, U.Bahrudin, S.Harada, J.Miake, Y.Yamamoto, Y.Hoshikawa, O.Igawa, K.Higaki, M.Soma, A.Yoshida, H.Ninomiya, G.Shiota, Y.Shirayoshi, I.Hisatome: Stabilizing effects of eicosapentaenoic acid on Kv1.5 channel protein expressed in mammalian cells, *Eur. J. Pharmacol.*, 604:93–102, 2009.

## Presentations at Conference

### International Conference (Presentations)

- 0130I001 T.Shibamoto, W.Zhang, Y.Kurata: The pathophysiology of anaphylactic hypotension in rats, XXXVI International Congress of Physiological Sciences (IUPS2009), (Kyoto, '09.07), J Physiol Sci, 59 (Suppl 1): 498, 2009.
- 0130I002 W.Zhang, T.Shibamoto, Y.Kurata: Effects of  $\beta$ -adrenergic blockers on anaphylactic hypotension in conscious rats, XXXVI International Congress of Physiological Sciences (IUPS2009), (Kyoto, '09.07), J Physiol Sci, 59 (Suppl 1): 498, 2009.
- 0130I003 Y.Kurata, H.Matsuda, I.Hisatome, T.Shibamoto: Roles of hyperpolarization-activated current  $I_h$  in sinoatrial node pacemaking: insights from bifurcation analysis of mathematical models, XXXVI International Congress of Physiological Sciences (IUPS2009), (Kyoto, '09.07), J Physiol Sci, 59 (Suppl 1): 130, 2009.
- 0130I004 (H.Matsuda), Y.Kurata, T.Shibamoto:  $\alpha$ -adrenergic modulation of the sustained outward  $K^+$  currents in rat ventricular myocytes, XXXVI International Congress of Physiological Sciences (IUPS2009), (Kyoto, '09.07), J Physiol Sci, 59 (Suppl 1): 254, 2009.
- 0130I005 T.Shibamoto, W.Zhang, Y.Kurata: Hepatic venoconstriction is involved in anaphylactic hypotension in animals of various species, XXI World Allergy Congress, (Buenos Aires, '09.12), 2009.

## 0140 Department of Biochemistry I

### Faculty

Title	Name	Field of Specialization
	IWABUCHI Kuniyoshi	Molecular biology, DNA repair, p53-binding proteins
	MATSUI Tadashi	Molecular biology, DNA repair, p53-binding proteins
	HASHIMOTO Mitsumasa	Cell biology, DNA repair, Cell cycle, p53-binding proteins

### Keywords of Research

ionizing radiation, DNA double-strand break, checkpoint, DNA repair, cell cycle, p53, 53BP1, signal transduction

### Outline of Research

Ionizing radiation (IR) induces a variety of DNA lesions, including DNA double-strand breaks (DSBs). DNA damages activate cell-cycle checkpoints, which monitor DNA damage and transduce signals to coordinate repair and cell cycle progression. Using the yeast two-hybrid system, we have identified two cellular proteins, designated 53BP1 and 53BP2, that interact with the tumor suppressor p53. After exposure of cells to IR, 53BP1 rapidly accumulates at sites of DNA DSBs, suggesting that 53BP1 is involved in cellular responses to DNA DSBs. Our goal is to know functions of 53BP1 in cellular responses to DNA DSBs.

### Publications

#### Originals

- 0140B001 (K.Watanabe), K.Iwabuchi, J.Sun, Y.Tsuji, T.Tani, K.Tokunaga, T.Date, M.Hashimoto, M.Yamaizumi, S.Tateishi: RAD18 promotes DNA double-strand break repair during G1 phase through chromatin retention of 53BP1, *Nucleic Acids Res.*, 37:2176-2193, 2009.

## 0150 Department of Biochemistry II

### Faculty

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Title	Name	Field of Specialization
	YONEKURA Hideto	Molecular mechanisms of angiogenesis, Alternative mRNA processing, MicroRNA function
	YOSHITAKE Yoshino	MicroRNA involved in angiogenesis, Functions of FGF-2 binding protein
(Additional Post)	NAGAO Yosinobu	Spermatogenesis and epigenetics
	IKEDA Takayuki	Molecular mechanisms of angiogenesis, Alternative mRNA processing

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### Keywords of Research

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growth factor, fibroblast growth factor, vascular endothelial growth factor, growth factor receptor, VEGF receptor, cytokines, autocrine/paracrine, angiogenesis, neuro-vascular interaction, tumor growth, diabetic vascular complications, endothelial cell, smooth muscle cell, chondrocyte, osteoblast, RNA interference, microRNA, alternative mRNA processing, centrosome, microtubule stabilizing protein, collagen, collagen tripeptide, hydroxyapatite, spermatogenesis, androgen receptor

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### Outline of Research

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1. Mechanisms of alternative pre-mRNA splicing and 3'-end processing
  2. Cellular and molecular mechanisms in angiogenesis
  3. Screening and identification of genes and microRNAs involved in neuro-vascular interaction
  4. Molecular mechanisms in development of diabetic vascular complications
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## 0160 Department of Pharmacology

### Faculty

Title	Name	Field of Specialization
(Additional Post)	NISHIO Matomo	Electrophysiological and pharmacological study of excitable and non-excitable cells, Pharmacology of cardiovascular drugs
	ISHIBASHI Takaharu	Kinetics of NO(nitric oxide)-related compounds in cardiovascular system
	YOSHIDA Junko	Pharmacology in cardiovascular system, Cancer chemotherapy
	NAKAMOTO Mihoko	Pharmacology of cardiovascular drugs, Kinetics of NO-related compounds in cardiovascular system, Cancer chemotherapy
	ABE Fusae	Pharmacology of cardiovascular drugs, Kinetics of NO-related Compounds in cardiovascular systems, Cancer chemotherapy

### Keywords of Research

electropharmacology, electrophysiology, ionic channel, patch clamp, excitable membrane, cardiovascular system, ischemic disease, marine toxin, ATP-sensitive K<sup>+</sup> channel, store-operated Ca<sup>2+</sup> channel, intracellular Ca<sup>2+</sup>, coronary circulation, nitric oxide, hemodynamics, nitric oxide-releasing vasodilators, nitrosothiols, signal transduction, anti-tumor drug, proliferation, cell biology

### Outline of Research

- 1 Electrophysiological and pharmacological study on the regulatory mechanisms of excitable and non-excitable cells
- 2 Signaling mechanisms of bioactive substances
- 3 Electropharmacology of the drugs acting on the cardiovascular system
- 4 Pharmacological study of the ischemic cardiomyocytes
- 5 Kinetics of NO(nitric oxide)-related compounds in cardiovascular system

### Publications

#### Originals

- 0160B001 T.Ishibashi, N.Nishizawa, M.Nakamoto, S.Liu, M.Yang, T.Miwa, I.Shinkawa, J.Yoshida, T.Kawada, M.Nishio: Arteriovenous differences in NO<sub>2</sub><sup>-</sup> kinetics in anesthetized rabbits, Biol.Pharm.Bull., 32:399-404, 2009.



## 0170 Department of Oncologic Pathology

### Faculty

Title	Name	Field of Specialization
	TANAKA Takuji	Inhibition of carcinogenesis, Oncologic pathology of digestive organ, Experimental pathology
	SUGIE Shigeyuki	Experimental pathology, Oncologic pathology of digestive organ
(Additional Post)	KOHNO Hiroyuki	Experimental pathology, Tumor immunology
	YASUI Yumiko	Lipids in carcinogenesis
	OYAMA Takeru	Mechanisms of carcinogenesis

### Keywords of Research

cancer chemoprevention, antioxidant, flavonoid, carotenoid, COX-2 inhibitor, organoselenium, intercellular communication, intermediate biomarker, detoxification enzyme, PCNA, BrdU, apoptosis, cytology, hepatocellular carcinoma, Min mice, inflammation

### Outline of Research

Cancer is the result of abnormal genetic control of cell growth that arises from structural alterations in DNA or mutations. Many mutations occur in somatic cells during the lifetime of an individual and some may result in cancer. There is evidence that dietary factors can impede this process. For example, epidemiological studies reveal that the quarter of the population with the lowest dietary intake of fruits and vegetables has roughly twice the cancer risk for most types of cancer compared with the quarter with the highest intake. In recent years the possible chemoprevention of cancer by specific chemical constituents of fruits and vegetables has attracted much attention. Also, several drugs, i.e., COX-2 inhibitors and iNOS inhibitors have been found to effectively inhibit cancer development in animal carcinogenesis models and human clinical studies. Our mission of The Department of Oncologic Pathology is to advance the science and application of cancer prevention through multidisciplinary strategies in research, clinical service, and education using novel animal models and imaging system.

### Books

- 0170A002 T.Tanaka: Toxicological carcinogenesis, Encyclopedia of Cancer, 2nd Edition(Manfred Schwab), 3008-3010, Springer-Verlag, Berlin, 2009.

### Publications

#### Originals

- 0170B001 T.Tanaka, Y.Yasui, M.Tanaka, T.Tanaka, T.Oyama, KM Wahidur Rahman: Melatonin suppresses AOM/DSS-induced large bowel oncogenesis in rats, *Chem. Biol. Interact.*, 177:128-136, 2009.
- 0170B002 (M.Kim), S.Miyamoto, Y.Yasui, T.Oyama, A.Murakami, T.Tanaka: Zerumbone, a tropical ginger sesquiterpene, inhibits colon and lung carcinogenesis in mice, *Int. J. Cancer.*, 124:264-271, 2009.
- 0170B003 (M.Shimizu), Y.Shirakami, J.Iwasa, M.Shiraki, Y.Yasuda, K.Hata, Y.Hirose, H.Tsurumi, T.Tanaka, H.Moriwaki: Supplementation with branched-chain amino acids inhibits azoxymethane-induced colonic preneoplastic lesions in male C57BL/KsJ-*db/db* mice, *Clin. Cancer Res.*, 15:3068-3075, 2009.

- 0170B004 (M.Yasuda), T.Nishizawa, H.Ohigashi, T.Tanaka, D.X.Hou, N.H.Colburn, A.Murakami: Linoleic acid metabolite suppresses skin inflammation and tumor promotion in mice: possible roles of programmed cell death 4 induction, *Carcinogenesis*, 30:1209–1216, 2009.
- 0170B005 (T.Toyoda), T.Tsukamoto, S.Takasu, N.Hirano, H.Ban, L.Shi, T.Kumagai, T.Tanaka, M.Tatematsu: Pitavastatin fails to lower serum lipid levels or inhibit gastric carcinogenesis in *Helicobacter pylori*-infected rodent models, *Cancer Prev. Res. (Phila. Pa.)*, 2:751–758, 2009.
- 0170B006 (K.Yoshimi), T.Tanaka, A.Takizawa, M.Kato, M.Hirabayashi, T.Mashimo, T.Serikawa, T.Kuramoto: Enhanced colitis-associated colon carcinogenesis in a novel *Apc*-mutant rat, *Cancer Sci.*, 100:2022–2027, 2009.
- 0170B007 T.Oyama, Y.Yasui, S.Sugie, M.Koketsu, K.Watanabe, T.Tanaka: Dietary tricetin suppresses inflammation-related colon carcinogenesis in male Crj: CD-1 mice, *Cancer Prev. Res. (Phila. Pa.)*, 2:1031–1038, 2009.
- 0170B008 Y.Yasui, T.Tanaka: Protein expression analysis of inflammation-related colon carcinogenesis, *J Carcinog.*, 8:10, 2009.

### Reviews

- 0170C001 Y.Yasui, M.Kim, T.Oyama, T.Tanaka: Colorectal carcinogenesis and suppression of tumor development by inhibition of enzymes and molecular targets, *Current Enzyme Inhibition.*, 5:1–26, 2009.
- 0170C002 (D.W.Rosenberg), C.Giardina, T.Tanaka: Mouse models for the study of colon carcinogenesis, *Carcinogenesis*, 30:183–196, 2009.
- 0170C003 T.Oyama, Y.Yasui, T.Tanaka: Breast cancer chemoprevention: current perspectives, *Current Enzyme Inhibition.*, 5:198–208, 2009.
- 0170C004 T.Tanaka: Colorectal carcinogenesis: Review of human and experimental animal studies, *J Carcinog.*, 8:5, 2009.
- 0170C005 T.Oyama, Y.Yasui, S.Sugie, T.Tanaka: Preclinical assays for identifying cancer chemopreventive phytochemicals, *Scholarly Research Exchange.*, Article ID 475963•doi: 10.3814, 2009.

### Presentations at Conference

#### International Conference (Presentations)

- 0170I001 T.Oyama, Y.Yasui, M.Kamide, S.Yamamoto, S.Sugie, T.Tanaka: A flavone, tricetin, suppresses colitis-associated mouse colon carcinogenesis, 9th Korea–Japan Symposium on Cancer and Ageing Research, (South Korea, '09.03).
- 0170I002 (M.Kim), S.Miyamoto, Y.Yasui, T.Oyama, A.Murakami, S.Sugie, T.Tanaka: Dietary zerumbone inhibits colon and lung carcinogenesis in mice, 9th Korea–Japan Symposium on Cancer and Ageing Research, (South Korea, '09.03).
- 0170I003 T.Tanaka: Preclinical bioassays for chemoprevention studies on inflammation- and obesity- related colonic oncogenesis, International Conference on Dietary and Chemical Cancer Prevention, (Taipei, '09.04).

## 0180 Department of Pathophysiological and Experimental Pathology

### Faculty

Title	Name	Field of Specialization
	KATSUDA Shogo	Vascular pathology, Pathophysiology of ECM
	UEDA Yoshimichi	Bone and soft tissue tumor, Pulmonary pathology
	SATO Katsuaki	Neuropathology
	SHIMASAKI Miyako	molecular pathology of the lung cancer

### Keywords of Research

atherosclerosis, extracellular matrix, lung carcinoma, bone and soft tissue tumor, metastasis, invasion, apoptosis, diagnostic histopathology, cardiomyopathy, matrix metalloproteinase, bone tumor, molecular genetics, molecular pathology, neuronal death, nitric oxide synthase, angiogenesis, HMGI-C, Fas/Fas ligand, NF  $\kappa$  B

### Outline of Research

1. Study on the pathogenesis of atherosclerosis, particularly from the aspect of extracellular matrix (ECM). The major subjects are: 1) collagens in human atherosclerosis, 2) cellular interactions and growth regulatory molecules, and 3) ECM degradation and matrix metalloproteinases.
2. Study on the functional gene networks involved in the progression of human lung cancer, especially regarding epithelial-mesenchymal transition of cancer cells, in order to establish novel molecular targets for the treatment. We are analyzing gene expression profiling data bioinformatically by means of ITP, one of the largest data-base for functional gene network/pathway analysis.
3. To elucidate mechanisms of neuronal injury by amyloid  $\beta$  protein, presumed to have essential role on Alzheimer's disease, we identify amyloid  $\beta$  protein-binding proteins in neuron by proteome analysis and explore functional disturbances of these proteins.

### Publications

#### Originals

- 0180B001 J.Xu, Z.Wang, G.Ma, M.Sagawa, M.Shimazaki, Y.Ueda, T.Sakuma: Endogenous catecholamine stimulates alveolar fluid clearance in rats with acute pancreatitis, *Respirology*, 14:195-202, 2009.
- 0180B002 T.Lihua, Y.Sakai, K.Iwai, S.Katsuda: Effect of collagen tripeptide of type I collagen on migration, proliferation and collagen synthesis of human aortic smooth muscle cells, *J. Kanazawa. Med. Univ.*, 34:93-100, 2009.
- 0180B003 K.Higashi, T.Sakuma, K.Ito, S.Niho, Y.Ueda, T.Kobayashi, R.Sekiguchi, T.Takahashi, T.Kato, H.Tonami: Combined evaluation of preoperative FDG uptake on PET, ground-glass opacity area on CT, and serum CEA level: identification of both low and high risk of recurrence in patients with resected T1 lung adenocarcinoma, *Eur. J. Nucl. Med. Mol. Imaging*, 36:373-381, 2009.
- 0180B004 R.Terauchi, K.Sato, M.Takenaka, M.Yamashita, Y.Asakura, M.Nakano, N.Kurose, H.Minato, T.Nojima: Intracytoplasmic lumina of urothelial carcinoma in urine cytology, *J. Jpn. Soc. Clin. Cytol.*, 48:12-16, 2009 (in Japanese).
- 0180B005 N.Koizumi, T.Miyanaga, S.Kawakami, M.Shimasaki, Y.Ueda: Proliferative and differentiative effects of basic fibroblast growth factor(bFGF) on perichondium of rabbit's ear, *Skin research.*, Special edition. 11:14-20, 2009 (in Japanese).

## Case Reports

- 0180D001 K.Sato, Y.Ueda, K.Kawamura, K.Aihara, S.Katsuda: Plasmacytoid urothelial carcinoma of the urinary bladder: a case report and immunohistochemical study, *Pathol. Res. Pract.*, 205:189-194, 2009.
- 0180D002 M.Sagawa, Y.Ueda, H.Sakuma, Y.Yoshimisu, F.Matsubara, T.Sakuma: Organizing pneumonia with an enlarging tumor-like lesion:immunohistochemical study, *Jpn. J. THORACIC CARDIOVASC. SURG.*, 57:433-436, 2009.
- 0180D003 M.Yamada, H.Shiroeda, S.Shiroeda, K.Sato, T.Arisawa, M.Tsutsumi: Cholangiocarcinoma producig parathyroid hoemone-related peptide treated with chemoradiation usig gemcitabine and S-1, *Intern. Med.*, 48:2097-2100, 2009.

## 0190 Department of Microbiology

### Faculty

Title	Name	Field of Specialization
	OHARA Yoshiro	Neurovirology, Neuroimmunology
	HIMEDA Toshiki	Neurovirology
	OKUWA Takako	Neurovirology

### Keywords of Research

Theiler's murine encephalomyelitis virus, central nervous system, demyelination, persistent infection, multiple sclerosis

### Outline of Research

Studies on pathomechanism of virus induced demyelination

### Publications

#### Originals

- 0190B001 N.Taniura, M.Saito, T.Okuwa, K.Saito, Y.Ohara: Different subcellular localization of Theiler's murine encephalomyelitis virus leader proteins of GDVII and DA strains in BHK-21 cells, *J. Virol.*, 83: 6624-6630, 2009.
- 0190B002 M.Saito, T.Matsuzaki, Y.Satou, J.Yasunaga, K.Saito, K.Arimura, M.Matuoka, Y.Ohara: In vivo expression of the HBZ gene of HTLV-1 correlates with proviral load, inflammatory markers and disease severity in HTLV-1 associated myelopathy/tropical spastic paraparesis (HAM/TSP), *Retrovirology.*, 6:19, 2009.

### Presentations at Conference

#### International Conference (Presentations)

- 0190I001 T.Okuwa, N.Taniura, M.Saito, K.Saito, Y.Ohara: Nonstructural proteins of Theiler's murine encephalomyelitis virus (TMEV), leader (L) and L\*, influence apoptotic cell death., 9th International Symposium on NeuroVirology, (Florida, '09.06).
- 0190I002 Y.Ohara, T.Okuwa, N.Taniura, M.Saito, K.Saito, RP.Roos: L\* protein of Theiler's murine encephalomyelitis virus (TMEV) inhibits apoptosis induced by leader (L) protein in BHK-21 cells, *Neuroscience 2009*, (Chicago, '09.10).

## 0200 Department of Fundamental Research for CAM

### Faculty

Title	Name	Field of Specialization
	YAMAGUCHI Nobuo	Developmental immunology, Defense immunity, Tumor immunity, Complementary & alternative medicine
	SHIMIZU Shoji	Immunology, Protective immunology, Tumor immunology
	MATSUBA Shintaro	Complementary & alternative medicine, Immunological pharmacology
	SAKUMA Masahiro	Molecular and cellular immunology, Pathological examination studies, Complementary & alternative medicine

### Keywords of Research

pregnancy, maternal immunization, offspring, immune suppression, acquired immunodeficiency, immunomodulator, oral immunity, herbal medicine, cytokine

### Outline of Research

Our research is founded on immunology. To date, we have studied fields such as fetomaternal immunity, tumor immunity and infectious immunity. With the graduate school reorganization in 2003, the name of the chair was changed with "Complementary and alternative medicine". Since then, we started the trial which verified alternative medicine of all the countries of world by the immunological parameters. In order to achieve these ends as effectively as possible, we planned the publication of new international journal, Evidence-based Complementary and Alternative Medicine (eCAM). The journal eCAM was published in 2004 and reached vol. 4th at present. In recent years, it has been proven that the neuroendocrine system adjusts the function of immune system and that there is a bidirectional regulation mechanism in these systems. We examine the effect of hot spring hydrotherapy and walking exercise on number and function of the immunocompetent cells. Hereafter, we aim at the establishment of an assessment of the alternative medicine throughout immunological parameters.

### Publications

#### Originals

- 0200B001 (K.Uchikawa), M.Sakuma, S.Matsuba, S.Shimizu, T.Motoyama, M.Kohno, N.Yamaguchi: Soybean-peptide modulates emotional hormones and leukocyte subsets in human peripheral blood, *Medicine and biology.*, 153:477-487, 2009 (in Japanese) .

## 0210 Department of Medical Zoology

### Faculty

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Title	Name	Field of Specialization
	IKEDA Teruaki	Immunological and biochemical studies of parasitic diseases
	OIKAWA Yosaburo	diagnosis of parasitic disease, tick-borne disease
	ICHIKAWA Hidetaka	Immunological study for parasitic diseases

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### Keywords of Research

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parasite, paragonimiasis, fascioliasis, cysticercosis, tick born disease, immunodiagnosis, antigen purification, circulating antigen, excretory/secretory products, IgE antibody, molecular biological diagnosis, cysteine proteinase, Acanthamoeba, metacercaria, excystment, atopic dermatitis, mite, Myobia musculi, Leptotrombidium

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### Outline of Research

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The main subjects of our department are as follows:

- 1.Study on the invading mechanism of lung flukes into their final hosts.
  - 2.Epidemiological research of tick-born diseases in the Noto Peninsula,Ishikawa Prefect.
  - 3.Development of immunological and molecular biological diagnosis of parasitic diseases.
- 

### Publications

#### Originals

- 0210B001 Y.Oikawa, K.Tabara, T.Yoshida, T.Arai, M.Tokoro, N.Takada: Evaluation of some pathogens detected from the blood of field rodents in Japan, with special references to geographical distribution and infectivity of *Babesia microti*, Ann. rep. Ohara Hosp., 49:7-14, 2009 (in Japanese) .

## 0220 Department of Pathology and Laboratory Medicine

### Faculty

Title	Name	Field of Specialization
	NOJIMA Takayuki	surgical pathology, molecular pathology, basic science on bone and soft tissue tumors
	MINATO Hiroshi	Surgical pathology, Pathological study of head and neck, lung, mediastinum, and pleura
	KUROSE Nozomu	surgical pathology, molecular pathology
	KINOSHITA Eriko	surgical pathology, molecular pathology

### Keywords of Research

pathology, surgical pathology, molecular pathology, ultrastructure, cytology, laboratory medicine, standardization of blood gas analysis, pulmonary function test, pulmonary pathology, "lung, mediastinum, and pleura", head and neck, salivary gland

### Outline of Research

1. Severe patients with chronic obstructive pulmonary diseases (COPD) frequently show expiratory flow limitation (FL) during spontaneous breathing, which is a marker of severely deteriorated pulmonary function and determines the prognosis of this disease. I have developed a new technique to detect FL with a brief interruption of airflow during spontaneous breathing and have been studying for increasing the accuracy of this method.
2. Accuracy assurance of blood gas analysis: The recent blood gas analyzers are small, portable, and do measurements on bedside (POCY: Point of Care Testing). However, it is difficult to maintain the accuracy of blood gas analysis because of the disposable electrodes in this type of equipments. I have been developing a method of accuracy assurance for these equipments with newly developed standard materials for blood gas analysis.

### Publications

#### Originals

- 0220B001 Y.Masaki, L.Dong, A.Nakajima, H.Iwao, M.Miki, N.Kurose, E.Kinoshita, T.Noijima, T.Sawaki, T.Kawanami, M.Tanaka, K.Shimoyama, C.Kim, M.Fukutoku, H.Kawabata, T.Fukushima, Y.Hirose, T.Takiguchi, S.Konda, S.Sugai, H.Umehara: Intravascular large B cell lymphoma:proposed of the strategy for early diagnosis and treatment of patients with rapid deteriorating condition, *Int. J. Hematol.*, 89:600-610, 2009.
- 0220B002 Y.Masaki, L.Dong, N.Kurose, K.Kitagawa, Y.Morikawa, M.Yamamoto, H.Takahashi, Y.Shinomura, K.Imai, T.Saeki, A.Azumi, S.Nakada, E.Sugiyama, S.Matsui, T.Origuchi, S.Nishiyama, I.Nishimori, T.Noijima, K.Yamada, M.Kawano, Y.Zen, M.Kaneko, K.Miyazaki, K.Tsubota, K.Eguchi, K.Tomoda, T.Sawaki, T.Kawanami, M.Tanaka, T.Fukushima, S.Sugai, H.Umehara: Proposal for a new clinical entity,IgG4-positive multiorgan lymphoproliferative syndrome:analysis of 64 cases of IgG4-related disorders, *Ann. Rheum. Dis.*, 68:1310-1315, 2009.
- 0220B003 R.Terauchi, K.Sato, M.Takenaka, M.Yamashita, Y.Asakura, M.Nakano, N.Kurose, H.Minato, T.Noijima: Intracytoplasmic lumina of urothelial carcinoma in urine cytology, *J. Jpn. Soc. Clin. Cytol.*, 48:12-16, 2009 (in Japanese) .

#### Case Reports

- 0220D001 (J.Shimizu), Y.Arano, N.Ishikawa, I.Adachi, T.Murata, C.Ikeda, T.Masunaga, H.Ohtake, H.Minato: Total esophago-gastrectomy followed by composite reconstruction with retrosternal pedicled jejunum and antethoracic-free jejunal autograft: A case report, *Ann Thorac Cardiovasc Surg*, 15:31-37, 2009.



- 0220D002 K.Usuda, M.Sagawa, H.Aikawa, M.Ueno, Y.Machida, T.Nojima, T.Terauchi, T.Sakuma: The multitude of cytologic components in pulmonary pleomorphic carcinoma—A report of tow cases—, *J. Jpn. Soc. Clin. Cytol.*, 48:220–225, 2009.
- 0220D003 H.Minato, T.Nojima, N.Kurose, E.Kinoshita: Adenomatoid tumor of the pleura, *Pathol. Int.*, 59:567–571, 2009.
- 0220D004 (M.Sasaki), I.Araki, T.Yasui, M.Kinosita, K.Itatsu, T.Nojima: Primary localized malignant biphasic mesothelioma of the liver in a patient with asbestosis, *World J. Gastroenterol.*, 15:615–621, 2009.
- 0220D005 T.Fukuyama, H.Kawahara, M.Yamada, N.Hayashi, H.Yano, M.Fukura, K.Ozaki, M.Tsuchishima, S.Takase, T.Arisawa, K.Omote, T.Nojima: A case of IL-6 producing malignant mesothelioma of abdomen with thrombocytosis, *jpn. j. gastroenterol.*, 109:546–553, 2009 (in Japanese) .
- 0220D006 K.Usuda, M.Sagawa, H.Aikawa, M.Ueno, M.Tanaka, Y.Machida, K.Tsuchihara, Y.Masaki, E.Kinoshita, T.Sakuma: Complete resection of an advanced mediastinal nonseminomatous germ cell tumor with multiple distant metastases after Down-staging by chemotherapy, *The Japanese journal of thoracic surgery.*, 62:545–551, 2009 (in Japanese) .
- 0220D008 M.Yokoi, K.Hosokawa, H.Funaki, S.Yoshitani, S.Kinami, K.Omote, N.Ueda, Y.Nakano, T.Kosaka, H.Minato: A case of retroperitoneal dedifferentiated liposarcoma successfully treated with IFM and CDDP, *Cancer & chemotherapy.*, 36:2114–2116, 2009 (in Japanese) .
- 0220D010 (J.Shimizu), Y.Arano, I.Adachi, N.Ishikawa, M.Morishita, W.Ikeda, B.Fuwa, S.Yokokawa, S.Minami, H.Minato: Radical resection for superior sulcus tumor which is reqired resection of 1st rib through hook approach: report of a case, *Medical journal of Mutual Aid Association.*, 58:278–283, 2009 (in Japanese) .
- 0220D011 (J.Shimizu), W.Ikeda, Y.Arano, I.Adachi, M.Morishita, B.Fuwa, S.Yokokawa, S.Minami, S.Yamaguchi, N.Ishikawa, G.Watanabe, H.Minato: Resection of advanced lung cancer invading the left atrium using cardiopulmonary bypass: report of a case, *Medical journal of Mutual Aid Association.*, 58:272–277, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Presentations)

- 0220I001 Y.Masaki, N.Kurose, H.Iwao, A.Nakajima, M.Yamamoto, H.Takahashi, M.Kawano, T.Saeki, S.Matsui, A.Azumi, S.Nishiyama, Y.Zen, T.Sumida, M.Kojima, T.Yoshino, S.Nakamura, N.Tomosugi, T.Takegami, S.Sugai, H.Umehara: Clinico-pathological analysis of 107 cases of IgG4+MOLPS (IgG4-positive multi-organ lymphoproliferative syndrome), 10<sup>th</sup> International symposium on Sjögren's syndrome, (BREST, '09.10).

## 0230 Department of Social and Environmental Medicine

### Faculty

Title	Name	Field of Specialization
(Additional Post)	YAMADA Yuichi	Occupational Health, Epidemiology of circulatory and respiratory diseases
	ISHIZAKI Masao	Occupational Health, Job stress
	HONDA Ryumon	Environmental health, Statistical analysis, Analytical chemistry
	NAKATA Minori	Industrial hygiene, Occupational medicine, Musculoskeletal disorders
	NOBORISAKA Yuka	Occupational Health, Job stress

### Keywords of Research

occupation, work-related disease, mental health, cardiovascular disease, non-specific pulmonary disease, musculoskeletal disease, metabolic syndrome, hypertension, job stress, absenteeism, alcohol consumption, cigarette consumption, shift work, work time

### Outline of Research

To clarify the health effects of social environmental factors—mainly occupational factors, and establish appropriate, policies for health promotion

### Publications

#### Originals

- 0230B001 (Y.Suwazono), T.Kido, H.Nakagawa, M.Nishijo, R.Honda, E.Kobayashi, M.Dochi, K.Nogawa: Biological half-life of cadmium in the urine of inhabitants after cessation of cadmium exposure, *Biomarkers.*, 14:77-81, 2009.
- 0230B002 K.Sasaki, Y.Yamashiro, M.Kojima, R.Honda, Y.Sakamoto, HM.Cheng, H.Sasaki: Assessment of pinguecula and pterygium in the aging eye with ultraviolet fluorescence photography (UVFP) : Data analysis of eye disease survey in Shanxi, China, *Rehabilitation science : memoirs of the Tohoku Bunka Gakuen University Faculty of Medical Science & Welfare, Department of rehabilitation.*, 5:31-40, 2009.
- 0230B003 K.Kitaoka-Higashiguti, Y.Morikawa, K.Miura, M.Sakurai, M.Ishizaki, T.Kido, Y.Naruse, H.Nakagawa: Burnout and risk factors for arteriosclerotic disease: follow-up study, *J. Occup. Health*, 51:123-131, 2009.
- 0230B004 M.Sakurai, K.Miura, T.Takamura, M.Ishizaki, Y.Morikawa, K.Nakamura, K.Yoshita, T.Kido, Y.Naruse, S.Kaneko, H.Nakagawa: J-shaped relationship between waist circumference and subsequent risk for Type 2 diabetes:an 8-year follow-up of relatively lean Japanese individuals., *Diabet. Med.*, 26:753-759, 2009.
- 0230B005 K.Tawara, M.Nishijo, R.Honda, S.Maruzeni, T.Seto, T.Kido, S.Saito, H.Nakagawa: Effects of maternal dioxin exposure on newborn size at birth among Japanese mother-infant pairs, *Environ. Health Prevent. Med.*, 14:88-95, 2009.
- 0230B006 (A.Inoune), N.Kawakami, A.Tsutsumi, A.Shimazu, M.Tsuchiya, M.Ishizaki, M.Tabata, M.Akiyama, A.Kitazume, M.Kuroda, M.Kivimäki: Reliability and validity of the Japanese version of the Organizational Justice Questionnaire, *J. Occup. Health*, 51:74-83, 2009.
- 0230B007 (K.Tsuno), N.Kawakami, A.Inoue, M.Ishizaki, M.Tabata, M.Tsuchiya, M.Akiyama, A.Kitazume, M.Kuroda, A.Shimazu: Intragroup and intergroup conflict at work, psychological distress, and work engagement in a sample of employees in Japan, *Ind Health*, 47:640-648, 2009.

- 0230B008 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido: Estimation of benchmark rice cadmium doses as threshold values for abnormal urinary findings with adjustment for consumption of Jinzu River water, *Bull. Environ. Contam. Toxicol.*, 83:102–107, 2009.
- 0230B009 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido: Influence of consumption of cadmium-polluted rice or Jinzu River water on occurrence of renal tubular dysfunction and/or Itai-itai disease, *Biol Trace Elem Res*, 127:257–268, 2009.
- 0230B010 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido: Association of lifetime cadmium intake or drinking Jinzu River water with the occurrence of renal tubular dysfunction, *Environ. Toxicol.*, 24:421–428, 2009.
- 0230B011 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido, H.Nakagawa: Influence of drinking and/or cooking with Jinzu River water on the development of Itai-Itai disease, *Biol Trace Elem Res*, 129:46–57, 2009.
- 0230B012 (E.Kobayashi), Y.Suwazono, R.Honda, M.Dochi, M.Nishijo, T.Kido, H.Nakagawa: Serial follow-up study on renal handling of calcium and phosphorus after soil replacement in Cd-polluted rice paddies estimated using a general linear mixed model, *Biol Trace Elem Res*, 129:261–269, 2009.
- 0230B013 (A.Inoue), N.Kawakami, M.Ishizaki, M.Tabata, M.Tsuchiya, M.Akiyama, A.Kitazume, M.Kuroda, A.Shimazu: Three job stress models/concepts and oxidative DNA damage in a sample of workers in Japan, *J. Psychosom. Res.*, 66:329–334, 2009.
- 0230B014 (H.Suzuki), T.Kido, Y.Morikawa, H.Nakagawa, M.Ishizaki, Y.Naruse, M.Higashiyama, M.Dochi, Y.Suwazono, K.Nogawa: The relationship between mental-health status and work-related factors in male Japanese overseas employees, *Journal of Tsuruma Health Society Kanazawa University*, 33:21–33, 2009.
- 0230B015 M.Sakurai, K.Miura, K.Nakamura, M.Ishizaki, Y.Morikawa, T.Kido, Y.Naruse, H.Nakagawa: Relationship between abdominal obesity, accumulation of metabolic abnormalities and risk of cardiovascular disease: An 11-year follow-up of middle-aged Japanese men, *Japanese journal of cardiovascular disease prevention.*, 44:1–9, 2009 (in Japanese) .

#### Others

- 0230F001 (M.Miyao), T.Watanabe, R.Honda, Y.Yamada: Answer to the comments by Eric J. Grant et al. in "Radiation unlikely to be responsible for high cancer rates among distal Hiroshima A-bomb survivors", *Environ. Health Prevent. Med.*, 14:250–253, 2009.
- 0230F002 (M.Miyao), T.Watanabe, R.Honda, Y.Yamada: Hiroshima survivors exposed to very low doses of A-bomb primary radiation showed a high risk for cancers, *Environ. Health Prevent. Med.*, 14:209, 2009.
- 0230F003 (M.Miyao), T.Watanabe, R.Honda, Y.Yamada: Answer to the comment by Yoshisada Shibata on "Hiroshima survivors exposed to very low doses of A-bomb primary radiation showed a high risk for cancers", *Environ. Health Prevent. Med.*, 14:157–158, 2009.

### Presentations at Conference

#### International Conference (Presentations)

- 0230I001 M.Nakata, K.Kogi, I.Mori, Y.Yamada: The need for establishing an evidence-based statistics for occupational accidents and diseases, 29th International Congress on Occupational Health, (Cape Town, '09.03), 234, 2009.

## 0240 Department of Epidemiology and Public Health

### Faculty

Title	Name	Field of Specialization
	NAKAGAWA Hideaki	Epidemiology of cardiovascular diseases, occupational medicine, preventive medicine
(Additional Post)	MORIKAWA Yuko	Cardiovascular epidemiology, occupational medicine
	NISHIJO Muneko	Environmental epidemiology, epidemiology of cadmium pollution
	SAKURAI Masaru	Cardiovascular epidemiology, preventive cardiology
(Additional Post)	NAKANISHI Yumiko	Preventive medicine
(Additional Post)	NAKAMURA Koshi	Epidemiology of Cardiovascular disease and Lifestyle-related disease Lifestyle/Disease and Medical expenditure

### Keywords of Research

epidemiology, public health, hypertension, diabetes mellitus, shift work, nutrition, calcium, stress, smoking, insulin resistance, work-related disease, environmental pollution, cadmium, renal tubular dysfunction, intractable disease, cardiovascular disease, stroke, hyperlipidemia, dietary habits, salt, magnesium, health promotion, alcohol, lipid peroxide, community registry, silicosis, Itai-itai disease, congenital anomaly, medical decision making, dioxin

### Outline of Research

Epidemiology and Prevention of Lifestyle-related Diseases(mainly of Cardiovascular Diseases)  
Environmental Epidemiology  
Epidemiology of Occupation-related Diseases  
Epidemiology of Congenital Anomalies  
Epidemiology of Interactable Diseases  
Clinical Epidemiology

### Publications

#### Originals

- 0240B001 (R.Oka), K.Miura, M.Sakurai, K.Nakamura, KYagi, S.Miyamoto, T.Moriuchi, H.Mabuchi, M.Yamagishi, Y.Takeda, S.Hifumi, A.Inazu, A.Nohara, MA.Kawashiri, J.Kobayashi: Comparison of waist circumference with body mass index for predicting abdominal adipose tissue, *Diabetes Res. Clin. Pract.*, 83:100-105, 2009.
- 0240B002 (K.Asayama), T.Ohkubo, S.Yoshida, K.Suzuki, H.Metoki, A.Harada, Y.Murakami, Y.Ohashi, H.Ueshima, Y.Imai, H.Nakagawa, The Japan Arteriosclerosis Longitudinal Study(JALS) group: Stroke risk and antihypertensive drug treatment in the general population:the Japan arteriosclerosis longitudinal study, *J.Hypertens.*, 27:357-364, 2009.
- 0240B003 R.Naganuma, M.Sakurai, K.Miura, K.Yoshita, Y.Morikawa, T.Kido, H.Ueshima, H.Nakagawa, J.Stamler: Relation of long-term body weight change to change in lipoprotein particle size in Japanese men and women:The INTRTMAP Toyama study, *Atherosclerosis*, 206:282-286, 2009.
- 0240B004 K.Nakamura, F.Barzi, R.Huxley, TH.Lam, I.Suh, J.Woo, HC.Kim, VL.Feigin, D.Gu, M.Woodward, Asia pacific cohort studies collaboration: Does cigarette smoking exacerbate the effect of total cholesterol and high-density lipoprotein cholesterol on the risk of cardiovascular diseases?, *Heart*, 95:909-916, 2009.

- 0240B005 (K.Miura), H.Nakagawa, Y.Ohashi, A.Harada, M.Takagi, T.Koshiro, A.Takahashi, M.Nishinaga, F.Soejima, H.Ueshima, for the Japan arteriosclerosis longitudinal study (JALS) group: Four blood pressure indexes and the risk of stroke and myocardial infarction in Japanese men and women: a meta-analysis of 16 cohort studies, *Circulation*, 119:1892-1898, 2009.
- 0240B006 (Y.Suwazono), T.Kido, H.Nakagawa, M.Nishijo, R.Honda, E.Kobayashi, M.Dochi, K.Nogawa: Biological half-life of cadmium in the urine of inhabitants after cessation of cadmium exposure, *Biomarkers.*, 14:77-81, 2009.
- 0240B007 K.Kitaoka-Higashiguti, Y.Morikawa, K.Miura, M.Sakurai, M.Ishizaki, T.Kido, Y.Naruse, H.Nakagawa: Burnout and risk factors for arteriosclerotic disease: follow-up study, *J. Occup. Health*, 51:123-131, 2009.
- 0240B008 M.Sakurai, T.Takamura, K.Miura, S.Kaneko, H.Nakagawa: Middle-aged Japanese women are resistant to obesity-related metabolic abnormalities, *Metab. Clin. Exp.*, 58:456-459, 2009.
- 0240B009 (M.Sasaki), K.Kitaoka, Y.Morikawa, H.Nakagawa: Relationship between stress coping and burnout in Japanese hospital nurses, *J. Nurs. Manag.*, 17:359-365, 2009.
- 0240B010 M.Sakurai, K.Miura, T.Takamura, M.Ishizaki, Y.Morikawa, K.Nakamura, K.Yoshita, T.Kido, Y.Naruse, S.Kaneko, H.Nakagawa: J-shaped relationship between waist circumference and subsequent risk for Type 2 diabetes: an 8-year follow-up of relatively lean Japanese individuals., *Diabet. Med.*, 26:753-759, 2009.
- 0240B011 (DD.Nhu), T.Kido, R.Naganuma, N.Sawano, K.Tawara, M.Nishijo, H.Nakagawa, NN.Hung, LTH.Thom: A GIS study of dioxin contamination in a Vietnamese region sprayed with herbicide, *Environ. Health Prevent. Med.*, 14:353-360, 2009.
- 0240B012 (The emerging risk factors collaboration), ED.Angelantonio, N.Sarwar, P.Perry, S.Captoge, KK.Ray, A.Thompson, AM.Wood, S.Lewington, N.Sattar, CJ.Packard, R.Collins, SG.Thompson, J.Danesh, H.Nakagawa: Major lipids, apolipoproteins, and risk of vascular disease, *JAMA*, 302:1993-2000, 2009.
- 0240B013 H.Oda, M.Nishijo, H.Nakagawa, Y.Morikawa, T.Kido, A.Ikawa, E.Kobayashi, K.Nogawa: Urinary metallothionein levels and mortality in residents exposed to cadmium in the environment, *J. Kanazawa. Med. Univ.*, 34:148-153, 2009.
- 0240B014 K.Tawara, M.Nishijo, R.Honda, S.Maruzeni, T.Seto, T.Kido, S.Saito, H.Nakagawa: Effects of maternal dioxin exposure on newborn size at birth among Japanese mother-infant pairs, *Environ. Health Prevent. Med.*, 14:88-95, 2009.
- 0240B015 (T.Kido), K.Saito, R.Naganuma, C.Sakakibara, DD.Nhu, H.Suzuki, M.Nishijo, H.Nakagawa, K.Kusama, NN.Hung: Association between dioxin concentrations in breast milk and dietary nutrient intake in Vietnam, *Organohalogen Compounds.*, 71:982-987, 2009.
- 0240B016 (DD.Nhu), T.Kido, R.Naganuma, K.Saito, H.Suzuki, N.Kuroda, S.Honma, K.Honma, S.Maruzeni, M.Nishijo, H.Nakagawa, NN.Hung, LTH.Thom: An epidemiological study on health effects by dioxin in Vietnam introduction of new "Hot Spot" area, *Organohalogen Compounds.*, 71:890-895, 2009.
- 0240B017 (AP.Kengne), K.Nakamura, F.Barzi, TH.Lam, R.Huxley, D.Gu, A.Patel, HC.Kim, M.Woodward, on behalf of the Asia Pacific Cohort Study Collaboration: Smoking, diabetes and cardiovascular diseases in men in the Asia-Pacific region, *J Diabetes.*, 1:173-181, 2009.
- 0240B018 (The Asia Pacific Cohort Studies Collaboration), RR.Huxley, K.Nakamura, TH.Lam, F.Barzi, D.Batty, S.Czernichow, H.Ueshima, HC.Kim, JW.Wong, X.Fang, V.Feigin, M.Woodward: Impact of cigarette smoking on the relationship between body mass index and coronary heart disease: a pooled analysis of 3264 stroke and 2706 CHD events in 378579 individuals in the Asia Pacific region, *BMC Public Health.*, 9:294, 2009.
- 0240B019 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido, H.Nakagawa: Influence of drinking and/or cooking with Jinzu River water on the development of Itai-Itai disease, *Biol Trace Elem Res*, 129:46-57, 2009.
- 0240B020 (E.Kobayashi), Y.Suwazono, R.Honda, M.Dochi, M.Nishijo, T.Kido, H.Nakagawa: Serial follow-up study on renal handling of calcium and phosphorus after soil replacement in Cd-polluted rice paddies estimated using a general linear mixed model, *Biol Trace Elem Res*, 129:261-269, 2009.
- 0240B021 (DD.Nhu), T.Kido, R.Naganuma, K.Saito, H.Suzuki, N.Kuroda, S.Honma, PT.Tai, S.Maruzeni, M.Nishijo, H.Nakagawa, NN.Hung, LTH.Thom: Hormone levels in the saliva of lactating Vietnamese mothers in a dioxin hot-spot area, *Journal of Tsuruma Health Society Kanazawa University*, 33:59-66, 2009.

- 0240B022 (H.Suzuki), T.Kido, Y.Morikawa, H.Nakagawa, M.Ishizaki, Y.Naruse, M.Higashiyama, M.Dochi, Y.Suwazono, K.Nogawa: The relationship between mental-health status and work-related factors in male Japanese overseas employees, *Journal of Tsuruma Health Society Kanazawa University*, 33:21-33, 2009.
- 0240B023 Y.Hamazaki, K.Nakamura, K.Hirata, K.Teramoto, M.Matuda: What factors are associated with postnatal depression in Japanese women?, *Hokuriku Japanese Journal of Public Health.*, 35:58-62, 2009 (in Japanese) .
- 0240B024 (K.Yoshita), M.Nakagawa, Y.Sugimori, K.Mira, M.Sakurai, T.Kami, Y.Arai, M.Nozone, R.Tomimatsu, H.Nakagawa, H.Ishida: Effects of weight-reducing program conducted at work place with minimum burden of participants: A program to prevent development of metabolic syndrome, mainly under the guidance of registered dieticians, *Journal of the Japan Dietetic Association*, 52:17-26, 2009 (in Japanese) .
- 0240B025 M.Sakurai, K.Miura, K.Nakamura, M.Ishizaki, Y.Morikawa, T.Kido, Y.Naruse, H.Nakagawa: Relationship between abdominal obesity, accumulation of metabolic abnormalities and risk of cardiovascular disease: An 11-year follow-up of middle-aged Japanese men, *Japanese journal of cardiovascular disease prevention.*, 44:1-9, 2009 (in Japanese) .

### Reviews

- 0240C001 (Emerging risk factors collaboration), S.Erpou, S.Kaptoge, PL.Perry, ED.Angeletonio, A.Thompson, IR.White, SM.Marcovina, R.Collins, SG.Thompson, J.Danesh, H.Nakagawa, K.Miura: Lipoprotein(a) concentration and the risk of coronary heart disease, stroke, and nonvascular mortality, *JAMA*, 302:412-423, 2009.
- 0240C002 K.Nakamura, R.Huxley, A.Ansary-Moghaddam, M.Woodward: The hazards and benefits associated with smoking and smoking cessation in Asia: a meta-analysis of prospective studies, *Tob. Control.*, 18: 345-353, 2009.

### Others

- 0240F001 M.Sakurai, T.Takamura, K.Miura, S.Kaneko, H. Nakagawa: Abnormal liver function tests and metabolic syndrome-is fatty liver related to risks for atherosclerosis beyond obesity?, *Intern. Med.*, 48:1573-1574, 2009.
- 0240F014 Y.Ishigaki, T.Takata, N.Tomosugi, T.Takegami, H.Nakagawa: Introduction of OLS inNIBB, *Japan Laser Therapy Association.*, 8:15-18, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Symposium)

- 0240H001 M.Sakurai, Prognostic factors of cardiomyopathy in Japan: Results from nationwide survey. *China-Japan Cardiovascular Forum 2009.*, The 73rd Annual Scientific Meeting of the Japan Circulation Society., (Osaka, '09.03).

## 0250 Department of Legal Medicine

### Faculty

Title	Name	Field of Specialization
	KITAMURA Osamu	Forensic Pathology, Drug Dependence
	TAKEICHI Toshiaki	hemorheologie
	WANG Lu	Tumor pathology, Endocrine pathology, Forensic pathology

### Keywords of Research

drug abuse, methamphtcamine, brain damage, forensic autopsy, drowning, immunohistochemistry, protinase K

### Outline of Research

Mechanism of methamphetamine abuse  
Immunohistochemical analysis of brain damage in forensic autopsy cases  
Application of proteinase K for diatome detection in the diagnosis of drowning

### Publications

#### Originals

0250B001 T.Takeichi, O.Kitamura: Detection of diatom in formalin-fixed tissue by proteinase K digestion, Forensic Sci. Int., 190:19-23, 2009.

#### Others

0250F001 O.Kitamura: Detection of methamphetamine neurotoxicity in forensic autopsy cases, , Suppl 1:S63-65, 2009.

## 0260 Department of Medical Education

### Faculty

Title	Name	Field of Specialization
	YASUDA Yukio	undergraduate clinical teaching, graduate education of physicians, medical education
	HORI Ariyuki	medical education, clinical neurology, clinical sleep medicine, neurophysiology, medical informatics, problem-based learning
	FUKUNAGA Toshiharu	laboratory medicine, standardization of blood gas analysis, pulmonary function test
	KURODA Naohiro	medical informatics, electronic medical record system, medical education

### Keywords of Research

medical informatics, electronic recording, evidence-based medicine, information technology, computer-aided PBL

### Outline of Research

Improving medical education including a new course of integrated problem-based learning, a medical interview training course before medical practice, management of medical informatics, practical training course using simulators, developing new assessment for students' practice, and providing new educational environment using e-syllabi.

### Publications

#### Originals

- 0260B001 (T.Okuda), M.Matuoka, Y.Yoshida, T.Kanamori, T.Fukunaga: The blood gas control survey reference values in Toyama Prefecture-Examination of the cause of dissociation from the data-, Japanese Journal of Medical Technology, 58:306-310, 2009 (in Japanese) .



# Clinical Medicine

## 0300 Department of Cardiovascular Medicine

### Faculty

Title	Name	Field of Specialization
(Additional Post)	KAJINAMI Kouji	Atherosclerosis, lipid metabolism
	MATSUI Shinobu	Heart failure
	ASAJI Takayoshi	Heart failure
	KITAYAMA Michihiko	Ischemic heart disease, Coronary intervention
	KAWAI Yasuyuki	Ischemic heart disease, Coronary intervention
	UENISHI Hiroaki	Ischemic heart disease, Coronary intervention
	AKAO Hironobu	Ischemic heart disease, Coronary intervention
	TAKEDA Kenji	Molecular Biology
	FUJIOKA Nakaba	Arrhythmia, Catheter ablation
	ISHIDA Ryoko	Ischemic heart disease, Coronary intervention
	KASENO Kenichi	Arrhythmia, Catheter ablation
	MOTOYAMA Atsushi	Ischemic heart disease, Coronary intervention
	IWADARE Mizuho	Atherosclerosis, hypertension
	WAKASA Minoru	Heart failure

### Keywords of Research

heart failure, hypertension, myocardial infarction, myocarditis, autonomic nervous function, atherosclerosis, metabolic syndrome, brain natriuretic peptide, angina pectoris, apoptosis, homocysteine, coronary calcification, valvular disease, autoantibody, myocardial biopsy, cardiac PET, coronary intervention, dilated cardiomyopathy, gene therapy, long QT, myocardial viability, pacemaker, aortitis syndrome, arrhythmia, catheter ablation, renin-angiotensin system, IABP, microvascular angina, gene polymorphism, circadian variation

### Outline of Research

- 1 Exploring risk factors and determinants of responsiveness to treatment or prognosis in cardiovascular diseases
- 2 Development of new therapeutics using the gene expression modification or the stem cell research technique
- 3 Visualization and quantification of the biological signal in cardiovascular system

### Publications

#### Originals

- 0300B001 (T.Nakajima), R.Takagi, Y.Tajima, C.Makita, Y.Kominato, J.Kuribara, S.Ohshima, H.Tada, H.Tsurugaya, Y.Kobayashi, H.Takeshita, Y.Kawai, T.Yasuda: Development of a sensitive enzyme-linked immunosorbent assay for measurement of Dnase I in human serum, *Clin. Chim. Acta*, 403:219-222, 2009.
- 0300B002 (T.Yasuda), R.Iida, Y.Kawai, T.Nakajima, Y.Kominato, J.Fujihara, H.Takeshita: Serum deoxyribonuclease I can be used as a useful marker for diagnosis of death due to ischemic heart disease, *Leg Med (Tokyo)*., 11:S213-S215, 2009.

- 0300B003 (J.Kuribara), H.Tada, Y.Kawai, R.Kawaguchi, H.Hoshizaki, K.Arakawa, M.Kitayama, K.Kajinami, M.Kurabayashi, S.Oshima, K.Taniguchi, Y.Kominato, T.Yasuda: Levels of serum deoxyribonuclease I activity on admission in patients with acute myocardial infarction can be useful in predicting left ventricular enlargement due to remodeling, *J Cardiol*, 53:196–203, 2009.

#### **Case Reports**

- 0300D001 R.Saito, H.Akao, K.Kaseno, Y.Nomura, M.Kitayama, H.Tsugawa, K.Kajinami: Marked PT-INR prolongation associated with appetite loss due to urinary tract infection in a late elderly case with chronic atrial fibrillation, *Jpn. j. geriat.*, 46:541–544, 2009 (in Japanese) .

### **Presentations at Conference**

#### **International Conference (Key Note Lecture)**

- 0300G001 K.Kajinami, R.Sato, H.Akao, E.Schaefer: Statin pharmacogenomics:Role of combined analysis of functionally-related loci, XV International Symposium on Atherosclerosis 2009, (Boston, '09.06).

#### **International Conference (Presentations)**

- 0300I001 R.Sato, K.Kajinami, H.Akao, A.Motoyama: Low bone mineral density – A risk of coronary and carotid atherosclerosis in postmenopausal women, XV International Symposium on Atherosclerosis 2009, (Boston, '09.06).
- 0300I002 H.Akao, M.Kitayama, Y.Kawai, K.Kajinami: The role of Tenascin-C in advanced coronary atherosclerosis, XV International Symposium on Atherosclerosis 2009, (Boston, '09.06).
- 0300I003 H.Akao, M.Kitayama, Y.Kawai, R.Sato, A.Motoyama, M.Wakasa, H.Aoki, R.Saito, K.Fujibayashi, K.Kajinami: Potential role of fetuin-A in advanced coronary atherosclerosis : coronary rotational atherectomy study, ESC Congress 2009, (Barcelona, '09.08).

## 0310 Department of Respiriology (Respiratory Medicine)

### Faculty

Title	Name	Field of Specialization
	TOGA Hirohisa	lung physiology, sleep disordered breathing
	OSANAI Kazuhiro	lung cell and molecular biology , COPD
	HUANG Jyongsu	lung physiology, sleep disordered breathing
	IGUCHI Masaharu	clinical respiratory medicine
	TAKAHASHI Masakatsu	clinical respiratory medicine , pulmonary tuberculosis
	TOBE Takeyasu	clinical respiratory medicine
	TSUCHIHARA Katsuma	clinical respiratory medicine
	OIKAWA Taku	clinical respiratory medicine , lung cancer
	NAKAGAWA Ken	clinical respiratory medicine , lung cancer
	FUJIMOTO Yuki	clinical respiratory medicine
	KOJIMA Koji	clinical respiratory medicine

### Keywords of Research

acute lung injury, cytokine, NO, matrix metalloproteinase, pulmonary alveolar type II cell, sleep apnea syndrome, acoustic reflection technique, upper airway compliance, CPAP, BiPAP, lung cancer, apoptosis, Fas, Fas ligand

### Outline of Research

1. Pathogenesis and therapy of acute lung injury
2. Cell biology of pulmonary alveolar epithelium
3. Pathogenesis and therapy of sleep-disordered breathing
4. Apoptosis of lung cancer cells

### Publications

#### Originals

- 0310B001 H.Takano, T.Shibamoto, W.Zhang, Y.Kurata, H.Toga: Hepatic microvascular pressure during anaphylactic shock in anesthetized rats, *Microvasc. Res.*, 78:169-173, 2009.
- 0310B004 M.Saito: Upper airway function assessed with negative expiratory pressure technique during wakefulness in patients with obstructive sleep apnea, *J. Kanazawa. Med. Univ.*, 34:59-67, 2009 (in Japanese) .
- 0310B005 M.Kobayashi: Change of alveolar type II cells affected by mutation of *Rab38* small GTPase gene, *J. Kanazawa. Med. Univ.*, 34:133-141, 2009 (in Japanese) .

#### Case Reports

- 0310D001 K.Usuda, M.Sagawa, H.Aikawa, M.Ueno, M.Tanaka, Y.Machida, K.Tsuchihara, Y.Masaki, E.Kinoshita, T.Sakuma: Complete resection of an advanced mediastinal nonseminomatous germ cell tumor with multiple distant metastases after Down-staging by chemotherapy, *The Japanese journal of thoracic surgery.*, 62:545-551, 2009 (in Japanese) .

## **Presentations at Conference**

### **International Conference (Presentations)**

- 0310I001 K.Osanai: Abnormal lung phenotype in Rab38-deficient rats, rodent models of Hermansky-Pudlak syndrome, FASEB 2009 Meetings, (New Orleans, '09.04).

## 0320 Department of Gastroenterology

### Faculty

Title	Name	Field of Specialization
	ARISAWA Tomiyasu	Gastro-intestinal disorders
	TSUTSUMI Mikihiro	Mechanism of alcoholic liver disease
	TSUCHISHIMA Mutsumi	Anti-viral therapy of viral hepatitis
	OZAKI Kazuaki	Mechanism of portal hypertention in alcoholic liver injury
	YANO Hirokazu	Clinico-epidemiology of alcoholic liver injury
	SHIROEDA Shoko	Clinical feature and treatment of severe acute pancreatitis
(Additional Post)	SHIROEDA Hisakazu	Endoscopic therapy of early gastric cancer
	FUKUMURA Atsushi	Etiology and clinical feature of acute hepatitis
	OOTSUKA Toshimi	Clinico-pathological study of nonalcoholic steatohepatitis
	YAMADA Masayoshi	Nonalcoholic steatohepatitis and oxidative stress
	FUKUYAMA Tomoki	Chemotherapy for gastrointestinal malignant disease
	SAITO Takashi	Treatment for metabolic syndrome

### Keywords of Research

alcohol metabolism, alcoholic liver injury, carbohydrate deficient transferrin, cytochrome P4502E1, mitochondrial DNA mutation, hepatic fibrosis, hepatic stellate cell, hepatocyte apoptosis, chemical carcinogenesis, non-alcoholic steatohepatitis, FLS-ob mouse, metabolic syndrome, insuline resistance, leptin, adiponectin, oxidative stress, anti-oxidative enzyme, chronic type C hepatitis, HCV-RNA genotype, interferon therapy, chronic type B hepatitis, anti-viral treatment, treatment of hepatocellular carcinoma, radiofrequency ablation, arterial infusion therapy, early gastric cancer, endoscopic mucosal resection, endoscopic submucosal dissection, inflammatory bowel disease, ischemic colitis

### Outline of Research

- 1 Basic and clinical study of digestive disease
  - ① Treatment for esophageal and gastric varices associated with portal hypertension
  - ② Endoscopic treatment for early cancer of the esophagus, stomach and colon
  - ③ Hepatic support system for severe alcoholic hepatitis
  - ④ Clinical feature and treatment for nonalcoholic steatohepatitis
- 2 Experimental study of alcoholic organ injury
  - ① Pathogenesis and treatment for alcoholic hepatitis
  - ② Pathogenesis of hepatic fibrosis induced by alcohol
  - ③ Effect of alcohol on chemical carcinogenesis of the liver
  - ④ Pathogenesis for nonalcoholic steatohepatitis

## Publications

### Originals

- 0320B001 (T.Tahara), T.Arisawa, T.Shibata, H.Yamashita, D.Yoshioka, I.Hirata: Effect of promoter methylation of multidrug resistance 1(MDR1)gene in gastric carcinogenesis, *Anticancer Res.*, 29:337-342, 2009.
- 0320B002 (T.Tahara), T.Shibata, M.Nakamura, H.Yamashita, D.Yoshioka, M.Okubo, N.Maruyama, T.Kamano, Y.Kamiya, H.Fujita, Y.Nakagawa, M.Nagasaka, M.Iwata, K.Takahama, M.Watanabe, H.Nakano, I.Hirata, T.Arisawa: Promoter methylation of protease-activated receptor (PAR2)is associated with severe clinical phenotypes of ulcerative colitis (UC), *Clin. Exp. Med.*, 9:125-130, 2009.
- 0320B003 (T.Tahara), T.Arisawa, T.Shibata, M.Nakamura, H.Yamashita, D.Yoshioka, M.Okubo, N.Maruyama, T.Kamano, Y.Kamiya, H.Fujita, M.Nagasawa, M.Iwata, K.Takahama, M.Watanabe, H.Nakano, I.Hirata: Effect of polymorphisms in the 3'-untranslated region(3'-UTR)of VEGF gene on gastric pre-malignant condition, *Anticancer Res.*, 29:485-490, 2009.
- 0320B004 (T.Tahara), T.Shibata, M.Nakamura, D.Yoshioka, M.Okubo, N.Maruyama, T.Kamano, Y.Kamiya, H.Fujita, M.Nagasaka, M.Iwata, K.Takahama, M.Watanabe, H.Yamashita, H.Nakano, I.Hirata, T.Arisawa: COMT gene Val158Met polymorphism influences the severity of interstitial metaplasia in H.Pylori infected older subjects, *Hepatogastroenterology*, 56:411-415, 2009.
- 0320B005 (T.Tahara), T.Shibata, M.Nakamura, D.Yoshioka, M.Okubo, T.Arisawa, I.Hirata: Gastric mucosal pattern by using magnifying narrow-band imaging endoscopy clearly distinguishes histological and serological severity of chronic gastritis, *Gastroenterological Endoscopy*, 70:246-253, 2009.
- 0320B006 (T.Tahara), T.Shibata, M.Nakamura, H.Yamashita, D.Yoshioka, M.Okubo, N.Maruyama, T.Kamano, Y.Kamiya, Y.Nakagawa, H.Fujita, M.Nagasaka, M.Iwata, K.Takahama, M.Watanabe, I.Hirata, T.Arisawa: Effect of MDR1 gene promoter methylation in patients with ulcerative colitis, *Int. J. Mol. Med.*, 23:521-527, 2009.
- 0320B007 (T.Tahara), T.Shibata, I.Hirata, H.Nakano, T.Arisawa: CD14 promoter-159 polymorphism is associated with reduced risk of intestinal-type gastric cancer in a Japanese population, *Dig. Dis. Sci.*, 54:1508-1512, 2009.
- 0320B008 (T.Tahara), T.Shibata, H.Yamashita, M.Nakamura, D.Yoshioka, M.Okubo, I.Hirata, T.Arisawa: Chronic nonsteroidal anti-inflammatory drug(NSAID)use suppresses multiple CpG islands hyper methylation(CIHM) of tumor suppressor genes in the human gastric mucosa, *Cancer Sci.*, 100:1192-1197, 2009.
- 0320B009 (T.Shibata), T.Tahara, I.Hirata, T.Arisawa: Genetic polymorphism of interleukin-17A and-17F genes in gastric carcinogenesis, *Hum. Immunol.*, 70:547-551, 2009.
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- 0320B018 (T.Tahara), T.Shibata, M.Nakamura, H.Yamashita, D.Yoshioka, M.Okubo, J.Yonemura, Y.Maeda, N.Maruyama, T.Kamano, Y.Kamiya, H.Fujita, Y.Nakagawa, M.Nagasaka, Iwata M, I.Hirata, T.Arisawa: Effect of polymorphisms of IL-17A, -17F and MIF genes on CpG island hyper-methylation (CIHM) in the human gastric mucosa, *Int. J. Mol. Med.*, 24:563–569, 2009.
- 0320B019 (T.Tahara), T.Shibata, F.Wang, M.Nakamura, M.Sakata, H.Nakano, I.Hirata, T.Arisawa: A genetic variant of the p22PHOX component of NADPH oxidase C242T is associated with reduced risk of functional dyspepsia in Helicobacter pylori-infected Japanese individuals, *Eur. J. Gastroenterol. Hepatol.*, 21:1363–1368, 2009.
- 0320B020 ZS.Zhao, T.Shibamoto, M.Tsutsumi, S.Cui, WM.Zhang, H.Takano, Y.Kurata: Mouse hepatic portal venoconstrictive response to vasoconstrictors is much weaker than that in rat, *J. Cardiovasc. Pharmacol.*, 54:421–426, 2009.

#### Case Reports

- 0320D001 M.Yamada, H.Shiroeda, S.Shiroeda, K.Sato, T.Arisawa, M.Tsutsumi: Cholangiocarcinoma producing parathyroid hormone-related peptide treated with chemoradiation using gemcitabine and S-1, *Intern. Med.*, 48:2097–2100, 2009.
- 0320D002 T.Fukuyama, H.Kawahara, M.Yamada, N.Hayashi, H.Yano, M.Fukura, K.Ozaki, M.Tsuchishima, S.Takase, T.Arisawa, K.Omote, T.Nojima: A case of IL-6 producing malignant mesothelioma of abdomen with thrombocytosis, *jpn. j. gastroenterol.*, 109:546–553, 2009 (in Japanese).

#### Short Communications

- 0320E001 (M.Nakamura), T.Tahara, T.Shibata, D.Yoshioka, M.Okubo, K.Takahama, M.Watanabe, T.Arisawa, I.Hirata.: Diagnostic efficacy of autofluorescence and reflectance imaging endoscopy for lateral extension of early gastric cancers, *Gastroenterological Endoscopy*, 70:599, 2009.

### Presentations at Conference

#### International Conference (Presentations)

- 0320I001 (M.Okubo), T.Tahara, T.Shibata, M.Nakamura, D.Yoshioka, N.Maruyama, T.Kamano, Y.Kamiya, H.Fujita, Y.Nakagawa, M.Nagasaka, M.Iwata, K.Takahama, M.Watanabe, T.Arisawa, I.Hirata: Classification of gastric mucosal patterns in the uninvolved gastric antrum by using magnifying NBI, in relation to H.pylori infection, histological and serological severity of chronic gastritis, DDW 2009, (Chicago, '09.06).
- 0320I002 (T.Tahara), T.Shibata, M.Nakamura, D.Yoshioka, M.Okubo, N.Maruyama, T.Kamano, Y.Kamiya, H.Fujita, Y.Nakagawa, M.Nagasaka, M.Iwata, K.Takahama, M.Watanabe, T.Arisawa, I.Hirata: Gastric mucosal pattern using magnifying NBI endoscopy clearly distinguishes histological, and serological severity of chronic gastritis and predicts gastric cancer occurrence, DDW 2009, (Chicago, '09.06).
- 0320I003 (T.Shibata), T.Tahara, T.Arisawa, I.Hirata: IL-6r -183a carrier is associated with diffuse type of gastric cancer in Japanese, DDW 2009, (Chicago, '09.06).



- 0320I004 (T.Tahara), T.Shibata, M.Okubo, D.Yoshioka, M.Nakamura, Y.Nakagawa, I.Hirata, T.Arisawa: Chronic nonsteroidal anti-inflammatory drugs (NSAIDs) use suppresses DNA methylation in human gastric mucosa, DDW 2009, (Chicago, '09.06).
- 0320I005 (T.Tahara), T.Shibata, I.Hirata, T.Arisawa: Effect of promoter methylation of multidrug resistance 1(MDR1) gene in gastric carcinogenesis, DDW 2009, (Chicago, '09.06).
- 0320I006 M.Yamada, H.Shiroeda, K.Ozaki, M.Tsuchishima, M.Tsutsumi, T.Arisawa: Analysis of C-kit and pdgfr  $\alpha$  gene mutation in gastrointestinal stromal tumor of the small intestine, DDW 2009, (Chicago, '09.06).
- 0320I007 (M.Okubo), T.Tahara, T.Shibata, M.Nakamura, D.Yoshioka, N.Maruyama, T.Kamano, Y.Kamiya, H.Fujita, Y.Nakagawa, M.Nagasaka, M.Iwata, K.Takahama, M.Watanabe, T.Arisawa, I.Hirata: Classification of gastric mucosal patterns in the uninvolved gastric antrum by using magnifying NBI, in relation to H.pylori infection, histological and serological severity of chronic gastritis, DDW 2009, (Chicago, '09.06).
- 0320I008 (T.Tahara), T.Shibata, M.Nakamura, D.Yoshioka, M.Okubo, N.Maruyama, T.Kamano, Y.Kamiya, H.Fujita, Y.Nakagawa, M.Nagasaka, M.Iwata, K.Takahama, M.Watanabe, T.Arisawa, I.Hirata: Gastric mucosal pattern using magnifying NBI endoscopy clearly distinguishes histological, and serological severity of chronic gastritis and predicts gastric cancer occurrence, DDW 2009, (Chicago, '09.06).
- 0320I009 (J.George), M.Tsutsumi, J.D'Armiento: MMP-13 deletion protects monocrotaline induced liver injury in mice, The Liver Meeting 2009, (Boston, '09.10).
- 0320I010 (T.Tahara), T.Shibata, M.Nakamura, I.Hirata, T.Arisawa: Association between polymorphisms in the 3' untranslated region(3'-UTR)of vascular endothelial growth factor(VEGF)gene and gastric cancer incidence in Japanese population., UEGW2009, (London, '09.11).
- 0320I011 (T.Tahara), T.Shibata, M.Nakamura, M.Okubo, Yonemura, Y.Maeda, D.Yoshioka, H.Yamashita, I.Hirata, T.Arisawa: Chronic nonsteroidal anti-inflammatory drug(NSAID)use suppresses multiple CpG islands hypermethylation(CIHM)of tumor suppressor genes in the human gastric, UEGW2009, (London, '09.11).
- 0320I012 (T.Tahara), T.Shibata, M.Nakamura, M.Okubo, J.Yonemura, Y.Maeda, D.Yoshioka, N.Maruyama, Kamano, Y.Kamiya, H.Fujita, Y.Nakagawa, M.Nagasaka, M.Iwata, T.Arisawa, I.Hirata: Gastric mucosal pattern using magnifying NBI endoscopy clearly H.Pylori induced chronic gastritis and predicts gastric cancer occurrence, UEGW2009, (London, '09.11).
- 0320I013 (T.Tahara), T.Shibata, M.Nakamura, M.Okubo, D.Yoshioka, I.Hirata, T.Arisawa: Homozygous trpv1 315c influences the susceptibility to functional dyspepsia(FD), UEGW2009, (London, '09.11).
- 0320I014 (M.Nakamura), T.Arisawa, T.Shibata, T.Tahara, M.Okubo, I.Hirata: Prospective randomized controlled trial of proton-pump inhibitor versus rebamipide-based proton-pump inhibitor therapy for treatment of endoscopic submucosal dissection-related complication, UEGW2009, (London, '09.11).

## 0330 Department of Nephrology

### Faculty

Title	Name	Field of Specialization
(Additional Post)	YOKOYAMA Hitoshi	Clinicopathological study of nephritic and nephrotic syndrome, Clinical study of blood purification, Clinicopathological study of renal transplantation
	TOMOSUGI Naohisa	Proteomics in clinical nephrology
	ASAKA Mitsuhiro	Cellular immunity in uremia, Clinicopathological study of primary nonfunction and chronic allograft nephropathy in renal transplantation
	YAMAYA Hideki	Clinical nephrology,
	OKUYAMA Hiroshi	Clinical nephrology,
	ADACHI Hiroki	Clinical nephrology,
	CHIKAZAWA Yoshihiro	Clinical nephrology,
	NAKAGAWA Masaru	Clinical nephrology,
	HAYAMA Satoshi	Clinical nephrology,
	ATSUMI Hirokatsu	Clinical nephrology
	IMURA Junko	Clinical nephrology
	FUJIMOTO Keiji	Clinical nephrology
	KIMURA Shogo	Clinical nephrology

### Keywords of Research

acquired renal cystic disease, CT scan, renal cell carcinoma, dialysis patient, cytogenetics, chromosome, PCR, karyotype, metalloproteinase, mesangial cell, renal disease, hemodialysis, hematuria, proteinuria, ADPKD, renal transplantation, hyperuricemia, nephrotic syndrome, hyperparathyroidism, bone disease, imaging, RCC, cystic disease, chronic renal failure, survival, IgA, glomerulonephritis, acute renal failure, vitamin D, CAPD

### Outline of Research

We performed the clinicopathological studies of nephritic and nephrotic syndrome, especially in human lupus nephritis. We confirmed the usefulness of ISN/RPS 2003 lupus nephritis classification in the long-term followed cohort analysis. We also analyzed the genetic backgrounds of familial focal segmental glomerulosclerosis (FSGS), and studied the early remission induction therapy of minimal change nephrotic syndrome and FSGS. In the fields of renal transplantation, we analyzed primary non-functioning kidneys and patients with chronic allograft nephropathy. As concern to chronic kidney diseases (CKD), we revealed the CKD population in Ishikawa Prefecture based on the health check program of general population. As the application of proteomics analyses, we studied the uremic toxins and iron metabolism, especially hepcidin, in chronic renal failure of both human and animal models. We applied blood purification and proteomics techniques in some co-ordinal works of various research fields.

### Publications

#### Originals

- 0330B001 (S.Matsuo), E.Imai, M.Horio, Y.Yasuda, K.Tomita, K.Nitta, K.Yamagata, Y.Tomino, H.Yokoyama, A.Hishida: Revised equations for estimated GFR from serum creatinine in Japan, *Am. J. Kidney Dis.*, 53:982-992, 2009.

- 0330B002 (E.Imai), M.Horio, T.Watanabe, K.Iseki, K.Yamagata, S.Hara, N.Ura, Y.Kiyohara, T.Moriyama, Y.Ando, S.Fujimoto, T.Konta, H.Yokoyama, H.Makino, A.Hishida, S.Matsuo: Prevalence of chronic kidney disease in the Japanese general population, *Clin Exp Nephrol*, 13:621–630, 2009.
- 0330B003 H.Okuyama, S.Kimura, H.Atsumi, J.Imura, K.Fujimoto, Y.Chikazawa, M.Nakagawa, H.Imamura, H.Yamaya, M.Asaka, N.Tomosugi, H.Yokoyama: The relationship between initial diagnosis and long-term prognosis in lupus nephritis, *Jpn. J. Nephrol.*, 51:44–50, 2009 (in Japanese) .
- 0330B004 (K.Sato), M.Asaka, M.Nakagawa, H.Imamura, H.Yokoyama, I.Ishikawa: Prophylactic continuous hemodialysis after coronary angiography in patients with renal insufficiency, *The Journal of Japanese Association of Dialysis Physicians.*, 42:237–243, 2009 (in Japanese) .

#### Others

- 0330F006 Y.Ishigaki, T.Takata, N.Tomosugi, T.Takegami, H.Nakagawa: Introduction of OLS in NIBB, *Japan Laser Therapy Association.*, 8:15–18, 2009 (in Japanese) .

### Presentations at Conference

#### International Conference (Presentations)

- 0330I001 H.Yokoyama: J-RBR(Japan Renal Biopsy Registry) and J-KDR(Japan Kidney Disease Registry)-Data base for clinicopathological studies constructed by Japanese Society of Nephrology-, *The 3rd Research Forum on Chronic Kidney Disease*, (Nagoya, '09.02).
- 0330I002 Y.Masaki, N.Kurose, H.Iwao, A.Nakajima, M.Yamamoto, H.Takahashi, M.Kawano, T.Saeki, S.Matsui, A.Azumi, S.Nishiyama, Y.Zen, T.Sumida, M.Kojima, T.Yoshino, S.Nakamura, N.Tomosugi, T.Takegami, S.Sugai, H.Umehara: Clinico-pathological analysis of 107 cases of IgG4+MOLPS (IgG4-positive multi-organ lymphoproliferative syndrome), *10<sup>th</sup> International symposium on Sjögren's syndrome*, (BREST, '09.10).
- 0330I003 H.Yokoyama, A.Saito, Y.Saito, I.Ishikawa: Intact parathyroid hormone levels at 3 hours of loading test reflect the effects of Cinacalcet in both hemodialysis and renal transplanted patients., *Renal Week 2009 ASN's 42nd Annual Meeting & Scientific Exposition*, (SanDiego, '09.10).
- 0330I004 (S.Kitajima), H.Yamauchi, A.Hara, K.Kitagawa, N.Sakai, K.Furuichi, H.Yokoyama, S.Kaneko, T.Wada: Clinicopathological manifestation in patients of idiopathic membranous nephropathy with relapse, *Renal Week 2009 ASN's 42nd Annual Meeting & Scientific Exposition*, (SanDiego, '09.10).

## 0340 Department of Endocrinology and Metabolism

### Faculty

Title	Name	Field of Specialization
	KOYA Daisuke	diabetes, hypertension, obesity, aging
	KIGOSHI Toshikazu	intracellular signaling of hormones, aldosterone secretion
	NAKAGAWA Atsushi	pancreatic and gut hormones, pituitary diseases
	KONISHI Kazunori	diabetes, arteriosclerosis
	NISHIZAWA Makoto	diabetes, insulin secretion, thyroid diseases
	ITO Tomohiko	adrenal diseases, diabetes, thyroid diseases
	TSUDA Shinichi	diabetes, hypertension, arteriosclerosis
	IMAZUMI Noriko	intracellular mechanisms of aldosterone synthesis, diabetes
	FURUYA Keisuke	diabetes, thyroid diseases
	KITADA Munehiro	diabetes, hypertension
	ITO Hiroki	diabetes
	FUJII Mizue	diabetes

### Keywords of Research

diabetic nephropathy, diabetic retinopathy, diabetic neuropathy, obesity, aldosterone, adrenal zona glomerulosa, transmembrane signaling mechanism, angiotensin, protein kinase C, blood pressure, ambulatory blood pressure monitoring, hypertension, autonomic dysfunction, microalbuminuria, insulin resistance, incretin, entero-insular axis, mitochondrial gene mutation, renin, Type 2 diabetes, artificial pancreas, selective hypoaldosteronism, Basedows disease, thyroid tumor, chronic thyroiditis, glucose metabolism, endothelial function, nitric oxide, hyperlipidemia, antihypertensive therapy

### Outline of Research

We study the relationship between intracellular oxidative stress and an anti-aging substance SIRT1 under diabetic conditions. SIRT1, an enzyme relating to the anti-aging effect of calorie restriction, was shown to inhibit oxidative stress-induced apoptosis of renal mesangial cells in vitro. At present, using diabetic animals, we investigate expressions of SIRT1 under various conditions of oxidative stress and prevention effects of over-expression of SIRT1 against diabetic complications.

Our clinical researches of the relation between the diurnal pattern of blood pressure and cardiovascular events among diabetics are highly evaluated because of the long-term prospective observation. Recently, we have also focused on the metabolic syndrome and blood pressure pattern to find out the participation of adiponectin.

We also study the abdominal vagal afferent signals sensing gut hormones, which are pivotal for postprandial glucose homeostasis.

### Publications

#### Originals

- 0340B001 (N.Deji), S.Kume, S.Araki, M.Soumura, T.Sugimoto, K.Isshiki, M.Chin-Kanasaki, M.Sakaguchi, D.Koya, M.Haneda, A.Kashiwagi, T.Uzu: Structural and functional changes in the kidneys of high-fat diet-induced obese mice, *Am. J. Physiol. Renal Physiol.*, 296:F118-F126, 2009.

- 0340B002 K.Konishi, S.Nakano, H.Seto, S.Tsuda, D.Koya: Carotid atherosclerosis mediated by visceral adiposity and adipocytokines in type 2 diabetic subjects, *Diabetes Res. Clin. Pract.*, 85:171–178, 2009.
- 0340B003 D.Koya, M.Haneda, S.Inomata, Y.Suzuki, D.Suzuki, H.Makino, K.Shikata, Y.Murakami, Y.Tomino, K.Yamada, S.I.Araki, A.Kashiwagi, R.Kikkawa: Long-term effect of modification of dietary protein intake on the progression of diabetic nephropathy: a randomised controlled trial, *Diabetologia*, 52:2037–2045, 2009.
- 0340B004 (S.Araki), H.Matsuno, M.Haneda, D.Koya, Y.Kanno, J.Itho, A.Kishi, K.Isshiki, T.Sugimoto, H.Maegawa, A.Kashiwagi, T.Uzu: Correlation between albuminuria and spontaneous platelet microaggregate formation in type 2 diabetic patients, *Diabetes Care.*, 32:2062–2067, 2009.

#### Reviews

- 0340C001 F.Liang, S.Kume, D.Koya: SIRT1 and insulin resistance, *Nat Rev Endocrinol.*, 5:367–373, 2009.
- 0340C002 L.Zeng, R.Chen, F.Liang, H.Tsuchiya, H.Murai, T.Nakahashi, K.Iwai, T.Takahashi, T.Kanda, S.Morimoto: Silent information regulator, sirtuin 1, and age-related diseases, *Nat. Clin. Pract. Rheumatol.*, 9:7–15, 2009.

### Presentations at Conference

#### International Conference (Presentations)

- 0340I001 (Y.Tanaka), S.Kume, S.Araki, K.Isshiki, T.Sugimoto, D.Koya, M.Haneda, T.Uzu: Effects of PPAR $\alpha$  agonist fenofibrate on renal injury induced by a high-fat diet, American Diabetes Association 69th Scientific Sessions, (New Orleans, LA, USA, '09.06), *Diabetes (Abstract Book 69th Scientific Sessions)*, 58(Suppl.1):A213, 2009.
- 0340I002 S.Tsuda, S.Nakano, D.Koya: Combination therapy of ezetimibe and statin rather than ezetimibe monotherapy reduces urinary albumin excretion rate in moderate-to-high risk subjects, American Diabetes Association 69th Scientific Sessions, (New Orleans, LA, USA, '09.06), "New Orleans, LA, USA", 58(Suppl.1):A243, 2009.
- 0340I003 D.Koya, S.Kume, A.Kashiwagi: Effect of SIRT3 overexpression in endothelial cells in vivo on HFD-induced metabolic derangements, American Diabetes Association 69th Scientific Sessions, (New Orleans, LA, '09.06), *Diabetes (Abstract Book 69th Scientific Sessions)*, 58(Suppl.1):A398, 2009.
- 0340I004 H.Atsumi: Combination therapy of ezetimibe and statin rather than ezetimibe monotherapy reduces urinary albumin excretion rate in moderate-to-high risk subjects, The 15th Korea-Japan Symposium on Diabetes Mellitus, (Jeju Island, Korea, '09.09).
- 0340I005 O.Tachibana, Y.Sasagawa, K.Torigoe, K.Yamamoto, S.Siraga, K.Okamoto, T.Iida, T.Akai, H.Iizuka, A.Nakagawa, D.Koya: Expression of interleukin-1 $\beta$ , interleukin-6, interleukin-12 and TNF alpha in human Rathke cleft cysts - A possible inducer of secondary hypophysitis associated with Rathke cleft cyst-, The 11th International Pituitary Pathology Society (IPPS) Meeting, (Tokushima, '09.10).

## 0350 Department of Hematology and Immunology

### Faculty

Title	Name	Field of Specialization
	UMEHARA Hisanori	Hematology and Immunology
	HIROSE Yuko	Hematology and Immunology, Transfusion Medicine
	FUKUSHIMA Toshihiro	Hematology and Immunology, Clinical Pharmacology
	MASAKI Yasufumi	Hematology and Immunology, Transfusion Medicine
	TANAKA Masao	Rheumatology, Immunology
	FUJITA Yoshimasa	Rheumatology, Immunology
	SAWAKI Toshioki	Hematology and Immunology
	KAWANAMI Takafumi	Hematology and Immunology
	JIN Zhexiong	Immunology
	SAKAI Tomoyuki	Hematology and Immunology
	MIKI Miyuki	Hematology and Immunology

### Keywords of Research

autoimmune disorder, Sjögren's syndrome, malignant lymphoma, bone marrow transplantation, monoclonal lymphoproliferation, EB virus and tumorigenesis, stem cell, chemotherapy, leukemia cell line, apoptosis, chemokines, lipid raft, signal transduction, fractalkine, adhesion molecule, rheumatoid arthritis, systemic lupus erythematosus

### Outline of Research

We practice the translational research to develop the new anti-cancer or immunosuppressive drugs through basic research in the fields of Hematology and Immunology.

A) Studies of immunological abnormalities and pathophysiology of autoimmune diseases: 1) Effects of chemokines on vascular injury and Th1 response during chronic inflammation. 2) Function of microdomain (lipid rafts) on lymphocyte activation and its contribution in autoimmune diseases. 3) Analysis of immunological disorder in sphingomyelin knockout mice. 4) Discovery and functional analysis of the new auto-antigens in rheumatoid arthritis. 5) Detection of stem cells in salivary glands and its implication for regenerative medicine.

B) Studies of hematological malignancies and development of anti-cancer drugs. 1) Analysis of EB-virus proteins and their roles in lymphoproliferative disorders. 2) Molecular biological analysis of drug resistance. 3) Roles of sphingomyelin on apoptosis.

### Publications

#### Originals

- 0350B001 Y.Masaki, L.Dong, A.Nakajima, H.Iwao, M.Miki, N.Kurose, E.Kinoshita, T.Nojima, T.Sawaki, T.Kawanami, M.Tanaka, K.Shimoyama, C.Kim, M.Fukutoku, H.Kawabata, T.Fukushima, Y.Hirose, T.Takiguchi, S.Konda, S.Sugai, H.Umehara: Intravascular large B cell lymphoma: proposed of the strategy for early diagnosis and treatment of patients with rapid deteriorating condition, *Int. J. Hematol.*, 89:600-610, 2009.

- 0350B002 Y.Masaki, L.Dong, N.Kurose, K.Kitagawa, Y.Morikawa, M.Yamamoto, H.Takahashi, Y.Shinomura, K.Imai, T.Saeki, A.Azumi, S.Nakada, E.Sugiyama, S.Matsui, T.Origuchi, S.Nishiyama, I.Nishimori, T.Nojima, K.Yamada, M.Kawano, Y.Zen, M.Kaneko, K.Miyazaki, K.Tsubota, K.Eguchi, K.Tomoda, T.Sawaki, T.Kawanami, M.Tanaka, T.Fukushima, S.Sugai, H.Umehara: Proposal for a new clinical entity, IgG4-positive multiorgan lymphoproliferative syndrome: analysis of 64 cases of IgG4-related disorders, *Ann. Rheum. Dis.*, 68:1310-1315, 2009.
- 0350B003 S.Sugai, H.Takahashi, S.Ohta, M.Nishiyama, M.Takei, S.Sawada, K.Yamaji, H.Oka, H.Umehara, I.Koni, E.Sugiyama, S.Nishiyama, A.Kawakami: Efficacy and safety of rebamipide for the treatment of dry mouth symptoms in patients with Sjögren's syndrome: a double-blind placebo-controlled multicenter trial, *Mod Rheumatol*, 19:114-124, 2009.
- 0350B004 (T.Fujii), M.Okada, Y.Fujita, T.Sato, M.Tanaka, T.Usui, H.Umehara, T.Mimori: Vaccination with autoreactive CD4<sup>+</sup> Th1 clones in lupus-prone MRL/Mp-Fas<sup>lpr/lpr</sup> mice, *J. Autoimmun.*, 33:125-134, 2009.
- 0350B005 T.Sakai: Mechanisms of bortezomib-induced apoptosis in T cell lines, *J. Kanazawa. Med. Univ.*, 34:125-132, 2009 (in Japanese) .
- 0350B006 XP.Tong: Prevalence and relevance to disease manifestation of autoantibodies to RBP1-like protein(Rbik) in rheumatoid arthritis, *J. Kanazawa. Med. Univ.*, 34:142-147, 2009 (in Japanese) .

### Reviews

- 0350C001 (T.Daniels), L.Criswell, C.Shiboski, S.Shiboski, H.Lanfranchi, Y.Dong, M.Schiodt, H.Umehara, S.Sugai, S.Challacombe, J.Greenspan: An early view of the international Sjögren's syndrome registry, *Arthritis Rheum.*, 61:711-714, 2009.
- 0350C002 H.Umehara, T.Sawaki, T.Kawanami, Y.Masaki, T.Fukushima: Sjögren's syndrome, *Nipponrinsho.*, 67:511-516, 2009 (in Japanese) .

### Case Reports

- 0350D001 T.Fukushima, H.Iwao, A.Nakazima, M.Miki, T.Sakai, T.Sawaki, M.Tanaka, Y.Masaki, Y.Hirose, H.Umehara: MRSA-pyomyositis in a patient with acute myelogenous leukemia after intensive chemotherapy, *Anticancer Res.*, 29:3361-3364, 2009.
- 0350D002 A.Sakai, Y.Shimode, H.Tsuji, Y.Masaki: Huge malignant lymphoma of the thyroid gland complicated by recurrent esophageal and tracheal fistulas induced by chemotherapy, *J. Kanazawa. Med. Univ.*, 34:72-76, 2009.
- 0350D003 K.Usuda, M.Sagawa, H.Aikawa, M.Ueno, M.Tanaka, Y.Machida, K.Tsuchihara, Y.Masaki, E.Kinoshita, T.Sakuma: Complete resection of an advanced mediastinal nonseminomatous germ cell tumor with multiple distant metastases after Down-staging by chemotherapy, *The Japanese journal of thoracic surgery.*, 62:545-551, 2009 (in Japanese) .
- 0350D004 T.Fukushima, H.Iwao, A.Nakashima, M.Miki, T.Sakai, T.Sawaki, M.Tanaka, Y.Masaki, Y.Hirose, H.Umehara: Very Good Partial Response and Long Time to Progression by Short-Term Bortezomib Plus Dexamethasone Therapy for a Patient with Relapsed and Refractory Multiple Myeloma—A Case Report, *Cancer & chemotherapy.*, 36:1387-1389, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Presentations)

- 0350I001 Y.Masaki, N.Kurose, H.Iwao, A.Nakajima, M.Yamamoto, H.Takahashi, M.Kawano, T.Saeki, S.Matsui, A.Azumi, S.Nishiyama, Y.Zen, T.Sumida, M.Kojima, T.Yoshino, S.Nakamura, N.Tomosugi, T.Takegami, S.Sugai, H.Umehara: Clinico-pathological analysis of 107 cases of IgG4+MOLPS (IgG4-positive multi-organ lymphoproliferative syndrome), 10<sup>th</sup> International symposium on Sjögren's syndrome, (BREST, '09.10).

- 0350I002 T.Kawanami, Y.Matsuzaki, T.Sawaki, T.Sakai, H.Iwal, A.Nakajima, M.Miki, Z-X.Jin., Y.Fujita, M.Tanaka, Y.Masaki, T.Fukushima, H.Umehara: Identification of human salivary stem cells from cultured labial minor salivary cells, 10<sup>th</sup> International symposium on Sjögren's syndrome, (Brest, '09.10).
- 0350I003 T.Sawaki, Y.Masaki, T.Nakamura, H.Iwao, A.Nakajima, T.Sakai, Y.Fujita, T.Fukushima, H.Umehara: Sjögren's syndrome and risk of non-Hodgkin lymphoma, mono-center analysis in japan, 10<sup>th</sup> International symposium Sjögren's syndrome, (Brest, '09.10).



## 0360 Department of Neurology

### Faculty

Title	Name	Field of Specialization
	MATSUI Makoto	Clinical neurology,Neuroimmunology,Clinical Immunology
	TANAKA Keiko	Clinical neurology,Neuroimmunology
	NAGAYAMA Shigeni	Clinical neurology,Neuroimmunology
	KAWAMURA Kazuyuki	Clinical neurology,Neuroimmunology
	NAKANISHI Megumi	Clinical neurology,Neuroimmunology
	KAITO Muichi	Clinical neurology
	GONDO Yuichiro	Clinical neurology
	INADA Hiroyuki	Applied Zoology
	NAKATA Michiyo	Clinical neurology

### Keywords of Research

clinical neurophysiology, epilepsy, apoptosis, cerebrovascular diseases, neuropathies, molecular genetics, ischemic strokes, autoantibody, neuroimmunology, neuroinfection, experimental autoimmune encephalomyelitis

### Outline of Research

Development of new therapeutic strategies for the neuroimmunological disorders, including multiple sclerosis, by clarifying their etiologies that may be elucidated from meticulous clinical and experimental approaches using experimental animal models, which have been established due to recent advances in basic immunology.

### Publications

#### Originals

- 0360B001 (S.Kamei), S.Kuzuhara, M.Ishihara, A.Morita, N.Taira, M.Togo, M.Matsui, M.Ogawa, K.Hisanaga, T.Mizutani, S.Kuno: Nationwide survey of acute juvenile female non-herpetic encephalitis in japan:Relationship to anti-N-methyl-d-aspartate receptor encephalitis, *Intern. Med.*, 48:673-679, 2009.
- 0360B002 (T.Ishizu), J.Kira, M.Osoegawa, T.Fukazawa, S.Kikuchi, K.Fujihara, M.Matsui, T.Kohriyama, G.Sobue, T.Yamamura, Y.Itoyama, T.Saida, K.Sakata: Heterogeneity and continuum of multiple sclerosis phenotypes in japanese according to the results of the fourth nationwide survey, *J. Neurol. Sci.*, 280:22-28, 2009.
- 0360B003 (M.Osoegawa), J.Kira, T.Fukazawa, K.Fujihara, S.Kikuchi, M.Matsui, T.Kohriyama, G.Sobue, T.Yamamura, Y.Itoyama, T.Saida, K.Sakata, H.Ochi, T.Matsuoka: Temporal changes and geographical differences in multiple sclerosis phenotypes in japanese:nationwide survey results over 30 years, *Mult.Scler*, 15:159-173, 2009.
- 0360B004 (M.Kinoshita), Y.Nakatsuji, M.Moriya, T.Okuno, A.Kumanogoh, M.Nakano, T.Takahashi, K.Fujihara, K.Tanaka, S.Sakoda: Astrocytic necrosis is induced by anti-aquaporin4 antibody-positive serum, *Neuroreport.*, 20:508-512, 2009.
- 0360B005 (T.Tani), K.Sakimura, M.Tsujita, T.Nakada, M.Tanaka, M.Nishizawa, K.Tanaka: Identification of binding sites for anti-aquaporin4 antibodies in patients with neuromyelitis optica, *J. Neuroimmunol.*, 211:110-113, 2009.

- 0360B006 (M.Tanaka), K.Tanaka, M.Komori: Interferon- $\beta$  1b Treatment in Neuromyelitis Optica, *Eur. Neurol.*, 62:167-170, 2009.
- 0360B007 (K.Yanagawa), I.Kawachi, Y.Toyoshima, A.Yokoseki, M.Arakawawa, A.Hasegawa, T.Ito, N.Kojima, R.Koike, K.Tanaka, T.Kosaka, Chun -Feng Tan, A.Kakita, K.Okamoto, M.Tsujita, K.Sakimura, H.Takahashi, M.Nishizawa: Pathologic and immunologic profiles of a limited form of neuromyelitis optica with myelitis, *Neurology*, 73:1628-1637, 2009.
- 0360B008 (A.MM), T.Kasai, Y.Tashiro, Hui Qin Xing, H.Shirahama, M.Mitsuda, T.Suetsugu, K.Tanaka, M.Osame, S.Izumo: CD8 positive T-cell infiltration in the dentate nucleus of paraneoplastic cerebellar degeneration, *J. Neuroimmunol.*, 208:136-140, 2009.
- 0360B009 (M.Takagi), K.Tanaka, T.Suzuki, A.Miki, M.Nishizawa, H.Abe: Anti-aquaporin-4 antibodypositive optic neuritis, *Acta Ophthalmol (Copenh.)*, 87:562-566, 2009.
- 0360B010 (M.Nakamura), H.Houzen, M.Niino, K.Tanaka, H.Sasaki: Relationship between Barkhof criteria and the clinical features of multiple sclerosis in northern Japan, *Mult.Scler.*, 15:1450-1458, 2009.
- 0360B012 M.Nakata: Useful laboratory parameters in blood and CSF for evaluation of pathological processes in patients with acute viral infection of the CNS, *J. Kanazawa. Med. Univ.*, 34:101-106, 2009 (in Japanese) .

### Reviews

- 0360C001 K.Tanaka: Anti-aquaporin 4 antibodies in neuromyelitis optica, *Neuro-Ophthalmology Japan*, 26:185-189, 2009 (in Japanese) .
- 0360C002 K.Tanaka: Paraneoplastic Encephalopathy /Encephalitis, *Neurological Therapeutics.*, 26:31-37, 2009 (in Japanese) .
- 0360C003 K.Tanaka: Anti-aquaporin4-antibody in optic neuritis, *Ophthalmology.*, 51:431-436, 2009 (in Japanese) .
- 0360C009 K.Tanaka: Clinical Aspects and Epidemiology in Multiple Sclerosis/Neuromyelitis Optica and Anti-Aquaporin-4 Antibody, *Journal of the eye.*, 26:1301-1306, 2009 (in Japanese) .

### Case Reports

- 0360D001 (S.Amemiya), M.Hamamoto, T.Kumagai, M.Ueda, Y.Katayama, K.Tanaka: Neuromyelitis optica preceded by brain demyelinating episode, *J Neuroimaging.*, 19:263-265, 2009.
- 0360D002 (H.Nozaaki), T.Shimohata, T.Kanbayashi, Y.Sagawa, S.Katada, M.Satoh, O.Onodera, K.Tanaka, M.Nishizawa: A patient with anti-aquaporin 4 antibody who presented with recurrent hypersomnia, reduced orexin (hypocretin) level, and symmetrical hypothalamic lesions, *Sleep Med.*, 10:253-255, 2009.
- 0360D003 (T.Fukuda), H.Shiraishi, T.Nakamura, K.Tanaka, H.Nakamura, A.Tsujino, Y.Nishiura, T.Yoshimura, M.Motomura, K.Eguchi: Efficacy of tacrolimus in Sjogren's syndrome-associated CNS disease with aquaporin-4 autoantibodies, *J. Neurol.*, 256:1762-1764, 2009.

## Presentations at Conference

### International Conference (Presentations)

- 0360I001 K.Tanaka, T.Tani, M.Tsujita, K.Sakimura, M.Tanaka, M.Nishizawa, M.Matsui: Determination of the Binding Epitope of Anti-Aquaporin 4 Antibody, *Annual Meeting of American Academy of Neurology*, (Seattle, '09.04).
- 0360I002 (M.Tanaka), K.Tanaka, M.Matsui, M.Tahara, T.Konishi: Asymptomatic enhancing brain lesions in Japanese patients with multiple sclerosis and neuromyelitis optica, *ECTRIMS Dusseldorf, Germany*, (Dusseldorf, '09.09).
- 0360I003 A.Nagaishi, Y.Kitagawa, M.Matsui, T.Tani, M.Tsujita, K.Sakimura, K.Tanaka: Anti-aquaporin 4 antibody binding epitopes and its co-relation to clinical subtypes of NMO, *ECTRIMS Dusseldorf, Germany*, (Dusseldorf, '09.09).

## 0370 Department of Geriatric Medicine

### Faculty

Title	Name	Field of Specialization
	MORIMOTO Shigeto	Geriatrics, Hypertension, Calcium Metabolism, Dementia, Osteoporosis
	IWAI Kunimitsu	Geriatrics, Circulation, Cell Biology, Cardiology
	TSUCHIYA Hiroshi	Geriatrics, Circulation, Atherosclerosis
	NAKASHI Takeshi	Geriatrics, Circulation, Hypertension, Atherosclerosis, Cardiology
	MURAI Hiroshi	Geriatrics, Gastroenterology, Dementia, Nutrition
	OKURO Masashi	Geriatrics, Circulation, Hypertension, Atherosclerosis
	ISHIGAMI Keiichiro	Geriatrics, Dementia
	SAKAI Junta	Geriatrics, Gastroenterology
	NOMURA Koji	Geriatrics, Circulation
	OHASHI Isao	Geriatrics, Hypertension, Atherosclerosis
	TAKATA Meiko	Geriatrics
	KATO Shouzaburo	Geriatrics, Hypertension, Atherosclerosis

### Keywords of Research

elderly, cardiac function, mitral stenosis, dynamic exercise, flow convergence region, dementia, computer, diastolic function, ultrasound, aortic distensibility, adenocarcinoma, stroke volume, carotid arterial stiffness, high frequency ultrasound, hypertension, antihypertensive treatment, color Doppler echocardiography, echocardiography, diabetes mellitus, cardiac disease, carotid artery, atherosclerosis, isolated systolic hypertension, Double cancer, squamous carcinoma, cardiac output, carotid arterial elastic modulus, Hasegawa's dementia scale, eicosapentaenoic acid, nitrendipine

### Outline of Research

The main fields of research of our Department are to elucidate pathogenesis and to develop new treatments for acute diseases in the elderly including pneumonia, stroke, heart failure, and ischemic heart diseases, of hypertension, and of elderly syndromes including dementia, falls/fractures, dysphagia, and bedridden. Besides these, we also research about genetic backgrounds for many elderly diseases using analysis of SNIPs, and about pathogenesis of atherosclerosis using culture of arterial cells.

### Publications

#### Reviews

- 0370C001 L.Zeng, R.Chen, F.Liang, H.Tsuchiya, H.Murai, T.Nakahashi, K.Iwai, T.Takahashi, T.Kanda, S.Morimoto: Silent information regulator, sirtuin 1, and age-related diseases, Nat. Clin. Pract. Rheumatol., 9:7-15, 2009.

## Presentations at Conference

### International Conference (Presentations)

- 0370I001 H.Murai, T.Nakahashi, M.Atsumi, I.Toyota, H.Yano, K.Nomura, H.Tsuchiya, K.Iwai, S.Morimoto: The atrophy of parahippocampal gyrus and lipid metabolism. -A vsrad analysis of senile dementia-, 19th Iagg World Congress of Gerontology and Geriatrics, (Paris, '09.07).
- 0370I002 T.Nakahashi, M.Atsumi, H.Murai, I.Toyota, H.Yano, K.Nomura, H.Tsuchiya, K.Iwai, S.Morimoto: Factors influencing prognosis of the frail elderly, 19th Iagg World Congress of Gerontology and Geriatrics, (Paris, '09.07).

## 0380 Department of Pediatrics

### Faculty

Title	Name	Field of Specialization
	SAIKAWA Yutaka	Pediatric hematology, Pediatric oncology
	NAKAMURA Tsuneyuki	Pediatric cardiology
	ITO Masatsune	Pediatric endocrinology, Pediatric metabolism, Inborn errors of metabolism.
	KOBAYASHI Azusa	Neonatology
	NAKAMURA Toshimi	Pediatric allergy, Pediatric immunology
	AKITA Chisato	Pediatric cardiology
	YAMAMURA Junichi	Pediatric Psychosomatic Disorder, Infectious Disease of Childhood, Clinical Virology, Fast and Easy Detection System for Infectious agent
	FUJIKI Takuma	Pediatric nephrology
	SATO Hitoshi	Infectious disease in children, Molecular biology, Child neurology, Inborn errors of metabolism
	NAGASAWA Mayumi	Neonatology
	OKADA Naoki	Pediatric hematology, Pediatric oncology
	IKEDA Tomomi	Child neurology
	HIRAMATSU Masayuki	Pediatric allergy, Pediatric immunology
	HORISAWA Torou	Pediatric hematology, Pediatric oncology
	KITO Toshiyuki	Pediatric allergy, Pediatric immunology

### Keywords of Research

DNA diagnosis, fatty acid oxidation, malignancy in childhood, peripheral blood stem cell, pituitary dwarfism, growth disorders in children, Kawasaki's disease, Adriamycin-induced cardiomyopathy, methylmalonic acidemia, infant botulism, leukemia in children, juvenile diabetes, congenital adrenal hyperplasia, congenital heart disease, arrhythmia in childhood

### Outline of Research

Clinical and basic research are actively going on at pediatric department in the area of Neonatology, Pediatric Infectious Diseases, Pediatric Cardiology, Pediatric Allergy and Immunology, Pediatric Hematology and Oncology, Pediatric Neurology, Psychosomatic Medicine, Pediatric Endocrinology, Inborn Errors of Metabolism.

### Publications

#### Originals

- 0380B001 (S.Okamoto), H.Ikawa, H.Fukumoto, H.Masuyama, K.Konuma, M.Kohno, T.Nakamura, H.Takahashi: Patent ductus arteriosus flow patterns in the treatment of congenital diaphragmatic hernia, *Pediatr. Int.*, 51:555-558, 2009.
- 0380B002 C.Kitaoka, T.Nakamura, T.Nakamura, H.Sato, Y.Saikawa: B-type natriuretic peptide as a marker of latent left ventricular impairment in pediatric patients with bronchial asthma, *J. Kanazawa. Med. Univ.*, 34:53-58, 2009.

- 0380B003 (Daisuke Tomizawa), Katsuyoshi Koh, Masahiro Hirayama, Takako Miyamura, Michiki Hatanaka, Y.Saikawa, Eiichi Ishii: Outcome of Recurrent or Refractory Acute Lymphoblastic Leukemia in Infants With MLL Gene Rearrangements: A Report From the Japan Infant Leukemia Study Group, *Pediatr Blood Cancer*, 52:808–813, 2009.
- 0380B004 T.Nakamura, T.Arai, H.Kitano, K.Ohta, S.Sakazume, T.Kanaya, S.Hirabuki, H.Ueno, M.Kubo, A.Yachie, M.Inoue, Y.Saikawa: Current Management of Prenatally Diagnosed Congenital Heart Disease in Ishikawa Prefecture, *Hokuriku Japanese Journal of Public Health.*, 35(2):, 2009 (in Japanese) .
- 0380B005 T.Akai, K.Torigoe, J.Yamamoto, S.Siraga, K.Yamamoto, H.Iizuka, S.Kawakami, Y.Saikawa: Are we too slow in diagnosing and operating for craniosynostosis?, *Nervous system in children.*, 34:380–384, 2009 (in Japanese) .
- 0380B006 Y.Hayashi, T.Nakamura, M.Oguri, C.Akita, C.Kitaoka, H.Sato, T.Nakamura, Y.Saikawa: The Association of Allergy in Kawasaki Disease, *Progress in Medicine*, 29:1655–1658, 2009 (in Japanese) .
- 0380B007 T.Kito, T.Nakamura, Y.Hayashi, T.Nakamura, T.Maruoka, Y.Saikawa: Antipyretic analysis of Mao-to for treatment of type A influenza infection in children, *Japanese journal of pediatrics.*, 62:2213–2217, 2009 (in Japanese) .
- 0380B008 M.Ito, N.Okada, A.Yamamoto, H.Takahashi, Y.Saikawa: Analyses of New Outpatients who had a Chief Complaint of Short Stature in a Single Institution and the Significance of Medical Screening for Short Stature, *Hokuriku Japanese Journal of Public Health.*, 36:6–9, 2009 (in Japanese) .
- 0380B009 (A.Yachie), M.Mayumi, Y.Adachi, T.Nakamura: Analytical evaluation of current medical practice for childhood bronchial asthma in hokuriku district based on questionnaires to the parents, *Jpn. j. pediatr. allergy clin. immunol.*, 23:103–112, 2009 (in Japanese) .
- 0380B010 T.Nakamura, M.Nakagawa, M.Hiramatsu, T.Kito, Y.Matsue, Y.Hayashi, T.Nakamura, Y.Saikawa: A questionnaire survey for food allergy in hospital diet, *Jpn. j. pediatr. allergy clin. immunol.*, 23:659–664, 2009 (in Japanese) .

#### Case Reports

- 0380D001 (K.Watanabe), K.Uese, O.Higuchi, T.Futatani, N.Yoshimura, T.Nakamura, F.Ichida: Three-Dimensional Computed Tomographic Findings of Bilateral Tracheal Bronchus, *Pediatr. Cardiol.*, 30:87–88, 2009.
- 0380D002 (K.Tamura), H.Kaneda, M.Miura, T.Horisawa, Y.Saikawa: Langerhans cell histiocytosis of the thoracic spine in a child:a case report, *Japanese Journal of Pediatric Oncology.*, 46:207–211, 2009 (in Japanese) .

#### Presentations at Conference

##### International Conference (Presentations)

- 0380I001 T.Nakamura: B-type natriuretic peptide as a marker of latent left ventricular impairment in pediatric patients with bronchial asthma,, 5TH WORLD CONGRESS of paediatric Cardiology and Cardiac Surgery,, (Australia, '09.06).
- 0380I002 T.Akai, K.Okamoto, S.Siraga, K.Yamamoto, T.Iida, O.Tachibana, H.Iizuka: Intraparenchyma tumor biopsy by neuroendoscope under navigation, 9th International conference on cerebrovascular surgery, (Nagoya, '09.11).

## 0390 Department of Neuropsychiatry

### Faculty

Title	Name	Field of Specialization
	JIBIKI Itsuki	Schizophrenia, Epilepsy, Brain imaging, Psychopharmacology, Senile Dementia, Senile Psychosis
	KUBOTA Takashi	Schizophrenia, Psychopharmacology, Epilepsy
	IWASAKI Shinzo	Psycho Physiology, Neuropsychology, Brain Imaging
	WATANABE Kenichiro	Neuropsychology, Neuropharmacology
	KITAMOTO Fukumi	Psychotherapy, Clinical Psychology
	KOIZUMI Hazuki	Clinical Psychology, Cognitive-behavioral therapy
	NANNO Hisatoshi	Schizophrenia
	HIROYASU Kiwamu	Molecular Psychiatry, Schizophrenia, Epilepsy
	KOSEKI Youju	Brain imaging
	MONKAWA Tomomi	Psychopharmacology, Neuropsychology
	SHIMIZU Satoru	Brain imaging
	MASUDA Shinji	Schizophrenia
	MONKAWA Akikazu	Brain imaging, Schizophrenia

### Keywords of Research

aged patients, age of onset, agrammatism, amitriptyline, amnesic syndrome, amnesia, amnesias, amoxapline, an interdict, anorexia nervosa, anxiety, aphasic subtypes, apperceptive and associative forms, associated societies, astrocytoma, attention deficit hyperactivity disorder(ADHD), acute reactive psychosis, aging

### Outline of Research

1. Study on regional identification of brain language areas by functional MRI—application for surgical therapy of epilepsy
2. Study on action mechanisms of antipsychotic drugs by regional cerebral blood flow measurement using SPECT
3. Study on action mechanisms of antipsychotic drugs by neurotransmitter measurement using microdialysis in animal experiments
4. Neuropsychological study on dementia or disturbance of high neuronal function such as aphasia
5. Clinical study on psychiatric disturbance in epilepsy
6. Study on cognitive-behavioural therapy for obsessive compulsive disorder
7. Study on music therapy for dementia

### Publications

#### Originals

- 0390B001 (Y.Sugiura), F.Nakatsu, K.Hiroyasu, A.Ishii, S.Hirose, M.Okada, I.Jibiki, H.Ohno, S.Kaneko, Y.Ugawa: Lack of potassium current in W309R mutant KCNQ3 channel causing benign familial neonatal convulsions(BFNC), *Epilepsy Res.*, 84:82-5, 2009.
- 0390B003 Y.Koseki: Study on cerebral activation areas during repetition with functional MRI in normal adults, *J. Kanazawa Med. Univ.*, 34:114-123, 2009 (in Japanese) .

0390B004 (H.Nakagawa), S.Iwasaki, H.Nanno, T.Nakada, M.Nagai, K.Watanabe: Long-term follow-up of a patient with endogenous juvenile-asthenic insufficiency syndrome: An attempt at disease grading and therapeutic approaches, Japanese Journal of Clinical Psychiatry., 38:1759-1768, 2009 (in Japanese) .

**Others**

0390F001 (K.Maruyama), K.Nakamura, M.Nashimoto, F.Kitamoto, M.Oyama, Y.Tsuchiya, M.Yamamoto: Bone fracture in physically disabled children attending schools for handicapped children in Japan, Environ. Health Perspect., 21:50, 2009.



## 0400 Department of Diagnostic and Therapeutic Radiology

### Faculty

Title	Name	Field of Specialization
	TONAMI Hisao	Head and Neck Radiology, MRI Diagnosis
	WATANABE Naoto	Nuclear Medicine.
	MATOBATA Munetaka	Interventional Radiology, Diagnostic Imaging
	YOKOTA Hajime	Gastrointestinal Radiology, MR Spectroscopy
	TANIGUCHI Mitsuru	Cardiac Nuclear Medicine
(Additional Post)	KUGINUKI Yasuaki	Diagnostic Imaging
	KONDO Tamaki	Diagnostic Imaging.
(Additional Post)	OTA Kiyotaka	Radiation Therapy
	TAKAHASHI Tomoko	Nuclear Medicine, Diagnostic Imaging.
	KITADATE Masataka	Diagnostic Imaging,
	DOAI Mariko	Diagnostic Imaging,
	TOYOTA Ichiro	Diagnostic Imaging,

### Keywords of Research

MRI, MRS, CT, US, IVR, radiotherapy, RI, PET, BAI, lung cancer, perfusion, diffusion, FDG, MTC, radiosurgery, brachytherapy, PEI, Sjögren, radiation, MRA, MRCP, color doppler, bone mineral, biopsy, RN, upper GI, TAE, metallic stent, contrast medium

### Outline of Research

1. Assessment of Tumor Microperfusion and Therapeutic Effect Influencing by Radiotherapy, Chemotherapy and Transarterial Embolization using MD-CT, MRI and MRS.
2. Assessment of Tumor Proliferative Potential and Malignant Grade using MRS, SPECT and PET.
3. Biological Study of Radiation Injury of Tumor and Normal Tissue after Stereotactic Radiosurgery by 3-D Radiotherapy Planning System.
4. Study of Inhibiting Neointimal Proliferation after Angioplasty by <sup>192</sup>Ir Intraarterial Irradiation.

### Publications

#### Originals

- 0400B001 M. Matoba, M. Kitadate, T. Kondo, H. Yokota, H. Tonami: Depiction of hypervascular hepatocellular carcinoma with 64-MDCT: comparison of moderate- and high-concentration contrast material with and without saline flush, *AJR Am J Roentgenol*, 193:738-744, 2009.
- 0400B002 K. Higashi, T. Sakuma, K. Ito, S. Niho, Y. Ueda, T. Kobayashi, R. Sekiguchi, T. Takahashi, T. Kato, H. Tonami: Combined evaluation of preoperative FDG uptake on PET, ground-glass opacity area on CT, and serum CEA level: identification of both low and high risk of recurrence in patients with resected T1 lung adenocarcinoma, *Eur. J. Nucl. Med. Mol. Imaging*, 36:373-381, 2009.
- 0400B003 M. Sagawa, K. Higashi, K. Usuda, H. Aikawa, Y. Machida, M. Tanaka, M. Ueno, T. Sakuma: Curative wedge resection for non-invasive bronchioloalveolar carcinoma, *Tohoku J. Exp. Med.*, 217:133-137, 2009.

## Presentations at Conference

### International Conference (Presentations)

- 0400I001 T.Kondo, M.Kitadate, M.Matoba, H.Yokota, H.Tonami: Experimental study on the evaluation of early therapeutic effect after irradiation using high-resolution MRI and <sup>1</sup>H-MRS, European Society for Magnetic Resonance in Medicine and Biology(ESMRMB), (Turkey, '09.10).
- 0400I002 H.Yokota, M.Doai, M.Matoba, H.Tonami, Y.Nagao: In vitro proton MR spectroscopy for evaluation of human bronchioalveolar carcinoma and lung adenocarcinoma, European Society for Magnetic Resonance in Medicine and Biology(ESMRMB), (Turkey, '09.10).

## 0410 Department of Cardiovascular Surgery

### Faculty

Title	Name	Field of Specialization
	AKITA Toshiaki	Cardiovascular surgery
	SHIKATA Hiroo	Vascular surgery
	HIDA Kenji	Vascular surgery
	NAGAYOSHI Yasuhiro	Cardiovascular surgery
	KOBATA Takashi	Vascular surgery
(Additional Post)	KANNO Masaaki	Cardiovascular surgery
	NISHIZAWA Hisateru	Cardiovascular surgery
	YOKOTE Jun	cardiovascular surgery
	NONAKA Toshimichi	Cardiovascular surgery
	KIYOSAWA Jun	Cardiovascular surgery
	NOGUCHI Yasuhisa	Cardiovascular surgery
	MIZUNO Fumito	Cardiovascular surgery
	MIKAMI Naofusa	cardiovascular surgery

### Keywords of Research

Cardiac surgery, vascular surgery, respiratory surgery, pacemaker implantation, Arrhythmia surgery, ventricular assist device, arteriosclerosis obliterans, thromboangitis obliterans, valvular surgery, coronary bypass surgery, surgery for congestive heart failure, artificial vascular graft, endovascular stent grafting, respiratory surgery, lung cancer

### Outline of Research

- 1.Elucidation of different mechanism for ischemia-reperfusion injury of immature and mature heart; Development of cardioplegia specific for neonate cardiac surgery.
- 2.Development of tailor-made cardiac reshaping net for heart failure patients
- 3.Endovascular stent-grafting for aortic aneurysm
- 4.Minimally invasive catheter ablation for varicose vein

### Presentations at Conference

#### International Conference (Presentations)

- 0410I001 T.Kobata, F.Mizuno, N.Mikami, J.Kiyosawa, Y.Noguchi, J.Yokote, Y.Nagayoshi, K.Hida, H.Shikata, T.Akita: A case with abdominal aortic aneurysm complicated by renal dysfunction in whom an endovascular aneurysm repair was implanted successfully using carbon dioxide angiography, The 10th Annual Congress of Asian Society for Vascular Surgery, (Busan, '09.10).
- 0410I002 J.Yokote, T.Kobata, N.Mikami, F.Mizuno, Y.Noguchi, J.Kiyosawa, Y.Nagayoshi, K.Hida, H.Shikata, T.Akita: A case of thoracic endovascular aneurysm repair with extra-anatomical bypass, The 10th Annual Congress of Asian Society for Vascular Surgery, (Busan, '09.10).

## 0420 Department of Surgical Oncology

### Faculty

Title	Name	Field of Specialization
	KOSAKA Takeo	Surgical treatment of gastric cancer
	NOGUCHI Masakuni	Surgery of breast cancer
	SAITO Hitoshi	Surgical treatment of hepatobiliary and pancreatic disease
	NAKANO Yasuharu	Surgery of breast cancer
	UEDA Nobuhiko	Surgical treatment of hepatobiliary and pancreatic disease
	OMOTE Kazuhiko	Surgical treatment of gastric cancer
	KINAMI Shinichi	Surgical treatment of gastric cancer
	YOSHITANI Shinichiro	Surgery of colorectal cancer
	TANAKA Yumiko	Surgery of colorectal cancer
	FUNAKI Hiroshi	Surgical treatment of gastric cancer
	HASEGAWA Taisuke	Surgery of hepatobiliary diseases
	YOKOI Miki	Surgery of breast cancer
	KURODA Masatoshi	Surgery of colorectal cancer
	HOSOKAWA Kenzo	Surgery of digestive diseases

### Keywords of Research

pancreato-biliary cancer, pattern of tumor invasion, laparoscopic surgery, safe and secure procedure, establishment of the laparoscopic surgery, laparoscopic surgery for malignant disease, surgical procedure, generalization and standardization, functional preserving operation, education and training, engineering and robotics

### Outline of Research

- A treatment strategy for advanced pancreato-biliary cancer, based on the pattern of tumor invasion
- Investigation concerning laparoscopic surgical procedure for safe and secure operation, and its establishment.
- Study of generalization and standardization for laparoscopic surgery in the gastrointestinal disease.
- Study of safeness in the laparoscopic surgery for malignant disease and functional preserving laparoscopic operation.
- Study on the education and training for laparoscopic surgery.
- Introduction of the recently evolving engineering and robotics to laparoscopic surgery.

### Publications

#### Originals

- 0420B001 Shin-ichiro Yoshitani, Shigeki Takashima: Efficacy of postoperative UFT (Tegafur /Uracil) plus PSK therapies in elderly patients with resected colorectal cancer, *Cancer Biother. Radiopharm.*, 24:35-39, 2009.
- 0420B002 Masakuni Noguchi, Masashi Inokuchi, Yo Zen: Complement of peritumoral and subareolar injection in breast cancer sentinel lymph node biopsy, *J. Surg. Oncol.*, 100:100-105, 2009.

## Reviews

- 0420C001 S.Kinami, T.Fujimura, S.Fushida, K.Oyama, H.Fujita, I.Ninomiya, T.Ohta: Gastric ESD with transnasal endoscope assistance : An excellent application of the transnasal slim scope, *Endoscopia Digestiva*, 21:115-120, 2009 (in Japanese) .
- 0420C002 M.Noguchi, M.Yokoi, Y.Nakano: Axillary reverse mapping for breast cancer, *J. Kanazawa. Med. Univ.*, 34:10-13, 2009 (in Japanese) .

## Case Reports

- 0420D001 T.Fukuyama, H.Kawahara, M.Yamada, N.Hayashi, H.Yano, M.Fukura, K.Ozaki, M.Tsuchishima, S.Takase, T.Arisawa, K.Omote, T.Nojima: A case of IL-6 producing malignant mesothelioma of abdomen with thrombocytosis, *jpn. j. gastroenterol.*, 109:546-553, 2009 (in Japanese) .
- 0420D002 S.Yoshitani, K.Hosokawa, M.Yokoi, S.Kinami, K.Omote, N.Ueda, Y.Nakano, T.Kosaka: A case of anal canal carcinoma with systemic lymph node metastases successfully treated by bevacizumab + mFOLFOX6 therapy, *Cancer & chemotherapy.*, 36:2229-2231, 2009 (in Japanese) .
- 0420D003 M.Yokoi, K.Hosokawa, H.Funaki, S.Yoshitani, S.Kinami, K.Omote, N.Ueda, Y.Nakano, T.Kosaka, H.Minato: A case of retroperitoneal dedifferentiated liposarcoma successfully treated with IFM and CDDP, *Cancer & chemotherapy.*, 36:2114-2116, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Presentations)

- 0420I001 S.Kinami, K.Hosokawa, M.Yokoi, H.Funaki, S.Yoshitani, K.Omote, N.Ueda, Y.Nakano, T.Kosaka, K.Oyama, S.Fushida, T.Fujimura, T.Ohta: Double tract with aboral pouch reconstruction (DTAP) after total gastrectomy, 8th International gastric cancer congress, (Kracow, '09.06).
- 0420I002 K.Hosokawa, S.Kinami, T.Kosaka: Possibility of minimized gastrectomy with selective lymphadenectomy for small T2 advanced gastric cancer, 8th International gastric cancer congress, (Kracow, '09.06).
- 0420I003 K.Omote, S.Kinami, H.Imaizumi, K.Hosokawa, M.Yokoi, M.Ooba, H.Funaki, S.Yoshitani, N.Ueda, Y.Nakano, T.Kosaka: Laparoscopic surgery for early gastric cancer - experience in our institute -, 11th World congress on gastrointestinal cancer, (Barcelona, '09.06).
- 0420I004 S.Yoshitani, M.Yokoi, K.Omote, T.Kosaka: Postoperative adjuvant immunochemotherapy using PSK in combination for colorectal cancer in the elderly, 11th World congress on gastrointestinal cancer, (Barcelona, '09.06).
- 0420I005 M.Yokoi, K.Hosokawa, H.Funaki, S.Yoshitani, K.Omote, S.Kinami, N.Ueda, Y.Nakano, T.Kosaka: Evaluation of peritoneal cytology for colorectal cancer, 11th World congress on gastrointestinal cancer, (Barcelona, '09.06).

## 0430 Department of Orthopedics Surgery

### Faculty

Title	Name	Field of Specialization
	MATSUMOTO Tadami	Hip surgery
(Additional Post)	OKADA Masato	Peripheral nerve surgery, Trauma
	FUJITA Takuya	Spinal surgery
	KANEUJI Ayumi	Hip and Knee surgery, Sports medicine
	OKUDA Tetsuhito	Spinal surgery
	SUGIMORI Tanzo	Hip and Knee surgery, Sports medicine
	MAEOKA Hayato	Trauma
	ICHISEKI Toru	Hip surgery
	HOSOKAWA Hidetaka	Spinal surgery
	HATANO Eiju	Spinal surgery
	MIAKI Kohei	Hip surgery
	HIROMURA Kentaro	Trauma
	FUKUI Kiyokazu	Hip surgery
	YASUDA Yoshihito	Spinal surgery
	KITAMURA Kenji	Hip surgery
	TAKADA Naruki	Trauma
	TOMIDOKORO Jun	Hip Surgery

### Keywords of Research

herniated nucleus pulposus, spondylosis, spondylolysis, spondylolisthesis, degenerative spondylolisthesis, giant cell tumor, coxarthrosis, gonarthrosis, carpal tunnel syndrome, acromioclavicular dislocation, gonarthrosis purulenta, nerve graft, patellar tendon rupture, rheumatoid arthritis, benign chondroblastoma, patella subluxation syndrome, posterior lumbar interbody fusion, osteotomy, lumbar disc decompression, hallux valgus, synovectomy, total hip arthroplasty, tendon suture, humeral shaft fracture, osteonecrosis

### Outline of Research

There are three types of proximal femur in Japanese hip osteoarthritis patients and we are developing a new femoral prosthesis that would be more suitable for the Japanese patient using a computer aided design system. Additionally we are researching some factors such as an intravascular obstructive lesion or oxidative stress that would be cause for steroid induced osteonecrosis of femoral head to prevent the occurrence of the disease.

Furthermore, we have been trying to elucidate the mechanism of degeneration of lumbar disc. It has been reported that apoptosis of vertebral disc cells occurs in the degenerative intervertebral disc. However, its molecular mechanism remains to be defined. The gene expression of Bax and Bcl-2 was analyzed in degenerative intervertebral disc. As a result, mechanical stress of the disc induces apoptosis through a Bax, reducing the number of cells and the synthesis of extracellular matrix proteins and resulting in the degeneration of the disc.

## Publications

### Originals

- 0430B001 A.Kaneuji, T.Sugimori, T.Ichiseki, K.Yamada, K.Fukui, T.Matsumoto: Minimum ten-year results of a porous acetabular component for Crowe I to III hip dysplasia using an elevated hip center., *J. Arthroplasty.*, 24:187-194, 2009.
- 0430B002 A.Kaneuji, K.Yamada, K.Hirosaki, M.Takano, T.Matsumoto: Stem subsidence of polished and rough double taper stems. In vitro mechanical effects on the cement-bone interface, *Acta Orthop.*, 80:270-276, 2009.
- 0430B003 (K.Kawanabe), K.Ise, K.Goto, H.Akiyama, T.Nakamura, A.Kaneuji, T.Sugimori, T.Matsumoto: A new cementless total hip arthroplasty with bioactive titanium porous-coating by alkaline and heat treatment: average 4.8-year results., *J. Biomed. Mater. Res. Part B Appl. Biomater.*, 90:476-481, 2009.
- 0430B007 (K.Shintani), H.Kawano, A.Kaneuji: A fundamental study of UHMWPE line improvement that has impact cushion ability, *Japanese Journal of Clinical Biomechanics.*, 30:269-276, 2009 (in Japanese) .
- 0430B008 (K.Hirosaki), K.Shintani, A.Kaneuji: Improvement of the canal fill ratio of custom-made artificial femoral stem. - Geometrical design using a circular insert axis based on the proximal canal morphology-, *Japanese Journal of Clinical Biomechanics.*, 30:277-286, 2009 (in Japanese) .
- 0430B015 T.Mikami: Prophylactic effect of antioxidant vitamins against osteonecrosis after steroid administration in a rabbit model, *J. Kanazawa. Med. Univ.*, 34:87-92, 2009 (in Japanese) .
- 0430B016 S.Nakagawa: Rat osteonecrosis model created through single application of an oxidative stress inducer, *J. Kanazawa. Med. Univ.*, 34:107-113, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Presentations)

- 0430I001 A.Kaneuji, T.Sugimori, T.Ichiseki, K.Fukui, J.Tomidokoro, K.Kitamura, T.Matsumoto: Stem subsidence of polished and rough double taper stems and its mechanical effect on the cement, 76th Annual Meeting of American Academy of Orthopaedic Surgeons (AAOS 2009), (Las Vegas, '09.02).
- 0430I002 T.Okuda, T.Fujita, H.Hosokawa, T.Matsumoto: Clinical outcome of lumbar disc herniation in young patients up to 25 years of age, The International Society for the Study of the Lumbar Spine (ISSLS 2009), (Miami, '09.05).
- 0430I003 K.Fukui, A.Kaneuji, T.Sugimori, T.Ichiseki, K.Kitamura, T.Matsumoto: Phase transformation and surface roughness of retrieval new generation yttria-stabilized zirconia femoral heads after total hip arthroplasty, The 22nd Annual Congress of the International Society for Technology in Arthroplasty (ISTA 2009), (Hawaii, '09.10).
- 0430I004 K.Kitamura, A.Kaneuji, T.Sugimori, T.Ichiseki, K.Fukui, T.Matsumoto: Changes of bone mineral density after cementless total hip arthroplasty with different types of proximal femoral canal, The 22nd Annual Congress of the International Society for Technology in Arthroplasty (ISTA 2009), (Hawaii, '09.10).
- 0430I005 T.Okuda, T.Fujita, A.Kaneuji, E.Hatano, T.Ichiseki, Y.Yasuda, T.Matsumoto: Incidence of spondylolysis, spondylolisthesis and degenerative scoliosis of the lumbar spine in patients with osteoarthritis of the hip, Societe Internationale de Chirurgie Orthopedique et de Traumatologie (Sixth SICOT), (Pattaya, '09.10).
- 0430I006 T.Okuda, T.Fujita, H.Hosokawa, E.Hatano, Y.Yasuda, T.Matsumoto: Clinical outcome of lumbar disc herniation in young patients (up to 25 years of age), Societe Internationale de Chirurgie Orthopedique et de Traumatologie (Sixth SICOT), (Pattaya, '09.10).
- 0430I007 T.Ichiseki, A.Kaneuji, T.Sugimori, K.Fukui, K.Kitamura, T.Mikami, S.Nakagawa, T.Matsumoto: Prophylactic effect of antioxidant vitamins against osteonecrosis after steroid administration in a rabbit model, Association Research Circulation Osseous 15th International Symposium on Bone Circulation (ARCO 2009), (Yokohama, '09.11), ARCO 2009 Program, 50, 2009.

- 0430I008 K.Fukui, A.Kaneuji, T.Sugimori, T.Ichiseki, K.Kitamura, R.Kominami, H.Shinohara, T.Matsumoto: Glucocorticoid induces micro-fat embolism in the rabbit: a scanning electron microscopic study, Association Research Circulation Osseous 15th International Symposium on Bone Circulation (ARCO 2009), (Yokohama, '09.11), ARCO 2009 Program, 47, 2009.
- 0430I009 K.Kitamura, T.Ichiseki, A.Kaneuji, K.Fukui, T.Matsumoto: Prevention of steroid-induced osteonecrosis by glutathione in rabbit models, Association Research Circulation Osseous 15th International Symposium on Bone Circulation (ARCO 2009), (Yokohama, '09.11), ARCO 2009 Program, 49, 2009.



## 0440 Department of Neurosurgery

### Faculty

Title	Name	Field of Specialization
	IIZUKA Hideaki	spinal disease, brain tumor, peripheral nerve disease
	TACHIBANA Osamu	brain tumor, hypothalamic and pituitary tumor
	AKAI Takuya	brain tumor, pediatric neurosurgical disease
	TAKADA Hisashi	cerebrovascular disease, head injury, interventional neurosurgery
	IIDA Takaaki	spinal disease, peripheral nerve disease
	OKAMOTO Kazuya	brain tumor, stereotactic radiosurgery
	SASAGAWA Yasuo	brain tumor
	SIRAGA Syunsuke	general neurosurgery
	YAMAMOTO Kenji	general neurosurgery
	YAMAMOTO Jiro	general neurosurgery
	TORIGOE Keiichiro	general neurosurgery
	SAKAI Sotaro	general neurosurgery

### Keywords of Research

brain neoplasm, glioma, meningioma, neurinoma, skull base tumor, subarachnoid hemorrhage, cerebral aneurysm, arteriovenous malformation, stroke, radiosurgery, endovascular therapy, microvascular decompression, skull base surgery, spinal surgery, spinal fusion, atlantoaxial dislocation, cervical spondylosis, ossification of the spinal ligament, syringomyelia, spinal dysraphism, spinal neoplasm, spinal injury, neural injury, experimental spinal injury, spinal cord compression, cerebral ischemia

### Outline of Research

The purpose of research is to regenerate the damaged neurological function by disclosing the pathogenesis of brain, spinal cord and peripheral nerve diseases. The goal of research is to contribute to improve patient prognosis. For the purpose, the researchers have to find out problems based on their clinical view points and solve those questions. The subjects of disease are brain tumors, spinal diseases, cerebrovascular diseases, head injuries and congenital anomalies.

#### 1. Brain tumor

- 1) development of tumor differentiation induction therapy for malignant gliomas
- 2) disclose the poor prognosis factors in malignant gliomas (by genetic sub classification and protein expression study)
- 3) prediction of treatment results in the stereotactic radiosurgery against metastatic brain tumors ( by genetic classification and protein expression study)
- 4) radiological diagnosis of cystic pituitary tumors
- 5) disclose the pathogenesis of secondary hypophysitis

#### 2. Spine and spinal cord disease

- 1) disclose the cord degeneration mechanism by spinal cord compression model
- 2) long term treatment results and affecting factors in spinal surgery

#### 3. Cerebrovascular disease

- 1) disclose the molecular biological mechanism for acquisition of cerebral ischemia

#### 4. Head injury

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1) operation methods and recurrence in chronic subdural hematoma

5. Congenital anomaly

1) treatment of hydrocephalus in fetus model

2) disclose the responsible gene and surgical treatment for craniosynostosis

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## Publications

### Originals

- 0440B001 (Y.Hirota), O.Tachibana, N.Uchiyama, Y.Hayashi, M.Nakada, D.Kita, T.Watanabe, R.Higashi, J.Hamada, Y.Hayashi: Gonadotropin-releasing hormone(GnRH)and its receptor in human meningiomas, Clin. Neurol. Neurosurg., 111:127-133, 2009.
- 0440B002 T.Akai, K.Torigoe, J.Yamamoto, S.Siraga, K.Yamamoto, H.Iizuka, S.Kawakami, Y.Saikawa: Are we too slow in diagnosing and operating for craniosynostosis?, Nervous system in children., 34:380-384, 2009 (in Japanese) .

### Case Reports

- 0440D001 Y.Sasagawa, T.Akai, K.Yamamoto, T.Masuoka, S.Itou, M.Oohashi, H.Iizuka: Multiple cavernous hemangiomas of the skull associated with hepatic lesions -case report-, Neurol. Med. Chir. (Tokyo), 49:162-166, 2009.
- 0440D002 Y.Sasagawa, T.Akai, S.Itou, H.Iizuka: Gamma knife radiosurgery-induced cavernous hemangioma -case report-, Neurosurgery, 64:1006-1007, 2009.
- 0440D003 K.Okamoto, O.Tachibana, K.Torigoe, T.Akai, H.Iizuka: Initial experience of stereotactic radiotherapy for carniopharyngioma, Stereotactic Radiotherapy., 13:39-45, 2009 (in Japanese) .

### Others

- 0440F003 T.Akai: Book & journal review -on the changing epidemiology of hydrocephalus-, Nervous system in children., 34:348-349, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Presentations)

- 0440I001 O.Tachibana, Y.Sasagawa, K.Torigoe, K.Yamamoto, S.Siraga, K.Okamoto, T.Iida, T.Akai, H.Iizuka, A.Nakagawa, D.Koya: Expression of interleukin-1beta,interleukin-6, interleukin-12 and TNF alpha in human rathke cleft cysts - A possible inducer of secondary hypophysitisassociated with rathke cleft cyst-, The 11th International Pituitary Pathology Society(IPPS)Meeting, (Tokushima, '09.10).
- 0440I002 T.Akai, K.Okamoto, S.Siraga, K.Yamamoto, T.Iida, O.Tachibana, H.Iizuka: Intraparenchyma tumor biopsy by neuroendoscope under navigation, 9th International conference on cerebrovascular surgery, (Nagoya, '09.11).

## 0450 Department of Plastic and Reconstructive Surgery

### Faculty

Title	Name	Field of Specialization
	KAWAKAMI Shigehiko	Plastic and Reconstructive Surgery
	SHIMADA Kenichi	Plastic and Reconstructive Surgery
	MORITA Reiji	Plastic and Reconstructive Surgery
	KISHIBE Miyuki	Plastic and Reconstructive Surgery
	YAMAMOTO Yasunori	Plastic and Reconstructive Surgery
	YAMASHITA Masanobu	Plastic and Reconstructive Surgery
	NISHIBU Yasuhiro	Plastic and Reconstructive Surgery
	HIMI Yuji	Plastic and Reconstructive Surgery
	HARASHIMA Youto	Plastic and Reconstructive Surgery
	NISHIO Akiko	Plastic and Reconstructive Surgery
	MIYASHITA Matsuki	Plastic and Reconstructive Surgery
	OKAMURA Ai	Plastic and Reconstructive Surgery
	NAKAMURA Namiki	Plastic and Reconstructive Surgery
	TAGUCHI Rie	Plastic and Reconstructive Surgery
	DAIZO Haruhisa	Plastic and Reconstructive Surgery
	MIYANAGA Toru	Plastic and Reconstructive Surgery

### Keywords of Research

fibroblasts, FGF receptor, pressure ulcer, TGF- $\beta$ , TGF- $\beta$  receptor, keratinocytes, wound healing, craniofacial surgery, zygoma, cleft lip, cleft palate, microtia, tissue expansion, craniofacial cleft, orbital advancement, microsurgery, free flap, medialis pedis flap, adipofascial turnover flap, burn reconstruction, burn wound management, MRI in congenital anomaly

### Outline of Research

- 1) Wound healing  
Promoting effects of wound dressings or drugs in wound healing process are studied clinically.
- 2) Tissue engineering  
Regeneration of the skin and subcutaneous tissue using artificial materials are studied clinically and experimentally
- 3) Cranio-maxillo-facial surgery  
New operative procedures in cranio-maxillo-facial fields are attempted to develop.

## Publications

### Originals

- 0450B001 N.Koizumi, T.Miyanaga, S.Kawakami, M.Shimasaki, Y.Ueda: Proliferative and differentiative effects of basic fibroblast growth factor(bFGF) on perichondium of rabbit's ear, *Skin research.*, Special edition. 11:14-20, 2009 (in Japanese) .
- 0450B002 A.Komuro, M.Kishibe, Y.Yamamoto, S.Kawakami: Treatment for second-degree burn wounds using trafermin (Fiblast<sup>®</sup> Spray), *Japanese journal of burn injuries.*, 35:27-39, 2009 (in Japanese) .
- 0450B003 T.Akai, K.Torigoe, J.Yamamoto, S.Siraga, K.Yamamoto, H.Iizuka, S.Kawakami, Y.Saikawa: Are we too slow in diagnosing and operating for craniosynostosis?, *Nervous system in children.*, 34:380-384, 2009 (in Japanese) .

### Case Reports

- 0450D002 R.Saurai, K.Shimada, S.Kawakami, M.Yamamoto: A case of gas gangrene following burn injury, *Japanese journal of burn injuries.*, 35:46-51, 2009 (in Japanese) .

## 0460 Department of Pediatric Surgery

### Faculty

Title	Name	Field of Specialization
	IKAWA Hiromichi	Pediatric surgery, Defecatory function, Liver transplantation
	KOHNO Miyuki	Pediatric surgery, Pediatric endoscopic surgery, Pediatric urology
	MASUYAMA Hiroaki	Pediatric surgery, Liver transplantation
	FUKUMOTO Hironori	Pediatric surgery
	KUWAHARA Tsuyoshi	Pediatric surgery
	OSHIKIRI Takahiro	Pediatric surgery
	TAKAHASHI Sadayoshi	Pediatric surgery

### Keywords of Research

inguinal hernia, hydrocele of the cord, acute abdomen, quality of life, endoscopy, congestive gastroenteropathy, biliary atresia, epidemiology, spontaneous cure, prevalence, neonatal surgery, vesicoureteral reflux, urostoma, intravenous hyperalimentation, hydrocele testis, cryptorchism, appendicitis, anorectal malformation, endoscopic surgery, gastroesophageal reflux, liver transplantation, pediatric surgical common disease, natural history, pediatric solid malignant tumor, pediatric urology, phimosis, intestinal stoma

### Outline of Research

Hemodynamic evaluation of PDA flow to decide the optimal timing for radical operation of congenital diaphragmatic hernia.  
The importance of rectal branch to induce high amplitude propagated colonic contraction.  
Clinical study of pediatric endoscopic surgery.  
Histochemical study of extracellular matrices which accelerate the hepatic fibrosis of biliary atresia.

### Publications

#### Originals

- 0460B001 M.Kohno, H.Ikawa, K.Konuma, H.Masuyama, H.Fukumoto, E.Ogawa, Takahiro Oshikiri, S.Takahashi: Comparison of the postoperative bowel function between transanal endorectal pull-through and transabdominal pull-through for Hirschsprung's disease: a study of the feces excretion function using an RI-defecogram, *Pediatr. Surg. Int.*, 25:949-954, 2009.
- 0460B002 (S.Okamoto), H.Ikawa, H.Fukumoto, H.Masuyama, K.Konuma, M.Kohno, T.Nakamura, H.Takahashi: Patent ductus arteriosus flow patterns in the treatment of congenital diaphragmatic hernia, *Pediatr. Int.*, 51:555-558, 2009.

## 0470 Department of Ophthalmology

### Faculty

Title	Name	Field of Specialization
(Additional Post)	SASAKI Hiroshi	cataract, epidemiology, uveitis.
	KITAGAWA Kazuko	ocular infection, Sjogren's syndrome, keratoconjunctivitis sicca, lacrimal fluid, proteomics.
	KOJIMA Masami	cataract, ophthalmological optics, electromagnetic ocular injury, epidemiology.
	FUKUDA Masamichi	ocular pharmacology, intraocular, penetration.
	NAGAI Kouta	cataract, epidemiology,
	KAWAKAMI Yutaka	cataract, thyroid ocular.
	FUJITA Nobuyuki	uveitis
	YAGUCHI Hiromoto	corneal epithelium, glaucoma.
	HAGIWARA Kenta	ocular infection
	INAGAKI Shinsuke	ocular infection
	OSADA Hiromi	cataract, ophthalmology
	SHIBATA Naoko	cataract, ophthalmology
	HATSUSAKA Natsuko	ophthalmological optics

### Keywords of Research

proteomics, cataract classification, corneal epithelium, crystallin lens, dry eye, glaucoma, image analysis, lens sectioning technique, melanin, ocular toxicology, Scheimpflug photography, tear secretion, UV-B, UV-induced ocular disease, UV-dosimetry, lens organ culture, age related cataract, cataract epidemiology, cytotoxicity, fluoroquinolone, herpetic keratitis, intraocular drug dynamics, lens epithelium, light scattering, retroillumination image, Sjogren's syndrome, threedimensional image, V-E, intraocular lens(IOL), cell culture

### Outline of Research

There are five major themes for research in our department including: 1) ophthalmic epidemiology, 2) clinical research for crystalline lens and intraocular lens (IOL), 3) basic research of cataract, 4) clinical research for keratoconjunctival diseases and 5) ophthalmic pharmacology. Concerning 1), we have performed epidemiological studies in climatically different places (Ishikawa and Kagoshima, Japan, Singapore, Iceland and China). These studies have included prevalence, incidence and risk factors of cataract, pterygium, high myopia, glaucoma and age-related macular degeneration. For 2), we have worked on image analysis of the crystalline lens, drew up a new classification system for cataract, and done research on visual performance in cataractous eye and IOL. Regarding 3), we have evaluated effects of anti-cataractous drugs using animal models and also investigated the mechanism of posterior capsular opacity (PCO). Development of a preventative drug for PCO is undergoing. Considering 4), a new precise and simple technique for diagnosis of Sjogren's syndrome using proteomics of tears is under development. Clinical research for diagnosis and treatment for ophthalmic infective diseases is also underway. And for 5), ocular dynamics of eye drops, effectiveness and toxicity of eye drops, and a new method for measuring corneal damage in vivo are all being investigated.

## Publications

### Originals

- 0470B001 (A.Arnarsson), KF.Damji, H.Sasaki, T.Sverrinsson, F.Jonasson: Pseudoexfoliation in the Reykjavik eye study: five-year incidence and changes in related ophthalmologic variables, *Am. J. Ophthalmol.*, 148:291-297, 2009.
- 0470B002 K.Sasaki, Y.Yamashiro, M.Kojima, R.Honda, Y.Sakamoto, HM.Cheng, H.Sasaki: Assessment of pinguecula and pterygium in the aging eye with ultraviolet fluorescence photography (UVFP) : Data analysis of eye disease survey in Shanxi, China, *Rehabilitation science : memoirs of the Tohoku Bunka Gakuen University Faculty of Medical Science & Welfare, Department of rehabilitation.*, 5:31-40, 2009.
- 0470B003 M.Kojima, M.Hanazawa, Y.Yamashiro, H.Sasaki, S.Watanabe, M.Taki, Y.Suzuki, A.Hirata, Y.Kamimura, K.Sasaki: Acute ocular injuries caused by 60-GHz millimeter-wave exposure, *Health Phys.*, 97:212-218, 2009.
- 0470B004 M.Fukuda, H.Sasaki: Measurement of AQCmax of five different ophthalmic solutions and discussion of its new application, *J Ocul Pharmacol Ther*, 25:351-355, 2009.
- 0470B005 H.Kawada, M.Kojima, T.Kimura, S.Natori, K.Sasaki, H.Sasaki: Effect of 5-S-GAD on UV-B-Induced cataracts in rats, *Jpn. J. Ophthalmol.*, 53:531-535, 2009.
- 0470B006 (K.A.Sasaki), Y.Osakabe, K.Miyata, S.Amano, M.Yamada, K.Kitagawa, K.Hirano, S.Kinoshita: What is this thing called "amyloidosis"?, *Cornea*, 28:80-83, 2009.
- 0470B007 Y.Masaki, L.Dong, N.Kurose, K.Kitagawa, Y.Morikawa, M.Yamamoto, H.Takahashi, Y.Shinomura, K.Imai, T.Saeki, A.Azumi, S.Nakada, E.Sugiyama, S.Matsui, T.Origuchi, S.Nishiyama, I.Nishimori, T.Nojima, K.Yamada, M.Kawano, Y.Zen, M.Kaneko, K.Miyazaki, K.Tsubota, K.Eguchi, K.Tomoda, T.Sawaki, T.Kawanami, M.Tanaka, T.Fukushima, S.Sugai, H.Umehara: Proposal for a new clinical entity, IgG4-positive multiorgan lymphoproliferative syndrome: analysis of 64 cases of IgG4-related disorders, *Ann. Rheum. Dis.*, 68:1310-1315, 2009.
- 0470B008 H.Sasaki: Observational cohort study : The Reykjavik eye study, *Journal of the eye.*, 26:17-24, 2009 (in Japanese) .
- 0470B009 M.Fukuda, H.Sasaki: Cytotoxic effects of new quinolone antibiotic ophthalmic solutions and nonsteroidal anti-inflammatory ophthalmic solutions on cultured rabbit corneal cell line, *Journal of the eye.*, 26:399-403, 2009 (in Japanese) .
- 0470B010 M.Fukuda, H.Sasaki: Cytotoxic effect of ofloxacin ophthalmic solutions and timolol maleate ophthalmic solutions on cultured rabbit corneal cell line and ocular pharmacokinetics of ophthalmic solutions in rabbits, *Journal of the eye.*, 26:977-981, 2009 (in Japanese) .

### Case Reports

- 0470D001 S.Inagaki, K.Kitagawa, K.Nagai, K.Hagiwara, H.Sasaki: An infant case of acute purulent dacryoadenitis due to MRSA, *Journal of the eye.*, 26:1405-1408, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Presentations)

- 0470I001 J.Qu, H.Sasaki, Y.Sakamoto, E.Shibuya, K.Sasaki: Influence of watercleft on ocular higher order aberrations, *The Association for Research in Vision and Ophthalmology*, (Florida, '09.05).
- 0470I002 M.Fukuda, N.Takahashi, M.Yoshikawa, M.Kojima, Y.Sakamoto, H.Sasaki: Monitoring real time recovery from corneal disorder with a corneal resistance device in vivo, *The Association for Research in Vision and Ophthalmology*, (Florida, '09.05).
- 0470I003 M.Kojima, T.Sakai, Y.Yamashiro, T.Matsuda, S.Watanabe, H.Shirai, K.Sasaki, H.Sasaki: Characteristics of ocular temperature rise under exposure to frequency (18-40 GHz), *BIOEM*, (Davos, '09.06).

- 0470I004 (T.Sakai), M.Kojima, Y.Yamashiro, K.Sasaki, H.Sasaki, S.Watanabe, K.Sato: Development of measurement system for MMW exposure to a rabbit, BIOEM, (Davos, '09.06).
- 0470I005 (T.Taguchi), H.Sitou, S.Kurogi, Y.Suzuki, M.Kojima, T.Sakai, S.Watanabe, H.Sasaki, M.Taki: Visualization of Temperature distribution change due to millimeter-wave exposure with micro-encapsulated thermo-chromic liquid crystal, BIOEM, (Davos, '09.06).
- 0470I006 (PJ.Whitcher), CH.Shiboski, SC.Shiboski, AM.Heidenreich, K.Kitagawa, S.Zhang, J.Zhao, S.Hamann, G.Larkin, N.McNamara, JS.Greenspan, SC.Pflugfelder, TE.Daniels: The clular sicca score (OOS) : A simplified quantitative method for assessing Keratoconjunctivitis sicca (KCS) in patinents enrolled in the Sjogrem's international registry called the Sjogren's international collaborative clinical alliance (SICCA), 10th International Symposium on Sjogren's Syndrome, (France, '09.10).
- 0470I007 K.Kitagawa, M.Higuchi, H.Tsuchida, H.Sasaki, N.Tomosugi: Diagnostic potential of tear and serum proteomic patterns in mikulicz's disease, 10th International Symposium on Sjogren's Syndrome, (France, '09.10), 2009.
- 0470I008 (JP.Whitcher), SC.Pflugfelder, G.Larkin, A.Heidenreich, S.Hamann, S.Zhang, TE.Daniels, JS.Greenspan, K.Kitagawa, CH.Shiboski, SC.Shiboski: A Quantitative Method for Assessing Keratoconjunctivitis sicca From the Sjogren's Syndrome (SS) International Registry, American Academy of Ophthalmology, (San Francisco, '09.10).
- 0470I009 H.Sasaki, Y.Sakamoto, C.Schnider, N.Fujita, Y.Yamashiro, K.Sasaki: UV exposure to the Eye as a function of solar altitude, American Academy of optometry, (Florida, '09.11).
- 0470I010 N.Hatsusaka, Y.Sakamoto, E.Shibuya, N.Mita, H.Sasaki: Influence of nuclear opacity on intraocular higher-order aberrations, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0470I011 M.Kojima, Y.Yamashiro, T.Sakai, Y.Suzuki, K.Sasaki, H.Sasaki: Heat cataract by millimeter wave band exposure and thermal transport of aqueous humor, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0470I012 H.Sasaki, T.Abe, S.Furui, Y.Sakamoto, S.Suzuki, H.Koutake, K.Terasaki, T.Ishitake, N.Hayabuchi: The effects of ionization radiation exposure on crystalline lenses of interventional radiologist, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0470I013 K.Nagai, H.Sasaki, R.Honda, M.Kojima, K.Sasaki, F.Jonasson, M.Ono: Lens thickness by three main types of cataract -Reykjavik Eye Study:2008-, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0470I014 M.Kojima, Y.Ishiba, Y.Iwai, K.Sasaki, H.Sasaki: Study of reflected lght form the back side of lenses (Glasses or Sunglasses), as a Penetration route into the Eye, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0470I015 Y.Yamashiro, M.Kojima, A.Hirata, T.Sakai, S.Watanabe, M.Taki, Y.Sakamoto, K.Sasaki, H.Sasaki: Comparison of temperature elevation in ocular tissue by 18-40 GHz radio-frequency exposure, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0470I016 E.Shibuya, Y.Sakamoto, N.Yamamoto, H.Sasaki: Influence of age and axial length on intraocular higher order aberrations, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).



## 0480 Department of Otolaryngology

### Faculty

Title	Name	Field of Specialization
	SUZUKA Yuko	Otology, Audiology, Equilibrium, Neuro-otology, phonation, Medical education
	TSUJI Hiroyuki	Head and neck oncology, Head and neck surgery
	MURATA Hideyuki	Rhinology, Head and neck surgery, Endoscopic surgery, Computer aided surgery
	SHIMODE Yuzo	Head and neck oncology, surgery, Thyroid gland tumor research
	HORIGUTI Akiko	Equilibrium, Vestibular research, Laryngology, Voice retraction
	ISHIMASA Hiroshi	Head and neck surgery, rhinology, General otolaryngology
	MIYAZAWA Toru	Basic otology research, Head and neck surgery
	KITAMURA Miwa	Otolaryngology
	SAKAI Aya	Sleep apnea, Otolaryngology
	YAMADA Kanako	Audiology, Otolaryngology
	YAMAMOTO Junpei	Otorhinolaryngology

### Keywords of Research

olfaction and gustation, neurotology, tympanoplasty, cochlear implant, middle ear implant, virtual endoscopy, computer-aided surgery, endoscopic nasal surgery, laser surgery, sleep apnea & snore surgery, skull base surgery, head and neck tumor surgery, molecular biology, oncology, laryngology, speech rehabilitation, acoustic neuroma surgery, navigation surgery, tele-medicine, thyroid tumor surgery, virtual education for surgery

### Outline of Research

Basic and clinical research for olfaction and gustation  
Central mechanism of audiological function by MEG  
Restriction for phonation with Provox 2 prosthesis  
Clinical research for snore and sleep apnea  
Research for Thyroid and parathyroid gland  
Inner ear molecular biology  
Clinical survey for Head and Neck tumor and Oncology

### Publications

#### Originals

- 0480B001 H.Shiga, H.Toda, T.Kobayakawa, S.Saito, K.Hirota, T.Tsukatani, M.Furukawa, T.Miwa: Usefulness of curry odorant of odor stick identification test for Japanese in olfactory impairment screening, *Acta Otolaryngol.*, 129(Suppl.562):91-94, 2009.
- 0480B002 H.Shiga, K.Washiyama, K.Hirota, R.Amano, M.Furukawa, T.Miwa: Use of thallium transport to visualize functional olfactory nerve regeneration in vivo, *Rhinology.*, 47:460-464, 2009.

- 0480B003 M.Kitamura, Y.Shimode, J.Yamamoto, T.Miyazawa, K.Yamada, T.Nakaizumi, A.Horiguchi, H.Tsuji, A.Sakai, Y.Suzuka, H.Nakai: The pollen count of *Cryptomeia japonica* and its relations between the direction and velocity of wind in Uchinada(2008), *Pollen allergy and prevention.*, 26-35, 2009 (in Japanese) .
- 0480B005 H.Shiga, K.Washiyama, K.Ogawa, H.Yamaguchi, Y.Magata, R.Amano, M.Furukawa, T.Miwa: Olfactory Nerve Imaging with SPECT/CT in Rats, *Japanese Journal of Rhinology.*, 48:138-141, 2009 (in Japanese) .
- 0480B007 (T.Inoue), H.Tsuji, T.Minami, T.Yamashita: Our experience of microvascular free tissue transfer in head and neck cancer reconstruction, *Otolaryngology-head and neck surgery (Tokyo)*, 19:55-61, 2009 (in Japanese) .

#### **Case Reports**

- 0480D001 A.Sakai, Y.Shimode, H.Tsuji, Y.Masaki: Huge malignant lymphoma of the thyroid gland complicated by recurrent esophageal and tracheal fistulas induced by chemotherapy, *J. Kanazawa. Med. Univ.*, 34:72-76, 2009.

### **Presentations at Conference**

#### **International Conference (Key Note Lecture)**

- 0480G001 T.Miwa: Diagnosis and management of olfactory dysfunction, 10th Taiwan-Japan Otolaryngology Head & Neck Conference, (Taiwan, '09.12).

#### **International Conference (Presentations)**

- 0480I001 H.Shiga, J.Taki, Y.Wshiyama, R.Amano, K.Yagi, J.Furukawa, T.Miwa: Clinical imaging of thalium transport in the human olfactory nerve, 2009 World Molecular Imaging Congress (WMIC), (Montreal, '09.09).

## 0490 Department of Dermatology

### Faculty

Title	Name	Field of Specialization
	MOCHIZUKI Takashi	Medical mycology , Dermatmycosis
	TANABE Hiroshi	Medical mycology, Decubitns
	KAWASAKI Masako	Medical mycology
	WATANABE Seiji	Medical mycology
	ABE Shinya	Skin tumor and growth factores
	FUJII Toshiki	Dermatopathology
	ISHIZAKI Yasuko	Dermatopathology, cutaneous malignant tumor
	TAKEDA Kiminobu	Medical mycology
	FUJITA Jun	Medical mycology
	HASEI Maki	Skin tumor and growth factores, Medical mycology
	TERADA Maiko	Dermatopathology
	ANZAWA Kazushi	Medical mycology

### Keywords of Research

fungi, dermatophytes, *Candida* species, *Sporothrix* species, dematiaceous fungi, mitochondrial DNA, restriction fragment length polymorphism, ribosomal DNA, ITS region, sequencing, phylogeny, taxonomy, molecular epidemiology, molecular typing, electron microscopy, dermatopathology, skin tumor, decubitus, deep tissue injury

### Outline of Research

Research activities in the Department of Dermatology are mainly in the fields of cutaneous mycosis and medical mycology. We introduced a nail drilling method for onychomycosis, to improve the methods of sampling, diagnosis and treatment by antimycotics. For tinea capitis and tinea corporis spreading over wrestling, judo and sumo wrestlers, we support dermatologists for identifying the causative fungi, *Trichophyton tonsurans*, and collect the nationwide epidemiological data. We try to find an effective infection control system combining with a hairbrush sampling method and antimycotics to the epidemics.

In the field of basic mycology, a new technique based on the analysis of intergenic regions of certain genomes are found to be useful to detect intra-species variations of *T. mentagrophytes*. Besides, the other aim of our research is to disclose the phylogenetic relationships of *Trichophyton* species based on multi-locus gene analysis and mating tests, and to understand those species as they are.

In the most recent years, we began to study the pathophysiology of deep tissue injury, which is an uncommon clinical type of decubitus after surgical operations.

### Publications

#### Originals

- 0490B001 M.Kawasaki, K.Anzawa, T.Mochizuki, H.Ishizaki, Basavaraj M.Hemashettar: Successful Mating of a Human Isolate of *Arthroderma simii* with a Tester Strain of *A. vanbreuseghemii*, Jpn. J. Med. Mycol., 50:15-18, 2009.

- 0490B002 H.Ishizaki, M.Kawasaki, K.Anzawa, T.Mochizuki, Arunaloke Chakrabarti, Rataporn Ungpakorn, Haydee Torres Guerro, Conchita Toriello, Robert Arenas: Mitochondrial DNA Analysis of *Sporothrix schenckii* in India Thailand, Brazil, Colombia, Guatemala and Mexico, Jpn. J. Med. Mycol., 50:19–26, 2009.
- 0490B003 K.Takeda, T.Ushigami, M.Nanbu, H.Tanabe, T.Mochizuki, A.Fukumura, Wun Bill Chen: Six Cases of Skin Damage Related to Leakage from a Gastrostomy Catheter, Skin research., 8:31–35, 2009 (in Japanese) .

#### Reviews

- 0490C007 T.Mochizuki: Diagnosis of Cutaneous Fungal Infection, Jpn. J. Med. Mycol., 50:195–198, 2009 (in Japanese) .
- 0490C012 T.Mochizuki: Fungal infections and oter common skin diseases on the foot, 靴医学, 23:105111, 2009 (in Japanese) .

#### Case Reports

- 0490D001 (A.Arakawa), N.Kanazawa, S.Tanaka, M.Yonezawa, Y.Miyachi, T.Mochizuki: Genotyping of *Trichophyton tonsurans* isolate from a Japanese boy reveals infection in the USA, Clin. Exp. Dermatol., 34:630–632, 2009.
- 0490D002 (N.Umemoto), T.Demitsu, M.Kakurai, K.Sasaki, R.Azuma, E.Iida, K.Yoneda, M.Kawasaki, T.Mochizuki: Two cases of cutaneous phaeohyphomycosis due to *Exophiala jeanselmei*: diagnostic significance of direct microscopical examination of the purulent discharge, Clin. Exp. Dermatol., 34:351–353, 2009.
- 0490D003 J.Hatta, M.Yanagihara, M.Hasei, S.Abe, H.Tanabe, T.Mochizuki: Case of multiple cutaneous granular cell tumors, J. Dermatol., 36:504–507, 2009.
- 0490D006 (E.Asakawa), M.Fujihiro, T.Mochizuki: A Case of Granuloma Trichophyticum(Majocchi) Mimicking Leontiasis in Clinical Appearance, Nishinohon j. dermatol., 71:160–163, 2009 (in Japanese) .

### Presentations at Conference

#### International Conference (Symposium)

- 0490H001 T.Mochizuki: Application of molecular diagnosis of cutaneous fungal infections, The17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0490H002 M.Kawasaki, H.Tanabe, T.Mochizuki: Mycoses in Asia EP-03-3, Dematiaceous fungus infections in East Asia – molecular biological aspects –, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).

#### International Conference (Presentations)

- 0490I001 T.Mochizuki, M.Kawasaki, H.Tanabe, K.Anzawa, H.Ishizaki, K.Kamei, M.Fujihiro, H.Shinoda: Molecular epidemiology of *Trichophyton tonsurans* isolated in Japan between 2006 to 2008, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0490I002 (M.Hata), K.Tatsuno, Y.Suzuki, K.Tomita, K. Sugaya, K.Anzawa, T.Mochizuki: Successful treatment of sporotrichosis with voriconazole, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0490I003 H.Tanabe, T.Mochizuki, M.Kawasaki, T.Ushigami, N.Masayuki: Tinea barbae caused by *Microsporum canis*, The 17<sup>th</sup> Congress of the International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0490I004 (M.Tochigi), T.Ochiai, C.Mekata, H.Nishiyama, K.Yamanaka, K.Anzawa, M.Kawasaki: Sporotrichosis of the face by autoinoculation associated with tacrolimus treatment, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0490I005 M.Kawasaki, K.Anzawa, T.Mochizuki, H.Ishizaki, B.Hemashettar: *Arthroderma vanbreuseghemii* is a synonym of *A.simii*, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).

- 0490I006 M.Kawasaki, K.Anzawa, T.Mochizuki, H.Ishizaki, B.Hemashettar:: Mating among three teleomorphs of *Trichophyton mentagrophytes*, The 17th Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0490I007 J. Hatta, T.Hatta, S.Miyagawa, Y.Kitahara, T.Hirota, K.Anzawa, T.Mochizuki: Quantitative image analysis of effects of antimycotic agents on the hyphal growth in *Trichophyton rubrum*, The 17th Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0490I008 T.Mochizuki, M.Kawasaki, H.Tanabe, K.Anzawa, H.Ishizaki, K.Kamei, Y.Takahashi, M.Fujihiro, H.Shinoda: Molecular epidemiology of Japanese isolates of *Trichophyton tonsurans* by PCR-RFLP analysis of non-transcribed spacer region of ribosomal RNA gene, The 4<sup>th</sup> Joint Meeting of Japanese Dermatological Association and Australian College of Dermatologist, (Tokyo, '09.07).

## 0500 Department of Urogenital Surgery

### Faculty

Title	Name	Field of Specialization
	SUZUKI Koji	kidney stone disease, kidney transplantation, hyperparathyroidism
	TANAKA Tatsuro	kidney transplantation, endourology
	MIYAZAWA Katsuhito	kidney stone disease, endourology, prostate cancer
	KAWAMURA Kenji	kidney stone disease, urogenital cancer
	MORIYAMA Manabu	kidney transplantation, kidney stone disease
	SUGA Koudai	general urology
	CHIKAZAWA Ippei	general urology
	TOKUNAGA Kousuke	general urology
	TACHIBANA Hiromichi	general urology
	ISHII Takeo	general urology
	MORITA Nobuyo	general urology

### Keywords of Research

chronic renal failure, renal transplantation, acquired cystic disease of the kidney, secondary hyperparathyroidism, acute rejection, immunosuppression, renal stone, ESWL, TUL, endourology, calcium oxalate, glycosaminoglycans, heparan sulfate, crystal matrix protein, prothrombin, scanning microscopy, renal cell carcinoma, flow cytometry, BPH, prostatic cancer, bladder cancer, p53, urinary incontinence

### Outline of Research

clinical research on renal transplantation,  
mechanism of urolithiasis

### Publications

#### Originals

- 0500B001 K.Miyazawa, K.Aihara, R.Ikeda, M.Moriyama, K.Suzuki: cDNA macroarray analysis of genes in renal epithelial cells exposed to calcium oxalate crystals, *Urol. Res.*, 37:27-33, 2009.
- 0500B002 M.Moriyama, K.Suga, K.Miyazawa, T.Tanaka, M.Higashioka, K.Noda, M.Oka, M.Tanaka, K.Suzuki: Inhibitions of urinary oxidative stress and renal calcium level by an extract of *Quercus salicina* Blume/*Quercus stenophylla* Makino in a rat calcium oxalate urolithiasis model, *Int. J. Urol.*, 16:379-401, 2009.
- 0500B003 K.Kawamura, N.Morita, K.Suzuki: Induction of catastrophic cell death in p53 siRNA-treated human fibroblast cells by hyperthermia, *Cytometry Res*, 19:45-51, 2009 (in Japanese) .

#### Reviews

- 0500C002 K.Kawamura, K.Fujikawa: Evaluation of sub-G1 peak in mitotic catastrophe, *Cytometry Res*, 19:63-71, 2009 (in Japanese) .

## Case Reports

- 0500D001 K.Sato, Y.Ueda, K.Kawamura, K.Aihara, S.Katsuda: Plasmacytoid urothelial carcinoma of the urinary bladder: a case report and immunohistochemical study, *Pathol. Res. Pract.*, 205:189-194, 2009.

## 0510 Department of Obstetrics and Gynecology

### Faculty

Title	Name	Field of Specialization
(Additional Post)	MAKINODA Satoru	reproductive physiology, perinatal medicine, gynecologic oncology, ovulation and cytokines
	FUJII Ryota	perinatal medicine, reproductive endocrinology
	WATANABE Yukio	perinatal medicine, reproductive endocrinology, perinatal diagnosis
	WASADA Tomoo	reproductive medicine, perinatal medicine, gynecologic oncology
	OKA Yasuko	perinatal medicine, reproductive medicine
	TAKAGI Hiroaki	perinatal medicine, reproductive medicine, gynecologic oncology
	TOMIZAWA Hideki	perinatal medicine, reproductive medicine
	FUJITA Satoko	perinatal medicine, reproductive medicine
	SASAKURA Chihaya	perinatal medicine, perinatal diagnosis
	NEYATANI Natsuko	perinatal medicine, climacteric medicine

### Keywords of Research

hypothalamus-pituitary system, prenatal diagnosis, malignant tumor of female genital organs, fertilization and nidation, postmenopausal osteoporosis, endothelin, corpus luteum insufficiency, hormone-replacement therapy, nutrition and metabolism in pregnant women, abnormal sexual differentiation, toxikosis of pregnancy, myoma uteri, climacteric symptoms, mechanism of abortion, endometriosis, HGF, cytokine, G-CSF, IL-6, ovulation, hemodynamics, vaginal agenesis

### Outline of Research

<Reproductive Endocrinology>

(Ovarian function and Cytokines)

Mechanism of luteolysis regulated by IL-6

Mechanism of ovulation regulated by G-CSF and its clinical application

(Water transport in the female genital tract)

Mechanism of aquaporin water channels in the ovary and oviduct

(Ovulatory process and Ovarian blood flow)

Prediction of ovulation using ovarian blood flow measurement

<Perinatology>

(Mechanism of Labor pains)

Relation between labor pains and G-CSF, and its clinical application for the prediction of premature labor

(Prenatal diagnosis for Fetus)

New method for fetal diagnosis using ultrasonography

Retrospective analysis for fetal MRI findings, compared with pathological and neonatal diagnosis

(Prognostic factor for early pregnant loss)

Analysis for hCG, Progesterone and G-CSF as prognostic factor for early pregnant loss



## Presentations at Conference

### International Conference (Presentations)

- 0510I001 Oka Y, Makinoda S: Myometrial blood flow analysis in pregnant women with IUGR, 19th World Congress on Ultrasound in Obstetrics and Gynecology, (Hamburg, '09.09).
- 0510I002 Waseda T, Oka Y, Makinoda S: Myometrial blood flow analysis in pregnant women with IUGR, 19th World Congress on Ultrasound in Obstetrics and Gynecology, (Hamburg, '09.09).
- 0510I003 Tomizawa H, Makinoda S: Usefulness of G-CSF in the Treatment of Luteinized Unruptured Follicle(LUF), XIX World Congress of Gynecology and Obstetrics, (Cape Town, '09.10).
- 0510I004 Fujita S, Oka Y, Fujii R, Makinoda S: A case of primary uterine atypical polypoid adenomyoma(APA) recurring after pregnancy and delivery, XIX World Congress of Gynecology and Obstetrics, (Cape Town, '09.10).
- 0510I005 R. Fujii, Tomizawa H, Fujita S, Oka Y, Takagi H, Sasagawa T, Makinoda S, Utsunomiya T: USEFULNESS OF G-CSF FOR LUF PATIENTS, The International Ovarian Conference 2009, (Tokyo, '09.12).

## 0520 Department of Anesthesiology and Perioperative Medicine

### Faculty

Title	Name	Field of Specialization
	TSUCHIDA Hideaki	Cardiovascular Effects of Anesthetics, Intravenous Anesthetics
	SHIRAIISHI Miharuru	Cardiac Anesthesia, Cardiovascular Agents
	NISHIIKE Satoshi	Cardiovascular effects of anesthetics, Volatile anesthetic
	SUGIURA Soichiro	Influence of the endothelium in sepsis, Cardiovascular effects of ultra-short acting $\beta$ 1-selective blocker
	HORIUCHI Katsura	General anesthesia, Local anesthesia
	KIDA Hiromasa	Anaphylaxis
	YAMAOKA Yuko	General anesthesia, Local anesthesia
	MAGARA Ayuko	General anesthesia, Local anesthesia
	HIRAMATSU Akiko	General anesthesia, Local anesthesia
	MURATA Yuriko	General anesthesia, Local anesthesia
	HIRAMATSU Toshiaki	General anesthesia, Local anesthesia

### Keywords of Research

anesthetic volatile, anesthetic intravenous, cardiovascular system, vascular smooth muscle, endothelium, palliative care, postoperative pain relief, paraquat, sepsis, delayed neuronal death, apoptosis, inducible nitric oxide synthase, brain ischemia, epidural blockade, cytochrome P-450, liver mitochondria, nitric oxide, hypothermia

### Outline of Research

In a clinical setting, we have been studying the effects of various anesthetics or vasoactive drugs on hemodynamics in perioperative patients. Especially, we are now studying the effects of beta1-selective antagonists on hemodynamics and prognosis in patients undergoing noncardiac surgery. In the laboratory, we have examined 1) the effects of septic shock on vasoreactivity in the rat thoracic aorta or the mesenteric arteriole, and 2) the effects of transient forebrain ischemia on apoptotic death of the hippocampal pyramidal neuron in Mongolian gerbil.

### Publications

#### Originals

- 0520B001 H.Kida: The changes in mesenteric lymph flow during anaphylactic hypotension of anesthetized rats, J. Kanazawa Med. Univ., 34:154-159, 2009 (in Japanese) .

#### Reviews

- 0520C002 H.Nakajima, T.Wagatsuma, N.Nakaya, H.Tsuchida: Startup of multi-disciplinary team for palliative care in Kanazawa Medical University Hospital, J. Kanazawa Med. Univ., 34:68-71, 2009 (in Japanese) .

## 0530 Department of Oral and Maxillofacial Surgery

### Faculty

Title	Name	Field of Specialization
	SEGAMI Natsuki	oral and maxillofacial surgery, temporomandibular joint disorders, oral cancer, orthognathic surgery
	YOSHMURA Hiroshi	temporomandibular joint disorders, stomatology, neuroscience
	DEMURA Noboru	orthodontics, stomatology
	KANEYAMA Keiseki	oral cancer, stomatology, oral and maxillofacial surgery, orthognathic surgery
	TAKAHASHI Motohiro	temporomandibular joint disorders, stomatology
	HONJOU Miho	Orthodontics.

### Keywords of Research

stomatology, oral and maxillofacial surgery, orthodontics, temporomandibular joint, arthroscopy, magnetic resonance imaging, oral cancer, metastasis, orthognathic surgery

### Outline of Research

1. Basic and clinical research for disorders of temporomandibular joints.
2. Molecular biological research for growth and metastasis of tumors in oral region.
3. Pathophysiological research for abnormal development of oral and maxillofacial region.
4. Research for surgical orthognathics for jaw deformity.
5. Integration mechanisms of oral sensory information in the central nervous systems.

### Presentations at Conference

#### International Conference (Presentations)

- 0530I001 H.Yoshimura, T.Sugai, N.Segami, N.Kato: Input frequency- and NMDA receptor activity- dependent determination of signal- traveling routes between primary and secondary visual cortices, The 36th International Congress of Physiological Sciences, (Kyoto, '09.07), "J.Physiol. Sci. Suppl.", 59:S284, 2009.
- 0530I002 T.Sugai, R.Yamamoto, Y.Ueta, H.Yoshimura, N.Kato: The endopiriform nucleus functionally connects the olfactory and gustatory information the rat, The 36th International Congress of Physiological Sciences, (Kyoto, '09.07), J.Physiol. Sci. Suppl, 59:S202, 2009.

## 0550 Department of Emergency Medicine

### Faculty

Title	Name	Field of Specialization
	WATOH Yukihiro	Emergency, Emergency medical system, Disaster Medicine,
	MASHIBA Satoru	Emergency, Anaphylaxis
	HAYASHI Nobuyuki	Emergency,
	MURASAKA Kenshi	Emergency, Neurosurgery
	MORITA Hideki	Emergency,
	GOTO Tetsuro	Emergency,
	FUKUZUMI Mari	Emergency,
	MIZUNUMA Mariko	Emergency,
	IWAI Junichi	Emergency,

### Keywords of Research

acute poisoning, resuscitation, disaster medicine, emergency room, intensive care

### Outline of Research

Evaluative research of Emergency Medicine, EMS system, and Disaster management.

## 0560 Department of Medical Oncology

### Faculty

Title	Name	Field of Specialization
	MOTOO Yoshiharu	Medical Oncology, Tumor Cell Biology, Gastroenterology
	NAKAJIMA Hideo	Medical Oncology, Immunology, Molecular Biology
	SHIMASAKI Takeo	Medical Oncology, Gastroenterology, Bioinformatics
	NAKAYA Naoki	Medical Oncology

### Keywords of Research

medical oncology, clinical oncology, gastroenterology, chemotherapy, tumor biology

### Outline of Research

We are studying on pancreatic cancer, which is one of the most untreatable cancers. One of our projects is the research on the cancerous expression of pancreatitis-associated proteins in human pancreatic cancer. We are cooperating with INSERM in Marseille, France. The second project is the identification and characterization of new heat-shock proteins. The third one is the elucidation of the molecular mechanisms of gemcitabine resistance of pancreatic cancer cells. We are cooperating with Cancer Research Institute of Kanazawa University, especially on glycogen synthase kinase. Other projects include the metabolome approach on the prediction of adverse reaction of anti-cancer drugs, and the proteome analysis on the discovery of new molecular markers for pancreatic cancer.

### Books

- 0560A003 Y.Motoo, T.Shimasaki, T.Minamoto: Gemcitabine changes the gene expression in human pancreatic cancer cells :search for new therapeutic molecular targets, *Pancreatology:from Bench to Bedside*, 33-38, Springer, Berlin, 2009.
- 0560A005 Y.Motoo: Japanese Herbal Medicine in Western-style Modern Medical System, *Botanical Medicine in Clinical Practice*, 105-111, CABI, UK, 2009.

### Publications

#### Originals

- 0560B001 (W.Mai), K.Kawakami, A.Shakoori, S.Kyo, K.Miyashita, K.Yokoi, M.Jin, T.Shimasaki, Y.Motoo, T.Minamoto: Deregulated GSK3  $\beta$  Sustains Gastrointestinal Cancer Cells Survival by Modulating Human Telomerase Reverse Transcriptase and Telomerase, *Clin. Cancer Res.*, 15:6810-6819, 2009.
- 0560B002 (QM.Zhou), S.Wang, H.Zhang, YY.Lu, XF.Wang, Y.Motoo, SB.Su: The combination of baicalin and baicalein enhances apoptosis via the ERK/p38 MAPK pathway in human breast cancer cells, *Acta Pharmacol. Sin.*, 30:1648-1658, 2009.
- 0560B003 Y.Motoo, I.Arai, I.Hyodo, K.Tsutani: Current status of Kampo (Japanese herbal) medicines in Japanese clinical practice guidelines, *Complement Ther Med.*, 17:147-154, 2009.

## Reviews

- 0560C001 (K.Miyashita), M.Nakada, K.Shakoori, Y.Ishigaki, T.Shimasaki, Y.Motoo, Kawakami K, T.Minamoto: An emerging strategy for cancer treatment targeting aberrant glycogen synthase kinase 3beta., *Anticancer Agents Med. Chem.*, 9:1114–1122, 2009.
- 0560C006 H.Nakajima, T.Wagatsuma, N.Nakaya, H.Tsuchida: Startup of multi-disciplinary team for palliative care in Kanazawa Medical University Hospital, *J. Kanazawa. Med. Univ.*, 34:68–71, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Symposium)

- 0560H001 T.Shimasaki, Y.Motoo: Molecular analysis on gemcitabine-treated pancreatic cancer cells., 2nd Japan-Taiwan Joint Symposium on Medical Oncology, (Taipei, '09.12).

### International Conference (Presentations)

- 0560I001 T.Shimasaki, Y.Ishigaki, N.Nakaya, N.Tomosugi, T.Tanaka, W.Mai, K.Kawakami, T.Minamoto, Y.Motoo: Therapeutic effect of gemcitabine plus GSK3  $\beta$  inhibitor on pancreatic cancer: basic analysis for future clinical trial, The International Pancreatic Research Forum 2009, (Tokyo, '09.03).
- 0560I002 J.Yamakawa, Y.Motoo: The kampo medicines orengekuto, bufutsushosan and boiogito have different activities to regulate gene expressions in differentiated rat white adipocytes: comprehensive analysis of genetic profiles, 8th meeting of the consortium for globalization of chinese medicine(CGCM), (London, '09.08).
- 0560I003 Y.Motoo: Systematic review of Japanese clinical practice guidelines: how are Kampo medicines described?, The 8th Meeting of the Consortium for Globalization of Chinese Medicine 2009, (Nottingham, '09.08).

## 0570 District medical

### Faculty

Title	Name	Field of Specialization
	KANDA Tsugiyasu	Cardiovascular distase, Diabetes Mellitus, Mental distase.
	SO Shihei	Cardiovascular distase , Diabetes Mellitus , Mental distase

### Keywords of Research

cytokine, myocarditis, atherosclerosis, chronic fatigue syndrome, immunotherapy

### Outline of Research

The main investigation in our department is to find the cytokine effect as the immunotherapy in the animal model or clinical field.

1. The treatment of heart failure with myocarditis in an animal model.
2. The treatment trial of cytokine regulation in the atherosclerosis.
3. The cytokine treatment against chronic fatigue syndrome.

### Publications

#### Reviews

- 0570C001 L.Zeng, R.Chen, F.Liang, H.Tsuchiya, H.Murai, T.Nakahashi, K.Iwai, T.Takahashi, T.Kanda, S.Morimoto: Silent information regulator, sirtuin 1, and age-related diseases, *Nat. Clin. Pract. Rheumatol.*, 9:7-15, 2009.

#### Case Reports

- 0570D001 M.Fukura, A.Saito, K.Ishigami, K.Konishi, M.Hasegawa, J.L.Wu, H.Kawahara, T.Kanda, T.Kigoshi, N.Takekoshi: Suicides in aged patients; Case reports and review of the literature, *J. Kanazawa. Med. Univ.*, 34:14-16, 2009.

### Presentations at Conference

#### International Conference (Presentations)

- 0570I001 T.Kanda, R.Chen, M.Hasegawa, T.Nakahashi, K.Iwai, S.Morimoto: Dual effect of PPAR $\alpha$  activator on myocardial damage in obese diabetic mice with viral myocarditis, 2010 Keystone Symposia Meeting Abstract Book, (Colorado, '10.01), 2010 Keystone Symposia Meeting Abstract Book.

## 0610 Health Management Center

### Faculty

Title	Name	Field of Specialization
	TAKASE Shujiro	Gastroenterology
	MATSUDA Yoshiro	
(Additional Post)	NAKAGAWA Hideaki	Epidemiology of cardiovascular diseases, occupational medicine, preventive medicine
(Additional Post)	YASUDA Yukio	evidence-based health care
	KAWAHARA Hiromu	Liver injury and oxidative stress
(Additional Post)	MORIKAWA Yuko	Cardiovascular epidemiology, occupational medicine
(Additional Post)	ISHIZAKI Masao	Occupational health, Epidemiology for cardiovascular disease
(Additional Post)	NISHIJO Muneko	Environmental epidemiology, epidemiology of cadmium pollution
	NAKANISHI Yumiko	Preventive medicine
	NAKAMURA Koshi	Epidemiology of Cardiovascular disease and Lifestyle-related disease Lifestyle/Disease and Medical expenditure
	KUGINUKI Yasuaki	hemodynamics
	KUSAKA Kazuya	Radiology
	OTA Kiyotaka	Radiology

### Keywords of Research

health examination, screening, metabolic syndrome, obesity, hypertension, insulin resistance, hyperlipidemia, smoking, alcohol intake, life style, "stress, dietary habits", "nutrient intake, exercise"

### Outline of Research

Studies for improvement of total medical check system and method of health support.

### Publications

#### Originals

- 0610B001 (R.Oka), K.Miura, M.Sakurai, K.Nakamura, KYagi, S.Miyamoto, T.Moriuchi, H.Mabuchi, M.Yamagishi, Y.Takeda, S.Hifumi, A.Inazu, A.Nohara, MA.Kawashiri, J.Kobayashi: Comparison of waist circumference with body mass index for predicting abdominal adipose tissue, *Diabetes Res. Clin. Pract.*, 83:100-105, 2009.
- 0610B002 (K.Asayama), T.Ohkubo, S.Yoshida, K.Suzuki, H.Metoki, A.Harada, Y.Murakami, Y.Ohashi, H.Ueshima, Y.Imai, H.Nakagawa, The Japan Arteriosclerosis Longitudinal Study(JALS) group: Stroke risk and antihypertensive drug treatment in the general population:the Japan arteriosclerosis longitudinal study, *J.Hypertens.*, 27:357-364, 2009.
- 0610B003 K.Nakamura, F.Barzi, R.Huxley, TH.Lam, I.Suh, J.Woo, HC.Kim, VL.Feigin, D.Gu, M.Woodward, Asia pacific cohort studies collaboration: Does cigarette smoking exacerbate the effect of total cholesterol and high-density lipoprotein cholesterol on the risk of cardiovascular diseases?, *Heart*, 95:909-916, 2009.
- 0610B004 M.Sakurai, K.Miura, T.Takamura, M.Ishizaki, Y.Morikawa, K.Nakamura, K.Yoshita, T.Kido, Y.Naruse, S.Kaneko, H.Nakagawa: J-shaped relationship between waist circumference and subsequent risk for Type 2 diabetes:an 8-year follow-up of relatively lean Japanese individuals., *Diabet. Med.*, 26:753-759, 2009.



- 0610B005 (AP.Kengne), K.Nakamura, F.Barzi, TH.Lam, R.Huxley, D.Gu, A.Patel, HC.Kim, M.Woodward, on behalf of the Asia Pacific Cohort Study Collaboration: Smoking, diabetes and cardiovascular diseases in men in the Asia-Pacific region, *J Diabetes.*, 1:173-181, 2009.
- 0610B006 (The Asia Pacific Cohort Studies Collaboration), RR.Huxley, K.Nakamura, TH.Lam, F.Barzi, D.Batty, S.Czernichow, H.Ueshima, HC.Kim, JW.Wong, X.Fang, V.Feigin, M.Woodward: Impact of cigarette smoking on the relationship between body mass index and coronary heart disease: a pooled analysis of 3264 stroke and 2706 CHD events in 378579 individuals in the Asia Pacific region, *BMC Public Health.*, 9:294, 2009.
- 0610B007 Y.Hamazaki, K.Nakamura, K.Hirata, K.Teramoto, M.Matsuda: What factors are Associated with Postnatal Depression in Japanese Women?, *Hokuriku Japanese Journal of Public Health.*, 35:58-62, 2009 (in Japanese) .
- 0610B008 Y.Hamazaki, K.Nakamura, K.Hirata, K.Teramoto, M.Matuda: What factors are associated with postnatal depression in Japanese women?, *Hokuriku Japanese Journal of Public Health.*, 35:58-62, 2009 (in Japanese) .
- 0610B009 K.Kusaka: Angiotensin II receptor blocker regulates the polarization of Th1 and Th2 immune responses of obese mice with viral myocarditis, *J. Kanazawa. Med. Univ.*, 34:1-9, 2009 (in Japanese) .
- 0610B010 M.Sakurai, K.Miura, K.Nakamura, M.Ishizaki, Y.Morikawa, T.Kido, Y.Naruse, H.Nakagawa: Relationship between abdominal obesity, accumulation of metabolic abnormalities and risk of cardiovascular disease: An 11-year follow-up of middle-aged Japanese men, *Japanese journal of cardiovascular disease prevention.*, 44:1-9, 2009 (in Japanese) .

#### Reviews

- 0610C001 K.Nakamura, R.Huxley, A.Ansary-Moghaddam, M.Woodward: The hazards and benefits associated with smoking and smoking cessation in Asia: a meta-analysis of prospective studies, *Tob. Control.*, 18: 345-353, 2009.

#### Case Reports

- 0610D002 T.Fukuyama, H.Kawahara, M.Yamada, N.Hayashi, H.Yano, M.Fukura, K.Ozaki, M.Tsuchishima, S.Takase, T.Arisawa, K.Omote, T.Nojima: A case of IL-6 producing malignant mesothelioma of abdomen with thrombocytosis, *jpn. j. gastroenterol.*, 109:546-553, 2009 (in Japanese) .

## 0620 Department of Pathology

### Faculty

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Title	Name	Field of Specialization
(Additional Post)	MINATO Hiroshi	Anatomical pathology, Laboratory medicine, Pathological study of pulmonary and mediastinal lesion, Pathological study of head & neck tumor.
(Additional Post)	KUROSE Nozomu	surgical pathology, molecular pathology
(Additional Post)	KINOSHITA Eriko	surgical pathology, molecular pathology

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### Keywords of Research

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surgical pathology, cytopathology, molecular pathology, ultrastructural pathology, general pathology, clinical pathology, diagnosis, histochemistry, immunostaining, PCR, in situ hybridization

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### Outline of Research

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1. Anatomical pathology, Laboratory medicine, Pathological study of pulmonary and mediastinal lesion, Pathological study of head & neck tumor.
  2. cellular pathology.
  3. molecular pathology.
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## 0630 Department of General Internal Medicine

### Faculty

Title	Name	Field of Specialization
	YAMAKAWA Junichi	General medicine,Kampo medicine
(Additional Post)	KUSAKA Kazuya	Diagnosis for esophagus,gastro-intestine,colon,liver & bile duct disease.Endoscopical treatment of its disease,especially,superficial type esophageal cancer, earlygastric cancer, early colon cancer
	MORIYA Junji	General medicine,Kampo medicine

### Keywords of Research

neurology, clinical epidemiology, alternative, clinical ethics, hospital management, general practise, obesity, infection

### Outline of Research

The kampo medicine to the metabolic syndrome and chronic fatigue syndrome.

### Publications

#### Originals

- 0630B001 K.Kusaka: Angiotensin II receptor blocker regulates the polarization of Th1 and Th2 immune responses of obese mice with viral myocarditis, J. Kanazawa. Med. Univ., 34:1-9, 2009 (in Japanese) .

#### Reviews

- 0630C001 L.Zeng, R.Chen, F.Liang, H.Tsuchiya, H.Murai, T.Nakahashi, K.Iwai, T.Takahashi, T.Kanda, S.Morimoto: Silent information regulator, sirtuin 1, and age-related diseases, Nat. Clin. Pract. Rheumatol., 9:7-15, 2009.

### Presentations at Conference

#### International Conference (Presentations)

- 0630I001 J.Yamakawa, Y.Motoo: The kampo medicines orangedokuto, bufutsushosan and boiogito have different activities to regulate gene expressions in differentiated rat white adipocytes: comprehensive analysis of genetic profiles, 8th meeting of the consortium for globalization of chinese medicine(CGCM), (London, '09.08).

## 0640 Endoscopy Center

### Faculty

Title	Name	Field of Specialization
	SHIROEDA Hisakazu	Endoscopic therapy of early gastric cancer

### Keywords of Research

early esophageal cancer, gastric esophageal reflux disorder, esophageal ulcer, esophageal varix, thrombosis of esophageal varix, peptic ulcer, acute gastric mucosal lesion, proton pump inhibitor, lansoplazole metabolism, helicobacter pylori, eradication therapy of helicobacter pylori, early gastric cancer, endoscopic mucosal resection, endoscopic submucosal dissection, endoscopic ultrasound, marking rivet, early colon cancer, apoptosis, vascular endothelial growth factor, ulcerative colitis, Crohn disease

### Outline of Research

- 1.Endoscopic treatment for early cancer of digestive organ
- 2.Endoscopic treatment for esophageal and gastric varices associated with portal hypertension
- 3.Endoscopic treatment for choledochal stone
- 4.Endoscopic diagnosis for pulmonary cancer

### Presentations at Conference

#### International Conference (Presentations)

- 0640I001 M.Yamada, H.Shiroeda, K.Ozaki, M.Tsuchishima, M.Tsutsumi, T.Arisawa: Analysis of C-kit and pdgfr  $\alpha$  gene mutation in gastrointestinal stromal tumor of the small intestine, DDW 2009, (Chicago, '09.06).

## 0650 Department of Rehabilitation Medicine

### Faculty

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Title	Name	Field of Specialization
	KAGECHIKA Kenji	rehabilitation medicine, osteoporosis, disuse syndrome, higher brain dysfunction
(Additional Post)	NAKATA Minori	Treatment and rehabilitation of musculoskeletal disorders, caused by work-related, whiplash-injury-associated, and other origins

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### Keywords of Research

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gait analysis, force plate, kinematic measurements, electromyogram, power spectrum, bone and joint problem, femoral neck fracture, low back pain, hemiplegia, paraplegia, osteoporosis, dysphagia, instruction of ADL

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### Outline of Research

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- 1) Using spectral analysis in the EMG frequency, we will clarify the control in motor units of lower extremity muscles during walking cycle.
  - 2) For the purpose of developing the therapeutic exercise, we are studying the sway paths of center of gravity for the patient with osteoarthritis of the hip who underwent hip surgery.
  - 3) We have made the clinical pathway of the patient with femoral neck fracture. Hereafter we are going to study about the outcome, then to improve this clinical pathway, for the patient to return home with satisfaction.
  - 4) We will establish the evaluation for dysphagia, analyzing results of videofluoroscopic and videoendoscopic examination of swallowing. Secondly, we are going to establish the standard of indication for swallowing training.
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## 0660 Department of Respiriology (Thoracic Surgery)

### Faculty

Title	Name	Field of Specialization
	SAKUMA Tsutomu	thoracic surgery, lung cancer, video assisted thoracoscopic surgery, pulmonary edema.
	SAGAWA Motoyasu	thoracic surgery, lung cancer, video assisted thoracoscopic surgery, epidemiology of mass screening.
	USUDA Katsuo	thoracic surgery, video assisted thoracoscopic surgery, lung cancer, mediastinal tumor, early lung cancer, interventional bronchology, clinical cytology,
(Additional Post)	AIKAWA Hirokazu	thoracic surgery, lung cancer, video assisted thoracoscopic surgery.
	KANNO Masaaki	Thoracic surgery
	MACHIDA Yuichiro	thoracic surgery, lung cancer, pulmonary circulation
	UENO Masakatsu	thoracic surgery, lung cancer, pulmonary circulation
	TANAKA Makoto	thoracic surgery, lung cancer, pulmonary circulation

### Keywords of Research

thoracic surgery, lung cancer, mediastinal tumor, lung transplantation, video assisted thoracoscopic surgery, chemotherapy, lung injury, alveolar epithelial cell, bronchoscopy, thoracoscopy, laser therapy, pneumothorax

### Outline of Research

Lung tumor

1. Screening test for lung cancer
2. Virtual bronchoscopy
3. Ion channel on cancer cells
4. Chemotherapy
5. Surgical treatment
6. Video assisted thoracoscopic surgery (VATS)

Mediastinal and pleural tumors

1. FDG-PET for mediastinal tumor
2. VATS
3. Surgical treatment and chemotherapy for malignant mesothelioma

Lung injury

1. Perioperative lung injury
2. Beta-agonist and antagonist therapy
3. Ischemia reperfusion lung injury
4. Aspiration lung injury
5. RAGE mice

New instruments

1. Bronchoscopy
2. Thoracoscopy

## Publications

### Originals

- 0660B001 M.Sagawa, C.Endo, M.Sato, Y.Saito, T.Sobue, K.Usuda, H.Aikawa, S.Fujimura, T.Sakuma: Four years experience of the survey on quality control of lung cancer screening system in japan, *Lung Cancer*, 63:291–294, 2009.
- 0660B002 J.Xu, Z.Wang, G.Ma, M.Sagawa, M.Shimazaki, Y.Ueda, T.Sakuma: Endogenous catecholamine stimulates alveolar fluid clearance in rats with acute pancreatitis, *Respirology*, 14:195–202, 2009.
- 0660B003 (C.Endo), A.Miyamoto, A.Sakurada, H.Aikawa, M.Sagawa, M.Sato, Y.Saito, T.Kondo: Results of long-term follow-up of photodynamic therapy for roentgenographically occult bronchogenic squamous cell carcinoma, *Chest.*, 136:369–375, 2009.
- 0660B004 K.Higashi, T.Sakuma, K.Ito, S.Niho, Y.Ueda, T.Kobayashi, R.Sekiguchi, T.Takahashi, T.Kato, H.Tonami: Combined evaluation of preoperative FDG uptake on PET, ground-glass opacity area on CT, and serum CEA level: identification of both low and high risk of recurrence in patients with resected T1 lung adenocarcinoma, *Eur. J. Nucl. Med. Mol. Imaging*, 36:373–381, 2009.
- 0660B005 M.Sagawa, K.Higashi, K.Usuda, H.Aikawa, Y.Machida, M.Tanaka, M.Ueno, T.Sakuma: Curative wedge resection for non-invasive bronchioloalveolar carcinoma, *Tohoku J. Exp. Med.*, 217:133–137, 2009.

### Reviews

- 0660C001 (C.Hamashima), T.Nakayama, M.Sagawa, H.Saito, T.Sobue: The Japanese guideline for prostate cancer screening, *Jpn. J. Clin. Oncol.*, 1–13, 2009.
- 0660C002 M.Sagawa, K.Usuda, H.Aikawa, Y.Machida, M.Tanaka, M.Ueno, T.Sakuma: Lung cancer screening and its efficacy, *Gen. Thorac. Cardiovasc. Surg.*, 57:519–527, 2009.
- 0660C005 (T.Nakayama), C.Hamajima, H.Saito, T.Sobue, M.Sagawa: Guideline for prostate cancer screening by the research group for developing the cancer screening guideline, *Japanese Association for Cancer Detection and Diagnosis.*, 16:36–40, 2009 (in Japanese) .

### Case Reports

- 0660D001 K.Usuda, M.Sagawa, H.Aikawa, M.Ueno, Y.Machida, T.Noijima, T.Terauchi, T.Sakuma: The multitude of cytologic components in pulmonary pleomorphic carcinoma—A report of two cases—, *J. Jpn. Soc. Clin. Cytol.*, 48:220–225, 2009.
- 0660D002 M.Sagawa, Y.Ueda, H.Sakuma, Y.Yoshimisu, F.Matsubara, T.Sakuma: Organizing pneumonia with an enlarging tumor-like lesion: immunohistochemical study, *Jpn. J. THORACIC CARDIOVASC. SURG.*, 57:433–436, 2009.
- 0660D003 K.Usuda, M.Sagawa, H.Aikawa, M.Tanaka, Y.Machida, M.Ueno, ZX.Tong, T.Sakuma: Severe basal bronchial stenosis related to dissection of pulmonary ligament. Report of a case, *J. Kanazawa. Med. Univ.*, 34:160–162, 2009.
- 0660D004 K.Usuda, M.Sagawa, H.Aikawa, M.Ueno, M.Tanaka, Y.Machida, K.Tsuchihara, Y.Masaki, E.Kinoshita, T.Sakuma: Complete resection of an advanced mediastinal nonseminomatous germ cell tumor with multiple distant metastases after Down-staging by chemotherapy, *The Japanese journal of thoracic surgery.*, 62:545–551, 2009 (in Japanese) .
- M.Tanaka, M.Ueno, Y.Machida, H.Aikawa, K.Usuda, M.Sagawa, T.Sakuma: Descending necrotizing mediastinitis, *The Japanese journal of thoracic surgery.*, 62:1073–1077, 2009 (in Japanese) .

## **Presentations at Conference**

### **International Conference (Key Note Lecture)**

0660G001 T.Sakuma: Multidisciplinary treatment of thoracic malignant tumor, 2009 Shanghai Medical Association Society of Pulmonary diseases proceedings of Annual meeting, (Shanghai, '09.04).

### **International Conference (Symposium)**

0660H001 M.Sagawa: Lung cancer screening program in japan and its efficacy, CLC International Lung Cancer Symposium, (Incheon, '09.08).



## 0670 Lifestyle-related Diseases Center

### Faculty

Title	Name	Field of Specialization
(Additional Post)	KIGOSHI Toshikazu	intracellular signaling of hormones, aldosterone secretion
(Additional Post)	TAMURA Nobuki	Physical physiology(The exercise testing and prescription from the physiological and biochemical research), Effects of the anemia on the physical activity, Exercise therapy for the lifestyle-related disease, Training for health Medical Education.
(Additional Post)	HORI Ariyuki	medical education, clinical neurology, clinical sleep medicine, neurophysiology, medical informatics, problem-based learning
(Additional Post)	NAKANISHI Yumiko	Preventive medicine.
	ITO Tomohiko	Endocrinology
	UENISHI Hiroaki	Cardiovascular Medicine
	KUDOH AKAZAWA Sumiyo	gender specific medicine, hypertension, molecular biology.
(Additional Post)	KITADA Munehiro	diabetes, hypertension.
	KAMODA Sachiko	lifestyle-related disease, Preventive medicine.

### Keywords of Research

life-style related disease, metabolic syndrome, impaired glucose tolerance, hypertension, hyperlipidemia, smoking, stroke, myocardial infarction, diet, exercise, smoking

### Outline of Research

Prevention of life-style-related diseases by exercise, diet and stop-smoking.

## 0680 Medical Genetic Center

### Faculty

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Title	Name	Field of Specialization
	NIIDA You	genetic diagnosis, genetic counseling
(Additional Post)	ITO Masatsune	child endocrinology
(Additional Post)	SATO Hitoshi	clinical virology, child infectious disease

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### Keywords of Research

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Medical genetics, Genetic services, Genetic counseling, Genetic testing, DNA diagnosis, Molecular diagnosis, Chromosomal study

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### Outline of Research

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Studies and practices of useful methods of genetic concerning  
Development of exhaustive and comprehensive genetic testing  
Total health care of patients with genetic diseases

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## 0690 Department of Endoscopy

### Faculty

Title	Name	Field of Specialization
	ITOU Tohru	Diagnosis for esophagus,gastro-intestine,colon,liver & bileduct disease.Endoscopic treatment of its disease,especially,superficial type esophageal cancer,early gastric cancer,early colon cancer.
	URASHIMA Sachio	Diagnosis for esophagus,gastro-intestine,colon,liver & bileduct disease.Endoscopic treatment of its disease,especially,superficial type esophageal cancer,early gastric cancer,early colon cancer.
	KAWAURA Ken	Diagnosis for esophagus,gastro-intestine,colon, disease.Endoscopic treatment of its disease,especially,superficial type esophageal cancer,early gastric cancer,early colon cancer.
	HAMADA Kazu	Diagnosis for esophagus,gastro-intestine,colon, disease.Endoscopic treatment of its disease,especially,superficial type esophageal cancer,early gastric cancer,early colon cancer.

### Keywords of Research

Endoscopy, Diagnosis, treatment, Esophagus, Stomach, Colon, ESD, EMR

### Outline of Research

- 1.A study for endoscopic diagnosis of early digestive organ cancer.(Esophagus,Stomach,Colon)
- 2.A study for endoscopic treatment of early digestive organ cancer.  
(Esophagus,Stomach,Colon)
- 3.A study for prediction of lymphnode metastasis which early digestive organ cancer.(Esophagus,Stomach,Colon)

## 0700 Multidisciplinary Cancer Center

### Faculty

Title	Name	Field of Specialization
(Additional Post)	TANAKA Tatsuro	Urology
(Additional Post)	TSUJI Hiroyuki	Head & Neck Surgery
(Additional Post)	MATOKA Munetaka	Radiation Oncology
(Additional Post)	MASAKI Yasufumi	Hematology/Oncology
(Additional Post)	OMOTE Kazuhiko	Surgical treatment of gastric cancer
(Additional Post)	WASADA Tomoo	Reproductive medicine, perinatal medicine, gynecologic oncology
(Additional Post)	OKAMOTO Kazuya	Brain tumor, stereotactic radiosurgery
(Additional Post)	TSUCHIHARA Katsuma	Clinical respiratory medicine
(Additional Post)	FUKUYAMA Tomoki	Chemotherapy for gastrointestinal malignant disease

### Keywords of Research

out patient chemotherapy, clinical investigation, biomarker, multidisciplinary cancer

### Outline of Research

Our main task is outpatient chemotherapy, which is requested by other Departments of the hospital. We are also involved in clinical trials on chemotherapy, and in translational research using clinical samples such as blood and urine of patients.

### Books

- 0700A003 Y.Motoo, T.Shimazaki, T.Minamoto: Gemcitabine changes the gene expression in human pancreatic cancer cells :search for new therapeutic molecular targets, *Pancreatology:from Bench to Bedside*, 33-38, Springer, Berlin, 2009.
- 0700A005 Y.Motoo: Japanese Herbal Medicine in Western-style Modern Medical System, *Botanical Medicine in Clinical Practice*, 105-111, CABI, UK, 2009.

### Publications

#### Originals

- 0700B001 (W.Mai), K.Kawakami, A.Shakoori, S.Kyo, K.Miyashita, K.Yokoi, M.Jin, T.Shimazaki, Y.Motoo, T.Minamoto: Deregulated GSK3  $\beta$  Sustains Gastrointestinal Cancer Cells Survival by Modulating Human Telomerase Reverse Transcriptase and Telomerase, *Clin. Cancer Res.*, 15:6810-6819, 2009.
- 0700B002 (QM.Zhou), S.Wang, H.Zhang, YY.Lu, XF.Wang, Y.Motoo, SB.Su: The combination of baicalin and baicalein enhances apoptosis via the ERK/p38 MAPK pathway in human breast cancer cells, *Acta Pharmacol. Sin.*, 30:1648-1658, 2009.
- 0700B003 Y.Motoo, I.Arai, I.Hyodo, K.Tsutani: Current status of Kampo (Japanese herbal) medicines in Japanese clinical practice guidelines, *Complement Ther Med.*, 17:147-154, 2009.

## **Presentations at Conference**

### **International Conference (Symposium)**

- 0700H001 T.Shimasaki, Y.Motoo: Molecular analysis on gemcitabine-treated pancreatic cancer cells., 2nd Japan-Taiwan Joint Symposium on Medical Oncology, (Taipei, '09.12).

### **International Conference (Presentations)**

- 0700I001 T.Shimasaki, Y.Ishigaki, N.Nakaya, N.Tomosugi, T.Tanaka, W.Mai, K.Kawakami, T.Minamoto, Y.Motoo: Therapeutic effect of gemcitabine plus GSK3  $\beta$  inhibitor on pancreatic cancer: basic analysis for future clinical trial, The International Pancreatic Research Forum 2009, (Tokyo, '09.03).
- 0700I002 Y.Motoo: Systematic review of Japanese clinical practice guidelines: how are Kampo medicines described?, The 8th Meeting of the Consortium for Globalization of Chinese Medicine 2009, (Nottingham, '09.08).

# School of Nursing

## 8010 Basic Nursing

### Faculty

Title	Name	Field of Specialization
	SAKAI Keiko	Proficiency and stressor of teachers in nursing.
	SAKAI Keiko	Communication Skills
	KIMOTO Miki	Experiences of diabetic patients that hemodialysis begins hold family's desire
	KYUJI Kazuyo	Nursing Students and Professional Sprit

### Keywords of Research

teachers in nursing, proficiency, stressor, sleep apnea syndrome, QOL, bi-cultural nursing, feelings and QOL, senior citizen, care-house

### Outline of Research

1. Feelings and QOL of senior citizens living care-house run by a municipal government or private sector.
2. Proficiency and stressor of teachers in nursing.
3. Quality of life of persons with sleep apnea syndrome.

## 8030 Psychiatric and Mental Health Nursing

### Faculty

Title	Name	Field of Specialization
	KITAOKA Kazuyo	Occupational Mental Health, Job Stress, Burnout, Rehabilitation of People with Mental Disability
	NAGAI Makie	Occupational Mental Health

### Keywords of Research

occupational health, occupational mental health, job stress, burnout, the Maslach Burnout Inventory, MBI, rehabilitation, mental disability

### Outline of Research

The major research theme is 'Occupational Mental Health' and 'Rehabilitation of People with Mental Disability'. We've been doing the burnout study for banishing it. The professor has published the Japanese version of *the Maslach Burnout Inventory (MBI)*, global scale for measure of burnout. We also put our effort to seek the methodology to support those people with mental disability.

### Publications

#### Originals

- 8030B001 K.Kitaoka-Higashiguti, Y.Morikawa, K.Miura, M.Sakurai, M.Ishizaki, T.Kido, Y.Naruse, H.Nakagawa: Burnout and risk factors for arteriosclerotic disease: follow-up study, *J. Occup. Health*, 51:123-131, 2009.
- 8030B002 (M.Sasaki), K.Kitaoka, Y.Morikawa, H.Nakagawa: Relationship between stress coping and burnout in Japanese hospital nurses, *J. Nurs. Manag.*, 17:359-365, 2009.
- 8030B003 (R.Umanodan), Y.Kobayashi, M.Nakamura, K.Kitaoka, N.Kawakami, A.Shimazu: Effects of a worksite stress management training program with six short-hour sessions, *J. Occup. Health*, 51:294-302, 2009.
- 8030B004 M.Nagai, K.Kitaoka, E.Hirayama: Explanatory approach of psychiatric out-patients' needs through the impression of nursing students during simulation as out-patient, *Journal of Japan Academy of Psychiatric and Mental Health Nursing.*, 18:20-27, 2009 (in Japanese) .
- 8030B005 (Y.Ando), K.Kitaoka, Y.Kobayashi, H.Okamura, K.Kitaoka: Development of a burnout causal model for nurses caring for patients with intractable neurological illness, *Journal of Japan Academy of Nursing Science.*, 29:3-12, 2009 (in Japanese) .
- 8030B006 (H.Nakagawa), S.Iwasaki, H.Nanno, T.Nakada, M.Nagai, K.Watamabe: Long-term follow-up of a patient with endogenous juvenile-asthenic insufficiency syndrome: An attempt at disease grading and therapeutic approaches, *Japanese Journal of Clinical Psychiatry.*, 38:1759-1768, 2009 (in Japanese) .

#### Others

- 8030F001 M.Nagai, Y.Hamazaki: Prevention of depression among the elderly:an elderly patient with transient depressive symptoms after the Noto peninsula earthquake, *J. So. Nurs. Pract.*, 21:65-68, 2009 (in Japanese) .



## Presentations at Conference

### International Conference (Presentations)

- 8030I001 (S.Kendall), K.Kitaoka, L.Bloomfield, J.Appleton, J.Petrie: A comparative study of the effect of group based parenting support on parental stress and outcomes for children, The 4th International Conference on Community Health Nursing Research, (Australia, '09.08).
- 8030I002 K.Kitaoka, S.Kendall, L.Bloomfield, J.Petrie, J.Appleton, H.Moto, N.Nakai, M.Nagai, K.Yoritsune, T.Hashimoto: Effect of parenting support program 123Magic applied to Japanese families, The 1st International Nursing Research Conference of World Academy of Nursing Science, (Kobe, '09.09).
- 8030I003 M.Nagai, K.Kitaoka: Changes in social distance of nursing students towards the mentally disabled as a result of listening to narrative story of persons with schizophrenia, The 1st International Nursing Research Conference of World Academy of Nursing Science, (Kobe, '09.09).
- 8030I004 (K.Ohnishi), K.Kitaoka, L.Bowers, D.Stewart, M.Merwe, Y.Ohgushi, H.Tanaka, M.Nakano, H.Fujii: Comparison of moral distress experienced by psychiatric nurses in Japan and the UK, The RCN 15th International Network for Psychiatric Nursing Research Conference, (Oxford, '09.09).
- 8030I005 (R.Umanodan), Y.Kobayashi, M.Nakamura, K.Kitaoka, N.Kawakami, A.Shimazu: Effects of a multi-component worksite stress management training program: a controlled trial in Japan, The 8th International Conference on Occupational Stress and Health, (Puerto Rico, '09.11).

## 8040 Adult Nursing

### Faculty

Title	Name	Field of Specialization
	TAMURA Sachiko	Nephrology Nursing, Transplant Nursing.
	HIRAYAMA Emiko	Nursing Ethics, Medical Ethics, Caring.
	UCHIDA Maki	Cancer Nursing, Terminal Care.
	KITAMURA Yoshiko	Cancer Nursing.
	YAMAZAKI Matsumi	Therapeutic Exercise in patients with Chronic Disease.

### Keywords of Research

Nephrology Nursing, Transplant Nursing, Chronic Disease Nursing, Terminal Care, Cancer Nursing, Nursing Ethics

### Outline of Research

Clinical Medical-Surgical Nursing.

### Publications

#### Originals

- 8040B001 S.Tamura, K.Shintani: Self-care and nursing interventions for the physical and psychological pain of chronic dialysis patients, J. So. Nurs. Pract., 21:28-35, 2009 (in Japanese) .
- 8040B002 M.Nagai, K.Kitaoka, E.Hirayama: Explanatory approach of psychiatric out-patients' needs through the impression of nursing students during simulation as out-patient, Journal of Japan Academy of Psychiatric and Mental Health Nursing., 18:20-27, 2009 (in Japanese) .

## 8050 Nursing of the Elderly

### Faculty

Title	Name	Field of Specialization
	KOIZUMI Yumi	community/elderly nursing science
	HASHIMOTO Tomoe	community/elderly nursing science

### Keywords of Research

Nursing of the Elderly

### Outline of Research

Verification of Nursing Care about Daily living activities and their communication of the elderly with Dementia,also,the effectiveness of the elderly Dementia prevention on the basis Local residents.

The Study of General Principle of Florence Nightingale connected with Nurse's recognition and expression in Nursing phenomenon.

### Presentations at Conference

#### International Conference (Presentations)

- 8050I001 K.Kitaoka, S.Kendall, L.Bloomfield, J.Petrie, J.Appleton, H.Moto, N.Nakai, M.Nagai, K.Yoritsune, T.Hashimoto: Effect of parenting support program 123Magic applied to Japanese families, The 1st International Nursing Research Conference of World Academy of Nursing Science, (Kobe, '09.09).
- 8050I002 M.Nagai, K.Kitaoka: Changes in social distance of nursing students towards the mentally disabled as a result of listening to narrative story of persons with schizophrenia, The 1st International Nursing Research Conference of World Academy of Nursing Science, (Kobe, '09.09).

## 8060 Child Nursing

### Faculty

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Title	Name	Field of Specialization
	TSUDA Akiko	Pediatric Nursing

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### Keywords of Research

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child, parenting, parenting support, attachment, daily living life, biological rhythm

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### Outline of Research

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The study on biological rhythm and life style in childhood.

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## 8070 Maternity Nursing

### Faculty

Title	Name	Field of Specialization
	OCHIAI Fumie	Maternity Health, Child Health, Midwifery.
	SASANO Kyoko	Critical nursing, Nursing education.
	TSUBOMOTO Takiko	
	YAMAZAKI Chisato	
	YORITSUNE Kaoru	Life development nursing.

### Keywords of Research

Practice, Pregnancy, Midwife, "Maternity Nursing, perinatal", after childbirth, breastfeeding, parenting stress maternity Nursing, Mother and child nursing, Child care, Mother, Mother-child relation

### Outline of Research

Mother-child relation, Nursing education, Education effect, Breastfeeding, Parenting stress, Mother's feeling in child care.

### Presentations at Conference

#### International Conference (Presentations)

- 8070I001 K.Kitaoka, S.Kendall, L.Bloomfield, J.Petrie, J.Appleton, H.Moto, N.Nakai, M.Nagai, K.Yoritsune, T.Hashimoto: Effect of parenting support program 123Magic applied to Japanese families, The 1st International Nursing Research Conference of World Academy of Nursing Science, (Kobe, '09.09).
- 8070I002 M.Nagai, K.Kitaoka: Changes in social distance of nursing students towards the mentally disabled as a result of listening to narrative story of persons with schizophrenia, The 1st International Nursing Research Conference of World Academy of Nursing Science, (Kobe, '09.09).

## 8080 Community Nursing

### Faculty

Title	Name	Field of Specialization
	FUKUMA Kazumi	Community Health Nursing
	SAKURAI Shihomi	Community Health Nursin
	HAMAZAKI Yuko	public health nursing study of elder abuse

### Keywords of Research

community nursing-care activity, community nursing education, Health promotion, successful aging, activity of community organization

### Outline of Research

We aim at the research of community nursing that contributes to sustain and improve quality of life and health of people in the community. We have been studying about community nursing-care activity, community nursing education, Health promotion, successful aging and elder abuse

### Publications

#### Originals

- 8080B001 Yuko Hamazaki, Shunki Doda: Investigation of how to intervention and support of elder abuse at family relationship, Family Nursing., 7:130-138, 2009 (in Japanese) .
- 8080B002 Y.Hamazaki, K.Nakamura, K.Hirata, K.Teramoto, M.Matsuda: What factors are Associated with Postnatal Depression in japanese Women?, Hokuriku Japanese Journal of Public Health., 35:58-62, 2009 (in Japanese) .
- 8080B003 Y.Hamazaki, K.Nakamura, K.Hirata, K.Teramoto, M.Matuda: What factors are associated with postnatal depression in Japanese women?, Hokuriku Japanese Journal of Public Health., 35:58-62, 2009 (in Japanese) .
- 8080B004 Y.Hamazaki, K.Fukuma: Survey of the Physical,Mental,Social conditions of community-dewlling patients suffering from ossification of the posterior longitudinal ligament(OPLL), Journal of Japan Academy of Home Care., 13:54-62, 2009 (in Japanese) .
- 8080B005 Y.Hamazaki, K.Fukuma: Factor analysis of subjective quality of life (QOL) of community-dwelling patients suffering from ossification of the posterior longitudinal ligament(OPLL), J. J. Intrac. Ill. Nurs., 14:140-148, 2009 (in Japanese) .

#### Others

- 8080F001 M.Nagai, Y.Hamazaki: Prevention of depression among the elderly:an elderly patient with transient depressive symptoms after the Noto peninsula earthquake, J. So. Nurs. Pract., 21:65-68, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Presentations)

- 8080I001 Y.Hamazaki, K.Fukuma, Y.Morikawa: Factor Analysis on Subjective Well-being in In-home Care of Patients suffering from Ossification of the posterior longitudinal Ligament in Japan, The 4th international conference on community health nursing research, (Adelaide South Australia, '09.08), The 4th international conference on community health nursing research conference handbook, 247, 2009.
- 8080I002 S.Sakurai: The study on sleep status in family caregivers of patients with Alzheimer disease, The 6th Congress of ASRS, (Osaka, Japan, '09.10), ASRS/JSSR/JSC Joint Congress 2009 PROGRAM & ABSTRACTS, 238, 2009.

## 8090 Home Care Nursing

### Faculty

Title	Name	Field of Specialization
	KATOU Kinko	Home Care Nursing, Public Health Nursing, Psychiatric Mental Health Nursing in Community
	MAEDA Shuko	home care , home health care nurse.
	KOHNO Yumiko	home care nursing, home care nursing teaching method, discharge support

### Keywords of Research

home healthcare nursing, home visit nursing, infection control, visiting nurse service station, continuing education, education program

### Outline of Research

Practice and restructuring of the infection control education program for home visiting nurses



## 8100 Human Science

### Faculty

Title	Name	Field of Specialization
	ISHIBASHI Takaharu	Cardiovascular Pharmacology
	OKADA Masato	Peripheral nerve surgery, Trauma
	KOHNO Hiroyuki	Experimental Pathology, Tumor immunology
	MORIKAWA Yuko	Cardiovascular epidemiology, occupational medicine
	KOJIMA Masami	Study of Cataractogenesis mechanisms, Relation of the intraocular temperature during infrared exposure and environmental temperature
	HONDA Ryumon	Environment and health, Epidemiology
	FUJII Ryota	perinatal medicine, reproductive endocrinology

### Keywords of Research

T. Ishibashi/ Nitric Oxide, T. Ishibashi/ Nitrite, T. Ishibashi/ Vasodilators, M. Okada/ Calcaneal fracture, M. Okada/ carpal tunnel syndrome, M. Kojima/electromagnetic radiation, M. Kojima/ultraviolet exposure, M. Kojima/infrared rays exposure

### Outline of Research

T. Ishibashi: Studies of kinetics of NO and NO related compound in vivo and mechanism of action of NO releasing vasodilators.  
M. Okada: Percutaneous osteosynthesis of calcaneal fractures. Endoscopic surgical treatment of carpal tunnel syndrome.  
M. Kojima: Study of ocular effect from electromagnetic radiation (electric wave, ultraviolet rays, and infrared rays) exposure.

### Publications

#### Originals

- 8100B001 R.Naganuma, M.Sakurai, K.Miura, K.Yoshita, Y.Morikawa, T.Kido, H.Ueshima, H.Nakagawa, J.Stamler: Relation of long-term body weight change to change in lipoprotein particle size in Japanese men and women:The INTRTMAP Toyama study, *Atherosclerosis*, 206:282-286, 2009.
- 8100B002 (Y.Suwazono), T.Kido, H.Nakagawa, M.Nishijo, R.Honda, E.Kobayashi, M.Dochi, K.Nogawa: Biological half-life of cadmium in the urine of inhabitants after cessation of cadmium exposure, *Biomarkers.*, 14:77-81, 2009.
- 8100B003 K.Sasaki, Y.Yamashiro, M.Kojima, R.Honda, Y.Sakamoto, HM.Cheng, H.Sasaki: Assessment of pinguecula and pterygium in the aging eye with ultraviolet fluorescence photography (UVFP) : Data analysis of eye disease survey in Shanxi, China, *Rehabilitation science : memoirs of the Tohoku Bunka Gakuen University Faculty of Medical Science & Welfare, Department of rehabilitation.*, 5:31-40, 2009.
- 8100B004 M.Kojima, M.Hanazawa, Y.Yamashiro, H.Sasaki, S.Watanabe, M.Taki, Y.Suzuki, A.Hirata, Y.Kamimura, K.Sasaki: Acute ocular injuries caused by 60-GHz millimeter-wave exposure, *Health Phys.*, 97:212-218, 2009.
- 8100B005 K.Kitaoka-Higashiguti, Y.Morikawa, K.Miura, M.Sakurai, M.Ishizaki, T.Kido, Y.Naruse, H.Nakagawa: Burnout and risk factors for arteriosclerotic disease: follow-up study, *J. Occup. Health*, 51:123-131, 2009.
- 8100B006 T.Ishibashi, N.Nishizawa, M.Nakamoto, S.Liu, M.Yang, T.Miwa, I.Shinkawa, J.Yoshida, T.Kawada, M.Nishio: Arteriovenous differences in NO<sub>2</sub><sup>-</sup> kinetics in anesthetized rabbits, *Biol.Pharm.Bull.*, 32:399-404, 2009.

- 8100B007 (M.Sasaki), K.Kitaoka, Y.Morikawa, H.Nakagawa: Relationship between stress coping and burnout in Japanese hospital nurses, *J. Nurs. Manag.*, 17:359–365, 2009.
- 8100B008 M.Sakurai, K.Miura, T.Takamura, M.Ishizaki, Y.Morikawa, K.Nakamura, K.Yoshita, T.Kido, Y.Naruse, S.Kaneko, H.Nakagawa: J-shaped relationship between waist circumference and subsequent risk for Type 2 diabetes:an 8-year follow-up of relatively lean Japanese individuals., *Diabet. Med.*, 26:753–759, 2009.
- 8100B009 H.Kawada, M.Kojima, T.Kimura, S.Natori, K.Sasaki, H.Sasaki: Effect of 5-S-GAD on UV-B-Induced cataracts in rats, *Jpn. J. Ophthalmol.*, 53:531–535, 2009.
- 8100B010 T.Lihua, Y.Sakai, K.Iwai, S.Katsuda: Effect of collagen tripeptide of type I collagen on migration, proliferation and collagen synthesis of human aortic smooth muscle cells, *J. Kanazawa. Med. Univ.*, 34:93–100, 2009.
- 8100B011 H.Oda, M.Nishijo, H.Nakagawa, Y.Morikawa, T.Kido, A.Ikawa, E.Kobayashi, K.Nogawa: Urinary metallothionein levels and mortality in residents exposed to cadmium in the environment, *J. Kanazawa. Med. Univ.*, 34:148–153, 2009.
- 8100B012 Y.Masaki, L.Dong, N.Kurose, K.Kitagawa, Y.Morikawa, M.Yamamoto, H.Takahashi, Y.Shinomura, K.Imai, T.Saeki, A.Azumi, S.Nakada, E.Sugiyama, S.Matsui, T.Origuchi, S.Nishiyama, I.Nishimori, T.Nojima, K.Yamada, M.Kawano, Y.Zen, M.Kaneko, K.Miyazaki, K.Tsubota, K.Eguchi, K.Tomoda, T.Sawaki, T.Kawanami, M.Tanaka, T.Fukushima, S.Sugai, H.Umehara: Proposal for a new clinical entity,IgG4-positive multiorgan lymphoproliferative syndrome:analysis of 64 cases of IgG4-related disorders, *Ann. Rheum. Dis.*, 68:1310–1315, 2009.
- 8100B013 K.Tawara, M.Nishijo, R.Honda, S.Maruzeni, T.Seto, T.Kido, S.Saito, H.Nakagawa: Effects of maternal dioxin exposure on newborn size at birth among Japanese mother–infant pairs, *Environ. Health Prevent. Med.*, 14:88–95, 2009.
- 8100B014 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido: Estimation of benchmark rice cadmium doses as threshold values for abnormal urinary findings with adjustment for consumption of Jinzu River water, *Bull. Environ. Contam. Toxicol.*, 83:102–107, 2009.
- 8100B015 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido: Influence of consumption of cadmium-polluted rice or Jinzu River water on occurrence of renal tubular dysfunction and/or Itai-itai disease, *Biol Trace Elem Res*, 127:257–268, 2009.
- 8100B016 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido: Association of lifetime cadmium intake or drinking Jinzu River water with the occurrence of renal tubular dysfunction, *Environ. Toxicol.*, 24:421–428, 2009.
- 8100B017 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido, H.Nakagawa: Influence of drinking and/or cooking with Jinzu River water on the development of Itai-Itai disease, *Biol Trace Elem Res*, 129:46–57, 2009.
- 8100B018 (E.Kobayashi), Y.Suwazono, R.Honda, M.Dochi, M.Nishijo, T.Kido, H.Nakagawa: Serial follow-up study on renal handling of calcium and phosphorus after soil replacement in Cd-polluted rice paddies estimated using a general linear mixed model, *Biol Trace Elem Res*, 129:261–269, 2009.
- 8100B019 (H.Suzuki), T.Kido, Y.Morikawa, H.Nakagawa, M.Ishizaki, Y.Naruse, M.Higashiyama, M.Dochi, Y.Suwazono, K.Nogawa: The relationship between mental-health status and work-related factors in male Japanese overseas employees, *Journal of Tsuruma Health Society Kanazawa University*, 33:21–33, 2009.
- 8100B027 M.Sakurai, K.Miura, K.Nakamura, M.Ishizaki, Y.Morikawa, T.Kido, Y.Naruse, H.Nakagawa: Relationship between abdominal obesity, accumulation of metabolic abnormalities and risk of cardiovascular disease: An 11-year follow-up of middle-aged Japanese men, *Japanese journal of cardiovascular disease prevention.*, 44:1–9, 2009 (in Japanese) .

## Reviews

- 8100C001 L.Zeng, R.Chen, F.Liang, H.Tsuchiya, H.Murai, T.Nakahashi, K.Iwai, T.Takahashi, T.Kanda, S.Morimoto: Silent information regulator, sirtuin 1, and age-related diseases, *Nat. Clin. Pract. Rheumatol.*, 9:7–15, 2009.

## Others

- 8100F001 (M.Miyao), T.Watanabe, R.Honda, Y.Yamada: Answer to the comments by Eric J. Grant et al. in "Radiation unlikely to be responsible for high cancer rates among distal Hiroshima A-bomb survivors", *Environ. Health Prevent. Med.*, 14:250–253, 2009.
- 8100F002 (M.Miyao), T.Watanabe, R.Honda, Y.Yamada: Hiroshima survivors exposed to very low doses of A-bomb primary radiation showed a high risk for cancers, *Environ. Health Prevent. Med.*, 14:209, 2009.
- 8100F003 (M.Miyao), T.Watanabe, R.Honda, Y.Yamada: Answer to the comment by Yoshisada Shibata on "Hiroshima survivors exposed to very low doses of A-bomb primary radiation showed a high risk for cancers", *Environ. Health Prevent. Med.*, 14:157–158, 2009.

## Presentations at Conference

### International Conference (Presentations)

- 8100I001 M.Fukuda, N.Takahashi, M.Yoshikawa, M.Kojima, Y.Sakamoto, H.Sasaki: Monitoring real time recovery from corneal disorder with a corneal resistance device in vivo, The Association for Research in Vision and Ophthalmology, (Florida, '09.05).
- 8100I002 M.Kojima, T.Sakai, Y.Yamashiro, T.Matsuda, S.Watanabe, H.Shirai, K.Sasaki, H.Sasaki: Characteristics of ocular temperature rise under exposure to frequency (18–40 GHz), BIOEM, (Davos, '09.06).
- 8100I003 (T.Sakai), M.Kojima, Y.Yamashiro, K.Sasaki, H.Sasaki, S.Watanabe, K.Sato: Development of measurement system for MMW exposure to a rabbit, BIOEM, (Davos, '09.06).
- 8100I004 (T.Taguchi), H.Sitou, S.Kurogi, Y.Suzuki, M.Kojima, T.Sakai, S.Watanabe, H.Sasaki, M.Taki: Visualization of Temperature distribution change due to millimeter-wave exposure with micro-encapsulated thermo-chromic liquid crystal, BIOEM, (Davos, '09.06).
- 8100I005 H.Murai, T.Nakahashi, M.Atsumi, I.Toyota, H.Yano, K.Nomura, H.Tsuchiya, K.Iwai, S.Morimoto: The atrophy of parahippocampal gyrus and lipid metabolism. –A vsrad analysis of senile dementia–, 19th Iagg World Congress of Gerontology and Geriatrics, (Paris, '09.07).
- 8100I006 T.Nakahashi, M.Atsumi, H.Murai, I.Toyota, H.Yano, K.Nomura, H.Tsuchiya, K.Iwai, S.Morimoto: Factors influencing prognosis of the frail elderly, 19th Iagg World Congress of Gerontology and Geriatrics, (Paris, '09.07).
- 8100I007 Y.Hamazaki, K.Fukuma, Y.Morikawa: Factor Analysis on Subjective Well-being in In-home Care of Patients suffering from Ossification of the posterior longitudinal Ligament in Japan, The 4th international conference on community health nursing research, (Adelaide South Australia, '09.08), The 4th international conference on community health nursing research conference handbook, 247, 2009.
- 8100I008 M.Kojima, Y.Yamashiro, T.Sakai, Y.Suzuki, K.Sasaki, H.Sasaki: Heat cataract by millimeter wave band exposure and thermal transport of aqueous humor, US–Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 8100I009 K.Nagai, H.Sasaki, R.Honda, M.Kojima, K.Sasaki, F.Jonasson, M.Ono: Lens thickness by three main types of cataract –Reykjavik Eye Study:2008–, US–Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 8100I010 M.Kojima, Y.Ishiba, Y.Iwai, K.Sasaki, H.Sasaki: Study of reflected light from the back side of lenses (Glasses or Sunglasses), as a Penetration route into the Eye, US–Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 8100I011 Y.Yamashiro, M.Kojima, A.Hirata, T.Sakai, S.Watanabe, M.Taki, Y.Sakamoto, K.Sasaki, H.Sasaki: Comparison of temperature elevation in ocular tissue by 18–40 GHz radio-frequency exposure, US–Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).

**Medical Research Institute/Center for FDD-MB**

## 0710 Medical Research Institute

### Faculty

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Title	Name	Field of Specialization
	DATE Takayasu	Mechanisms of chromosome segregation and DNA repair.

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### Keywords of Research

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Gene analysis, PKU- $\beta$  (TLK1), PKU- $\alpha$  (TLK2), DNA repair, cell cycle, signal transduction, chromosome

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### Outline of Research

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Our research is to clarify the function of nuclear protein kinases.  
PKU-alpha/TLK2 and PKU-beta/TLK1. Much of the work in our laboratory has focused on identifying the role of PKU-beta/TLK1 in cell proliferation.

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## 0740 Division of Human Genetics (Biochemistry)

### Faculty

Title	Name	Field of Specialization
	KUHARA Tomiko	Human metabolome analysis for diagnosis of metabolic disorders and personalized medicine
	SHINKA Toshihiro	Chemical diagnosis of metabolic disorders by mass spectrometry (Tyrosinosis, Metabolic disorders of fatty acid beta oxidation, Acylcarnitine analysis, Sulfated bile acids analysis)
	INOUE Yoshito	Chemical diagnosis and follow up study for metabolic disorders (urea cycle disorders, prenatal diagnosis of organic acidemias, Canavan disease, optical isomer analysis)

### Keywords of Research

human genetics, metabolome, pharmacogenomics, nutrigenomics, metabolomics, mass spectrometry, inborn errors of metabolism, molecular diagnosis, organic acidemia, gas chromatography-mass spectrometry, chemical diagnosis, pilot study of neonatal screening, prenatal diagnosis, personalized medicine, stable isotope dilution, tandem mass spectrometry, electrospray ionization mass spectrometry, 5-fluorouracil toxicity, metabolic profiling, aminoacidemia/aminoaciduria, fatty acid  $\beta$ -oxidation, carnitine, acylcarnitine

### Publications

#### Originals

- 0740B001 T.Kuhara, M.Ohse, Y.Inoue, T.Shinka: Five cases of beta-ureidopropionase deficiency detected by GC/MS analysis of urine metabolome, *J Mass Spectrom*, 44:214-221, 2009.
- 0740B002 T.Kuhara, M.Ohse, Y.Inoue, T.Shinka, Y.Okano, H.Shintaku, K.Hongou, T.Miyawaki, W.Morinobu, H.Tamai, K.Omura: Urinary metabolic profile of phenylketonuria in patients receiving total parenteral nutrition and medication, *Rapid Commun. Mass Spectrom.*, 23:3167-3172, 2009.

#### Case Reports

- 0740D001 (T.Kimura), K.Yasuda, Y.Obi, K.Kobayashi, T.Kuhara, Y.Isaka, E.Imai, H.Rakugi, T.Hayashi: Worsening kidney function with a history of urolithiasis, *Am. J. Kidney Dis.*, 53:37-39, 2009.

## 0750 Division of Human Genetics (Clinical Medicine)

### Faculty

Title	Name	Field of Specialization
	TAKABAYASHI Haruo	fetal medicine, DNA medicine
	OZAKI Mamoru	cytogenetics, Molecular cytogenetics

### Keywords of Research

genetic counseling, genetic service, prenatal diagnosis, congenital abnormality

### Presentations at Conference

#### International Conference (Presentations)

0750I001 H.Takabayashi, P.Yuditiya, M.Kita, K.Ikawa, A.Sekisawa, H.Chiba, M.Kitagawa: FDD-MB 2.0 System and Future, CNAPS-IV Hong Kong, (Hong Kong, '09.11).

## 0770 Division of Core Facility (Radioisotope Center)

### Faculty

Title	Name	Field of Specialization
	ISHIGAKI Yasuhito	Molecular and Cellular Biology
	YAMASHITA Masatoshi	Radiation Safety Management

### Keywords of Research

RNA surveillance, nonsense mediated mRNA decay, mutation, DNA microarray, transcriptome, proteome, apoptosis, Energy-filtering electron microscopy, Element mapping, Ultra micro structure, mouse germ cells, DNA repair, fibroblast growth factor, centrosome, tumor growth angiogenesis, micro RNA

### Outline of Research

Quality control of genetic information

### Publications

#### Originals

- 0770B001 T.Takata, T.Hasegawa, T.Tatsuno, J.Date, Y.Ishigaki, Y.Nakamura, N.Tomosugi, F.Takano, T.Ohta: Isolation of N-acetylneuraminic acid and N-glycolylneuraminic acid from *Pleurocybella porrigens*., *J. Health Sci.*, 55:373-379, 2009.
- 0770B002 (T.Kiba), Y.Kintaka, Y.Suzuki, E.Nakata, Y.Ishigaki, S.Inoue: Ventromedial hypothalamic lesions change the expression of neuron-related genes and immune-related genes in rat liver., *Neurosci. Lett.*, 455:14-16, 2009.
- 0770B003 (T.Kiba), Y.Kintaka, Y.Suzuki, E.Nakata, Y.Ishigaki, S.Inoue: Gene Expression Profiling in Rat Liver After VMH Lesioning., *Exp. Biol. Med. (Maywood)*, 234:758-763, 2009.

#### Reviews

- 0770C001 (K.Miyashita), M.Nakada, K.Shakoori, Y.Ishigaki, T.Shimasaki, Y.Motoo, Kawakami K, T.Minamoto: An emerging strategy for cancer treatment targeting aberrant glycogen synthase kinase 3beta., *Anticancer Agents Med. Chem.*, 9:1114-1122, 2009.

#### Others

- 0770F002 Y.Ishigaki, T.Takata, N.Tomosugi, T.Takegami, H.Nakagawa: Introduction of OLS inNIBB, Japan Laser Therapy Association., 8:15-18, 2009 (in Japanese) .

### Presentations at Conference

#### International Conference (Symposium)

- 0770H001 Y.Ishigaki, T.Kurihara, S.Izumi: Visualization of the mRNA structure in human cells by immuno-electron microscopy, 6th International symposium on electron microscopy in medicine and biology 2009, (Kobe, '09.09).



### International Conference (Presentations)

- 0770I001 T.Shimasaki, Y.Ishigaki, N.Nakaya, N.Tomosugi, T.Tanaka, W.Mai, K.Kawakami, T.Minamoto, Y.Motoo: Therapeutic effect of gemcitabine plus GSK3  $\beta$  inhibitor on pancreatic cancer: basic analysis for future clinical trial, The International Pancreatic Research Forum 2009, (Tokyo, '09.03).
- 0770I002 T.Takegami, M.Murakami, K.Sato, T.Ota, Y.Ishigaki: Isolation of Japanese encephalitis virus (JEV) in Ishikawa, Japan and analysis of gene expression in JEV-infected cells by microarray, 43rd Joint Working Conference on Viral Diseases, US-Japan Cooperative Medical Science Program, Philadelphia, (Philadelphia, '09.07).

## 0780 Division of Core Facility (Experimental Animal Center)

### Faculty

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Title	Name	Field of Specialization
(Additional Post)	MATSUI Shinobu	

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### Keywords of Research

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cardiac function, echocardiography, myocardial metabolism, cell cycle control and immunopathology

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### Outline of Research

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1. cardiac function, echocardiography, myocardial metabolism.
  2. cell cycle control and immunopathology.
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## 0800 Division of Core Facility (High-Tech Research Center)

### Faculty

Title	Name	Field of Specialization
(Additional Post)	NISHIJO Muneko	Environmental epidemiology, epidemiology of cadmium pollution
	SUN Peng	Analysis of mood disorder model mice in search for new therapeutic approaches
	TAKATA Takanobu	Development of the method for diacrisis and therapy of the intractable disease by 'Proteome Analysis'

### Keywords of Research

Epidemiology of health effects of environmental cadmium exposure, dioxins, Toxicology of environmental pollutants, neurovirology, Cancer chemoprevention by natural products

### Outline of Research

1. Epidemiology of health effects of environmental cadmium exposure, and dioxins., Toxicology of environmental pollutants.
2. neurovirology.
3. Cancer chemoprevention by natural products.

### Publications

#### Originals

- 0800B001 (K.Asayama), T.Ohkubo, S.Yoshida, K.Suzuki, H.Metoki, A.Harada, Y.Murakami, Y.Ohashi, H.Ueshima, Y.Imai, H.Nakagawa, The Japan Arteriosclerosis Longitudinal Study(JALS) group: Stroke risk and antihypertensive drug treatment in the general population:the Japan arteriosclerosis longitudinal study, *J.Hypertens.*, 27:357-364, 2009.
- 0800B002 R.Naganuma, M.Sakurai, K.Miura, K.Yoshita, Y.Morikawa, T.Kido, H.Ueshima, H.Nakagawa, J.Stamler: Relation of long-term body weight change to change in lipoprotein particle size in Japanese men and women:The INTRTMAP Toyama study, *Atherosclerosis*, 206:282-286, 2009.
- 0800B003 (K.Miura), H.Nakagawa, Y.Ohashi, A.Harada, M.Takagi, T.Koshiro, A.Takahashi, M.Nishinaga, F.Soejima, H.Ueshima, for the Japan arteriosclerosis longitudinal study (JALS) group: Four blood pressure indexes and the risk of stroke and myocardial infarction in Japanese men and women: a meta-analysis of 16 cohort studies, *Circulation*, 119:1892-1898, 2009.
- 0800B004 (Y.Suwazono), T.Kido, H.Nakagawa, M.Nishijo, R.Honda, E.Kobayashi, M.Dochi, K.Nogawa: Biological half-life of cadmium in the urine of inhabitants after cessation of cadmium exposure, *Biomarkers.*, 14:77-81, 2009.
- 0800B005 K.Kitaoka-Higashiguti, Y.Morikawa, K.Miura, M.Sakurai, M.Ishizaki, T.Kido, Y.Naruse, H.Nakagawa: Burnout and risk factors for arteriosclerotic disease: follow-up study, *J. Occup. Health*, 51:123-131, 2009.
- 0800B006 M.Sakurai, T.Takamura, K.Miura, S.Kaneko, H.Nakagawa: Middle-aged Japanese women are resistant to obesity-related metabolic abnormalities, *Metab. Clin. Exp.*, 58:456-459, 2009.
- 0800B007 (M.Sasaki), K.Kitaoka, Y.Morikawa, H.Nakagawa: Relationship between stress coping and burnout in Japanese hospital nurses, *J. Nurs. Manag.*, 17:359-365, 2009.
- 0800B008 M.Sakurai, K.Miura, T.Takamura, M.Ishizaki, Y.Morikawa, K.Nakamura, K.Yoshita, T.Kido, Y.Naruse, S.Kaneko, H.Nakagawa: J-shaped relationship between waist circumference and subsequent risk for Type 2 diabetes:an 8-year follow-up of relatively lean Japanese individuals., *Diabet. Med.*, 26:753-759, 2009.

- 0800B009 (DD.Nhu), T.Kido, R.Naganuma, N.Sawano, K.Tawara, M.Nishijo, H.Nakagawa, NN.Hung, LTH.Thom: A GIS study of dioxin contamination in a Vietnamese region sprayed with herbicide, *Environ. Health Prevent. Med.*, 14:353–360, 2009.
- 0800B010 (The emerging risk factors collaboration), ED.Angelantonio, N.Sarwar, P.Perry, S.Captoge, KK.Ray, A.Thompson, AM.Wood, S.Lewington, N.Sattar, CJ.Packard, R.Collins, SG.Thompson, J.Danesh, H.Nakagawa: Major lipids, apolipoproteins, and risk of vascular disease, *JAMA*, 302:1993–2000, 2009.
- 0800B011 H.Oda, M.Nishijo, H.Nakagawa, Y.Morikawa, T.Kido, A.Ikawa, E.Kobayashi, K.Nogawa: Urinary metallothionein levels and mortality in residents exposed to cadmium in the environment, *J. Kanazawa. Med. Univ.*, 34:148–153, 2009.
- 0800B012 K.Tawara, M.Nishijo, R.Honda, S.Maruzeni, T.Seto, T.Kido, S.Saito, H.Nakagawa: Effects of maternal dioxin exposure on newborn size at birth among Japanese mother–infant pairs, *Environ. Health Prevent. Med.*, 14:88–95, 2009.
- 0800B013 (T.Kido), K.Saito, R.Naganuma, C.Sakakibara, DD.Nhu, H.Suzuki, M.Nishijo, H.Nakagawa, K.Kusama, NN.Hung: Association between dioxin concentrations in breast milk and dietary nutrient intake in Vietnam, *Organohalogen Compounds.*, 71:982–987, 2009.
- 0800B014 (DD.Nhu), T.Kido, R.Naganuma, K.Saito, H.Suzuki, N.Kuroda, S.Honma, K.Honma, S.Maruzeni, M.Nishijo, H.Nakagawa, NN.Hung, LTH.Thom: An epidemiological study on health effects by dioxin in Vietnam introduction of new “Hot Spot” area, *Organohalogen Compounds.*, 71:890–895, 2009.
- 0800B015 (E.Kobayashi), Y.Suwazono, M.Dochi, R.Honda, T.Kido, H.Nakagawa: Influence of drinking and/or cooking with Jinzu River water on the development of Itai–Itai disease, *Biol Trace Elem Res*, 129:46–57, 2009.
- 0800B016 (E.Kobayashi), Y.Suwazono, R.Honda, M.Dochi, M.Nishijo, T.Kido, H.Nakagawa: Serial follow–up study on renal handling of calcium and phosphorus after soil replacement in Cd–polluted rice paddies estimated using a general linear mixed model, *Biol Trace Elem Res*, 129:261–269, 2009.
- 0800B017 (DD.Nhu), T.Kido, R.Naganuma, K.Saito, H.Suzuki, N.Kuroda, S.Honma, PT.Tai, S.Maruzeni, M.Nishijo, H.Nakagawa, NN.Hung, LTH.Thom: Hormone levels in the saliva of lactating Vietnamese mothers in a dioxin hot–spot area, *Journal of Tsuruma Health Society Kanazawa University*, 33:59–66, 2009.
- 0800B018 (H.Suzuki), T.Kido, Y.Morikawa, H.Nakagawa, M.Ishizaki, Y.Naruse, M.Higashiyama, M.Dochi, Y.Suwazono, K.Nogawa: The relationship between mental–health status and work–related factors in male Japanese overseas employees, *Journal of Tsuruma Health Society Kanazawa University*, 33:21–33, 2009.
- 0800B019 T.Takata, T.Hasegawa, T.Tatsuno, J.Datte, Y.Ishigaki, Y.Nakamura, N.Tomosugi, F.Takano, T.Ota: Isolation of *N*-acetylneuraminic acid and *N*-glycolylneuraminic acid from *Pleurocybella porrigens*, *J. Health Sci.*, 55:373–379, 2009.
- 0800B020 (K.Yoshita), M.Nakagawa, Y.Sugimori, K.Mira, M.Sakurai, T.Kami, Y.Arai, M.Nozone, R.Tomimatsu, H.Nakagawa, H.Ishida: Effects of weight–reducing program conducted at work place with minimum burden of participants: A program to prevent development of metabolic syndrome, mainly under the guidance of registered dietitians, *Journal of the Japan Dietetic Association*, 52:17–26, 2009 (in Japanese) .
- 0800B021 M.Sakurai, K.Miura, K.Nakamura, M.Ishizaki, Y.Morikawa, T.Kido, Y.Naruse, H.Nakagawa: Relationship between abdominal obesity, accumulation of metabolic abnormalities and risk of cardiovascular disease: An 11–year follow–up of middle–aged Japanese men, *Japanese journal of cardiovascular disease prevention.*, 44:1–9, 2009 (in Japanese) .

## Reviews

- 0800C001 (Emerging risk factors collaboration), S.Erpou, S.Kaptoge, PL.Perry, ED.Angelantonio, A.Thompson, IR.White, SM.Marcovina, R.Collins, SG.Thompson, J.Danesh, H.Nakagawa, K.Miura: Lipoprotein(a) concentration and the risk of coronary heart disease, stroke, and nonvascular mortality, *JAMA*, 302:412–423, 2009.

## Others

- 0800F001 M.Sakurai, T.Takamura, K.Miura, S.Kaneko, H. Nakagawa: Abnormal liver function tests and metabolic syndrome— is fatty liver related to risks for atherosclerosis beyond obesity?, Intern. Med., 48:1573–1574, 2009.
- 0800F013 Y.Ishigaki, T.Takata, N.Tomosugi, T.Takegami, H.Nakagawa: Introduction of OLS inNIBB, Japan Laser Therapy Association., 8:15–18, 2009 (in Japanese) .

## 0900 Division of Cell Medicine

### Faculty

Title	Name	Field of Specialization
	FUJIKAWA Kohzaburo	polyploid cells, cell cycle,transformation
	MIYAGOSHI Minoru	Cell biology

### Keywords of Research

polyploid cells, polyploidization, Meth-A cells, V79 cells, triploid cells, tetraploid cells, octaploid cells, H-1(ES)cells

### Outline of Research

Study of polyploid cells

### Publications

#### Originals

0900B001 K.Fujikawa-Yamamoto, M.Miyagoshi, H.Yamagishi: Cell cycle, morphology and pluripotency of octaploid embryonic stem cells in comparison with those of tetraploid and diploid cells, Hum. Cell., 22:64-71, 2009.

#### Reviews

0900C001 K.Kawamura, K.Fujikawa: Evaluation of sub-G1 peak in mitotic catastrophe, Cytometry Res, 19:63-71, 2009 (in Japanese) .

## 0910 Division of Advanced Medicine

### Faculty

Title	Name	Field of Specialization
	MATSUI Shinobu	Clinical cardiology
	TOMOSUGI Naohisa	Clinical Proteomics
	NAGAO Yosinobu	spermatogenesis, epigenetics, endocrine disruptors
	UEDA Tadashi	cardiac muscle, lung, cell biology, cytochemistry

### Keywords of Research

heart failure, cardiomyopathy, neurohumoral factor, immunity, autoantibody, spermatogenesis, cell cycle, epigenetics, endocrine disruptors, meiosis

### Outline of Research

1. Myocardial injury due to autoimmunity against G-protein-coupled receptor. Growing evidence suggested that G-protein-coupled receptor-directed autoimmune mechanism may play an important role in the pathogenesis of idiopathic dilated cardiomyopathy. Our study showed that specific removal of anti-G-protein coupled receptor autoantibodies improved cardiac structure and function in experimental autoimmune cardiomyopathy.

2. Heparin, a key regulator of iron metabolism, is expressed in the liver, distributed in blood, and excreted in urine. However, to date, no reliable and practical method for measuring the bioactive form of heparin in serum has been developed. Here, we employed surface-enhanced laser desorption ionization time of flight mass spectrometry (SELDI-TOF MS) to analyze the expression of serum heparin in hemodialysis patients. Heparin-25 was found to accumulate in the serum of hemodialysis patients; this could contribute to the pathogenesis of renal anemia by decreasing the available iron for hematopoiesis.

3. Histone modifications in meiotic prophase of spermatogenesis.

### Publications

#### Originals

- 0910B001 T.Takata, T.Hasegawa, T.Tatsuno, J.Date, Y.Ishigaki, Y.Nakamura, N.Tomosugi, F.Takano, T.Ohta: Isolation of N-acetylneuraminic acid and N-glycolylneuraminic acid from *Pleurocybella porrigens*., *J. Health Sci.*, 55:373-379, 2009.
- 0910B002 (J.J.Kroot), E.H.J.M.Kemna, S.S.Bansal, M.Busbridge, N.Campostrini, D.Girelli, R.C.Hider, V.Koliaraki, A.Mamalaki, G.Olbina, N.Tomosugi, C.Tselepis, D.G.Ward, T.Ganz, J.C.M.Hendriks, D.W.Swinkels: Results of the first international round robin for the quantification of urinary and plasma heparin assays: need for standardization, *Haematologica.*, 94:1748-1752, 2009.
- 0910B003 (J.Kanda), T.Uchiyama, N.Tomosugi, M.Higuchi, T.Uchiyama, H.Kawabata: Oncostatin M and leukemia inhibitory factor increase heparin expression in hepatoma cell lines, *Int. J. Hematol.*, 90:545-552, 2009.
- 0910B004 (T.Kamai), N.Tomosugi, H.Abe, K.Arai, K.Yoshida: Increased serum heparin-25 level and increased tumor expression of heparin mRNA are associated with metastasis of renal cell carcinoma, *BMC Cancer*, 9:270, 2009.
- 0910B005 (J.Kanda), C.Mizumoto, H.Kawabata, T.Ichinohe, H.Tsuchida, N.Tomosugi, K.Matsuo, K.Yamashita, T.Kondo, T.Ishikawa, T.Uchiyama: Clinical significance of serum heparin levels on early infectious complications in allogeneic hematopoietic stem cell transplantation, *Biol. Blood Marrow Transplant.*, 15:956-962, 2009.

- 0910B006 (H.Suzuki), K.Toba, K.Kato, T.Ozawa, N.Tomosugi, M.Higuchi, T.Kusuyama, Y.Iso, N.Kobayashi, S.Yokoyama, N.Fukuda, H.Saitoh, K.Akazawa, Y.Aizawa: Serum hepcidin-20 is elevated during the acute phase of myocardial infarction, *Tohoku J. Exp. Med.*, 218:93-98, 2009.
- 0910B007 (R.Sugimoto), N.Fujita, N.Tomosugi, H.Miyauchi, H.Tanaka, M.Takeo, N.Nakagawa, M.Iwasa, Y.Kobayashi, M.Kaito, Y.Takei: Impaired regulation of serum hepcidin during phlebotomy in patients with chronic hepatitis C, *Hepatol. Res.*, 39:619-624, 2009.
- 0910B008 H.Okuyama, S.Kimura, H.Atsumi, J.Imura, K.Fujimoto, Y.Chikazawa, M.Nakagawa, H.Imamura, H.Yamaya, M.Asaka, N.Tomosugi, H.Yokoyama: The relationship between initial diagnosis and long-term prognosis in lupus nephritis, *Jpn. J. Nephrol.*, 51:44-50, 2009 (in Japanese) .

#### Others

- 0910F002 Y.Ishigaki, T.Takata, N.Tomosugi, T.Takegami, H.Nakagawa: Introduction of OLS inNIBB, Japan Laser Therapy Association., 8:15-18, 2009 (in Japanese) .

### Presentations at Conference

#### International Conference (Presentations)

- 0910I001 T.Shimasaki, Y.Ishigaki, N.Nakaya, N.Tomosugi, T.Tanaka, W.Mai, K.Kawakami, T.Minamoto, Y.Motoo: Therapeutic effect of gemcitabine plus GSK3  $\beta$  inhibitor on pancreatic cancer: basic analysis for future clinical trial, *The International Pancreatic Research Forum 2009*, (Tokyo, '09.03).
- 0910I002 Y.Masaki, N.Kurose, H.Iwao, A.Nakajima, M.Yamamoto, H.Takahashi, M.Kawano, T.Saeki, S.Matsui, A.Azumi, S.Nishiyama, Y.Zen, T.Sumida, M.Kojima, T.Yoshino, S.Nakamura, N.Tomosugi, T.Takegami, S.Sugai, H.Umehara: Clinico-pathological analysis of 107 cases of IgG4+MOLPS (IgG4-positive multi-organ lymphoproliferative syndrome), *10<sup>th</sup> International symposium on Sjögren's syndrome*, (BREST, '09.10).
- 0910I003 H.Yokota, M.Doai, M.Matoba, H.Tonami, Y.Nagao: In vitro proton MR spectroscopy for evaluation of human bronchioalveolar carcinoma and lung adenocarcinoma, *European Society for Magnetic Resonance in Medicine and Biology(ESMRMB)*, (Turkey, '09.10).
- 0910I004 K.Kitagawa, M.Higuchi, H.Tsuchida, H.Sasaki, N.Tomosugi: Diagnostic potential of tear and serum proteomic patterns in mikulicz's disease, *10th International Symposium on Sjogren's Syndrome*, (France, '09.10), 2009.



## 0920 Division of Molecular Oncology and Virology

### Faculty

Title	Name	Field of Specialization
	TAKEGAMI Tsutomu	Molecular mechanism of flavivirus replication, interaction with host cells and viral carcinogenesis
(Additional Post)	MOTOO Yoshiharu	Clinical Oncology, Gastroenterology, Cancer Cell Biology
	OTA Takahide	Molecular analysis of the mechanism of cancer metastasis
	MURAKAMI Manabu	Pathogenicity of flavivirus isolated from the field-collected mosquitoes

### Keywords of Research

cancer, carcinogenesis, metastasis, cell transformation, gene expression, hepatitis C virus, flavivirus, Japanese encephalitis virus, virus replication, RhoGDI, Rho family, Eomes, epithelial/mesenchymal, nonstructural protein NS3, RNA synthesis, transfection, persistent infection, RNAi

### Outline of Research

Molecular analyses of virus replication, carcinogenesis and metastasis

### Books

- 0920A003 Y.Motoo, T.Shimasaki, T.Minamoto: Gemcitabine changes the gene expression in human pancreatic cancer cells :search for new therapeutic molecular targets, *Pancreatology:from Bench to Bedside*, 33-38, Springer, Berlin, 2009.
- 0920A005 Y.Motoo: Japanese Herbal Medicine in Western-style Modern Medical System, *Botanical Medicine in Clinical Practice*, 105-111, CABI, UK, 2009.

### Publications

#### Originals

- 0920B001 (W.Mai), K.Kawakami, A.Shakoori, S.Kyo, K.Miyashita, K.Yokoi, M.Jin, T.Shimasaki, Y.Motoo, T.Minamoto: Deregulated GSK3  $\beta$  Sustains Gastrointestinal Cancer Cells Survival by Modulating Human Telomerase Reverse Transcriptase and Telomerase, *Clin. Cancer Res.*, 15:6810-6819, 2009.
- 0920B002 (QM.Zhou), S.Wang, H.Zhang, YY.Lu, XF.Wang, Y.Motoo, SB.Su: The combination of baicalin and baicalein enhances apoptosis via the ERK/p38 MAPK pathway in human breast cancer cells, *Acta Pharmacol. Sin.*, 30:1648-1658, 2009.
- 0920B003 Y.Motoo, I.Arai, I.Hyodo, K.Tsutani: Current status of Kampo (Japanese herbal) medicines in Japanese clinical practice guidelines, *Complement Ther Med.*, 17:147-154, 2009.
- 0920B004 (S.Nukuzuma), M.Kaneoka, S.Sugiura, K.Nakamichi, C.Nukuzuma, I.Miyoshi, T.Takegami: Archetype JC virus efficiently propagates in kidney-derived cells stable expressing HIV-1 Tat, *Microbiol. Immunol.*, 53:621-628, 2009.
- 0920B005 (S.Nukuzuma), K.Nakamichi, C.Nukuzuma, T.Takegami: Inhibitory effect of serotonin antagonists on JC virus propagation in a carrier culture of human neuroblastoma cells, *Microbiol. Immunol.*, 53:496-501, 2009.

## Others

- 0920F005 Y.Ishigaki, T.Takata, N.Tomosugi, T.Takegami, H.Nakagawa: Introduction of OLS inNIBB, Japan Laser Therapy Association., 8:15-18, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Symposium)

- 0920H001 T.Shimasaki, Y.Motoo: Molecular analysis on gemcitabine-treated pancreatic cancer cells., 2nd Japan-Taiwan Joint Symposium on Medical Oncology, (Taipei, '09.12).

### International Conference (Presentations)

- 0920I001 T.Shimasaki, Y.Ishigaki, N.Nakaya, N.Tomosugi, T.Tanaka, W.Mai, K.Kawakami, T.Minamoto, Y.Motoo: Therapeutic effect of gemcitabine plus GSK3  $\beta$  inhibitor on pancreatic cancer: basic analysis for future clinical trial, The International Pancreatic Research Forum 2009, (Tokyo, '09.03).
- 0920I002 T.Takegami, M.Murakami, K.Sato, T.Ota, Y.Ishigaki: Isolation of Japanese encephalitis virus (JEV) in Ishikawa, Japan and analysis of gene expression in JEV-infected cells by microarray, 43rd Joint Working Conference on Viral Diseases, US-Japan Cooperative Medical Science Program, Philadelphia, (Philadelphia, '09.07).
- 0920I003 Y.Motoo: Systematic review of Japanese clinical practice guidelines: how are Kampo medicines described?, The 8th Meeting of the Consortium for Globalization of Chinese Medicine 2009, (Nottingham, '09.08).
- 0920I004 Y.Masaki, N.Kurose, H.Iwao, A.Nakajima, M.Yamamoto, H.Takahashi, M.Kawano, T.Saeki, S.Matsui, A.Azumi, S.Nishiyama, Y.Zen, T.Sumida, M.Kojima, T.Yoshino, S.Nakamura, N.Tomosugi, T.Takegami, S.Sugai, H.Umehara: Clinico-pathological analysis of 107 cases of IgG4+MOLPS (IgG4-positive multi-organ lymphoproliferative syndrome), 10<sup>th</sup> International symposium on Sjögren's syndrome, (BREST, '09.10).

## 0930 Division of Dermatmycology (Novartis Pharma)

### Faculty

Title	Name	Field of Specialization
(Additional Post)	MOCHIZUKI Takashi	Medical mycology, Dermatmycosis
	ISHIZAKI Hiroshi	Medical mycology
(Additional Post)	KAWASAKI Masako	Medical mycology
(Additional Post)	ANZAWA Kazushi	Medical mycology

### Keywords of Research

fungi, dermatophytes, *Candida* species, *Sporothrix* species, dematiaceous fungi, mitochondrial DNA, restriction fragment length polymorphism, ribosomal DNA, ITS region, sequencing, phylogeny, taxonomy, molecular epidemiology, molecular typing

### Outline of Research

Research activities in the Division of Dermatmycology are as follows:

1. Improvement and application of genetic typing of *Candida albicans* to investigate the fungal flora in oral cavities of patients.
2. Improvement and application of DNA extraction from nail and PCR-RFLP methods for identification of fungal elements in nail for the diagnosis of onychomycosis.
3. Identification of isolates and isolation and identification of fungi from samples sent from nation-wide hospitals to support clinics without molecular biological facilities.
4. Conservation of a fungal collection held in the Department of Dermatology.
5. An epidemiological survey of *Trichophyton tonsurans*

### Publications

#### Originals

- 0930B001 M.Kawasaki, K.Anzawa, T.Mochizuki, H.Ishizaki, Basavaraj M.Hemashettar: Successful Mating of a Human Isolate of *Arthroderma simii* with a Tester Strain of *A. vanbreuseghemii*, Jpn. J. Med. Mycol., 50:15-18, 2009.
- 0930B002 H.Ishizaki, M.Kawasaki, K.Anzawa, T.Mochizuki, Arunaloke Chakrabarti, Rataporn Ungpakorn, Haydee Torres Guererro, Conchita Toriello, Robert Arenas: Mitochondrial DNA Analysis of *Sporothrix schenckii* in India Thailand, Brazil, Colombia, Guatemala and Mexico, Jpn. J. Med. Mycol., 50:19-26, 2009.
- 0930B003 K.Takeda, T.Ushigami, M.Nanbu, H.Tanabe, T.Mochizuki, A.Fukumura, Wun Bill Chen: Six Cases of Skin Damage Related to Leakage from a Gastrostomy Catheter, Skin research., 8:31-35, 2009 (in Japanese) .

#### Reviews

- 0930C005 T.Mochizuki: Diagnosis of Cutaneous Fungal Infection, Jpn. J. Med. Mycol., 50:195-198, 2009 (in Japanese) .
- 0930C010 T.Mochizuki: Fungal infections and oter common skin diseases on the foot, 靴医学, 23:105111, 2009 (in Japanese) .

## Case Reports

- 0930D001 (A.Arakawa), N.Kanazawa, S.Tanaka, M.Yonezawa, Y.Miyachi, T.Mochizuki: Genotyping of *Trichophyton tonsurans* isolate from a Japanese boy reveals infection in the USA, Clin. Exp. Dermatol., 34:630–632, 2009.
- 0930D002 (N.Umemoto), T.Demitsu, M.Kakurai, K.Sasaki, R.Azuma, E.Iida, K.Yoneda, M.Kawasaki, T.Mochizuki: Two cases of cutaneous phaeohyphomycosis due to *Exophiala jeanselmei*: diagnostic significance of direct microscopical examination of the purulent discharge, Clin. Exp. Dermatol., 34:351–353, 2009.
- 0930D003 J.Hatta, M.Yanagihara, M.Hasei, S.Abe, H.Tanabe, T.Mochizuki: Case of multiple cutaneous granular cell tumors, J. Dermatol., 36:504–507, 2009.
- 0930D005 (E.Asakawa), M.Fujihiro, T.Mochizuki: A Case of Granuloma Trichophyticum(Majocchi) Mimicking Leontiasis in Clinical Appearance, Nishinon j. dermatol., 71:160–163, 2009 (in Japanese) .

## Presentations at Conference

### International Conference (Symposium)

- 0930H001 T.Mochizuki: Application of molecular diagnosis of cutaneous fungal infections, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0930H002 M.Kawasaki, H.Tanabe, T.Mochizuki: Mycoses in Asia EP-03-3, Dematiaceous fungus infections in East Asia – molecular biological aspects –, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).

### International Conference (Presentations)

- 0930I001 T.Mochizuki, M.Kawasaki, H.Tanabe, K.Anzawa, H.Ishizaki, K.Kamei, M.Fujihiro, H.Shinoda: Molecular epidemiology of *Trichophyton tonsurans* isolated in Japan between 2006 to 2008, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0930I002 (M.Hata), K.Tatsuno, Y.Suzuki, K.Tomita, K. Sugaya, K.Anzawa, T.Mochizuki: Successful treatment of sporotrichosis with voriconazole, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0930I003 H.Tanabe, T.Mochizuki, M.Kawasaki, T.Ushigami, N.Masayuki: Tinea barbae caused by *Microsporum canis*, The 17<sup>th</sup> Congress of the International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0930I004 (M.Tochigi), T.Ochiai, C.Mekata, H.Nishiyama, K.Yamanaka, K.Anzawa, M.Kawasaki: Sporotrichosis of the face by autoinoculation associated with tacrolimus treatment, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0930I005 M.Kawasaki, K.Anzawa, T.Mochizuki, H.Ishizaki, B.Hemashettar: *Arthroderma vanbreuseghemii* is a synonym of *A.simii*, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0930I006 M.Kawasaki, K.Anzawa, T.Mochizuki, H.Ishizaki, B.Hemashettar: Mating among three teleomorphs of *Trichophyton mentagrophytes*, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0930I007 J. Hatta, T.Hatta, S.Miyagawa, Y.Kitahara, T.Hirota, K.Anzawa, T.Mochizuki: Quantitative image analysis of effects of antimycotic agents on the hyphal growth in *Trichophyton rubrum*, The 17<sup>th</sup> Congress of The International Society for Human and Animal Mycology, (Tokyo, '09.05).
- 0930I008 T.Mochizuki, M.Kawasaki, H.Tanabe, K.Anzawa, H.Ishizaki, K.Kamei, Y.Takahashi, M.Fujihiro, H.Shinoda: Molecular epidemiology of Japanese isolates of *Trichophyton tonsurans* by PCR-RFLP analysis of non-transcribed spacer region of ribosomal RNA gene, The 4<sup>th</sup> Joint Meeting of Japanese Dermatological Association and Australian College of Dermatologist, (Tokyo, '09.07).

## 0970 Division of Vision Research for Environmental Health

### Faculty

Title	Name	Field of Specialization
(Additional Post)	SASAKI Hiroshi	cataract, epidemiology, uveitis
	SASAKI Kazuyuki	cataract, ophthalmological optics, electromagnetic ocular injury, epidemiology
(Additional Post)	KOJIMA Masami	cataract, ophthalmological optics, electromagnetic ocular injury, epidemiology
(Additional Post)	KAWAKAMI Yutaka	cataract, thyroid ocular
	YAMASHIRO Yoko	cataract, electromagnetic wave induced ocular tissue changes, epidemiology

### Keywords of Research

electromagnetic waves, micro waves, millimeter waves, ultraviolet rays, infrared rays, non ionizing-radiation, mobile phone, environmental health, cataract epidemiology, prevention of blindness, cataract, pterygium, glaucoma, age related macular degeneration, JICA, WHO, outdoor temperature, risk factors search, Reykjavik eye study, Monzen eye study, Liaoning eye study, racial differences

### Outline of Research

Main research themes are (1) Population based survey of ocular diseases in the farmers with low income living in the small village of Shanxi Province. China and (2) Radio frequency (RF) effects on health ; Acute ocular tissue damages by 60 GHz RF exposure. Study No.1 : The survey was carried as a part of JICA project on July 2006. Total number of participants was 710, response ratio was 93.9%. Cataract was a top ranked blindness cause. Although, number of patients was small, cases with diabetic retinopathy and age related macular degeneration were noticed. No.2 : The study on acute ocular tissues injuries induced in rabbit eyes by exposure of 60 GHz millimeter RF has been carried out. No ocular injuries were noticed without high dose of the above RF exposure. Among corneal superficial damages which were pointed out by previous investigators, no RF exposure specific damages were seen. No one has pointed out the above up to now.

### Publications

#### Originals

- 0970B001 (A.Arnarsson), KF.Damji, H.Sasaki, T.Sverrinsson, F.Jonasson: Pseudoexfoliation in the Reykjavik eye study: five-year incidence and changes in related ophthalmologic variables, *Am. J. Ophthalmol.*, 148:291-297, 2009.
- 0970B002 K.Sasaki, Y.Yamashiro, M.Kojima, R.Honda, Y.Sakamoto, HM.Cheng, H.Sasaki: Assessment of pinguecula and pterygium in the aging eye with ultraviolet fluorescence photography (UVFP) : Data analysis of eye disease survey in Shanxi, China, *Rehabilitation science : memoirs of the Tohoku Bunka Gakuen University Faculty of Medical Science & Welfare, Department of rehabilitation.*, 5:31-40, 2009.
- 0970B003 M.Kojima, M.Hanazawa, Y.Yamashiro, H.Sasaki, S.Watanabe, M.Taki, Y.Suzuki, A.Hirata, Y.Kamimura, K.Sasaki: Acute ocular injuries caused by 60-GHz millimeter-wave exposure, *Health Phys.*, 97:212-218, 2009.
- 0970B004 M.Fukuda, H.Sasaki: Measurement of AQCmax of five different ophthalmic solutions and discussion of its new application, *J Ocul Pharmacol Ther*, 25:351-355, 2009.
- 0970B005 H.Kawada, M.Kojima, T.Kimura, S.Natori, K.Sasaki, H.Sasaki: Effect of 5-S-GAD on UV-B-Induced cataracts in rats, *Jpn. J. Ophthalmol.*, 53:531-535, 2009.

- 0970B006 H.Sasaki: Observational cohort study : The Reykjavik eye study, *Journal of the eye.*, 26:17–24, 2009 (in Japanese) .
- 0970B007 M.Fukuda, H.Sasaki: Cytotoxic effects of new quinolone antibiotic ophthalmic solutions nad nonsteroidal anti-inflammatory ophthalmic solutions on cultured rabbit corneal cell line, *Journal of the eye.*, 26:399–403, 2009 (in Japanese) .
- 0970B008 M.Fukuda, H.Sasaki: Cytotoxic effect of ofloxacin ophthalmic solutions and timolol maleate ophthalmic solutions on cultured rabbit corneal cell line and ocular pharmacokinetics of ophthalmic solutions in rabbits, *Journal of the eye.*, 26:977–981, 2009 (in Japanese) .

#### Case Reports

- 0970D001 S.Inagaki, K.Kitagawa, K.Nagai, K.Hagiwara, H.Sasaki: An infant case of acute purulent dacryoadenitis due to MRSA, *Journal of the eye.*, 26:1405–1408, 2009 (in Japanese) .

### Presentations at Conference

#### International Conference (Presentations)

- 0970I001 J.Qu, H.Sasaki, Y.Sakamoto, E.Shibuya, K.Sasaki: Influence of watercleft on ocular higher order aberrations, The Association for Research in Vision and Ophthalmology, (Florida, '09.05).
- 0970I002 M.Fukuda, N.Takahashi, M.Yoshikawa, M.Kojima, Y.Sakamoto, H.Sasaki: Monitoring real time recovery from corneal disorder with a corneal resistance device in vivo, The Association for Research in Vision and Ophthalmology, (Florida, '09.05).
- 0970I003 M.Kojima, T.Sakai, Y.Yamashiro, T.Matsuda, S.Watanabe, H.Shirai, K.Sasaki, H.Sasaki: Characteristics of ocular temperature rise under exposure to frequency (18–40 GHz), BIOEM, (Davos, '09.06).
- 0970I004 (T.Sakai), M.Kojima, Y.Yamashiro, K.Sasaki, H.Sasaki, S.Watanabe, K.Sato: Development of measurement system for MMW exposure to a rabbit, BIOEM, (Davos, '09.06).
- 0970I005 (T.Taguchi), H.Sitou, S.Kurogi, Y.Suzuki, M.Kojima, T.Sakai, S.Watanabe, H.Sasaki, M.Taki: Visualization of Temperature distribution change due to millimeter-wave exposure with micro-encapsulated thermo-chromic liquid crystal, BIOEM, (Davos, '09.06).
- 0970I006 K.Kitagawa, M.Higuchi, H.Tsuchida, H.Sasaki, N.Tomosugi: Diagnostic potential of tear and serum proteomic patterns in mikulicz's disease, 10th International Symposium on Sjogren's Syndrome, (France, '09.10), 2009.
- 0970I007 H.Sasaki, Y.Sakamoto, C.Schnider, N.Fujita, Y.Yamashiro, K.Sasaki: UV exposure to the Eye as a function of solar altitude, American Academy of optometry, (Florida, '09.11).
- 0970I008 N.Hatsusaka, Y.Sakamoto, E.Shibuya, N.Mita, H.Sasaki: Influence of nuclear opacity on intraocular higher-order aberrations, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0970I009 M.Kojima, Y.Yamashiro, T.Sakai, Y.Suzuki, K.Sasaki, H.Sasaki: Heat cataract by millimeter wave band exposure and thermal transport of aqueous humor, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0970I010 H.Sasaki, T.Abe, S.Furui, Y.Sakamoto, S.Suzuki, H.Koutake, K.Terasaki, T.Ishitake, N.Hayabuchi: The effects of ionization radiation exposure on crystalline lenses of interventional radiologist, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0970I011 K.Nagai, H.Sasaki, R.Honda, M.Kojima, K.Sasaki, F.Jonasson, M.Ono: Lens thickness by three main types of cataract -Reykjavik Eye Study:2008-, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0970I012 M.Kojima, Y.Ishiba, Y.Iwai, K.Sasaki, H.Sasaki: Study of reflected light from the back side of lenses (Glasses or Sunglasses), as a Penetration route into the Eye, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).

- 0970I013 Y.Yamashiro, M.Kojima, A.Hirata, T.Sakai, S.Watanabe, M.Taki, Y.Sakamoto, K.Sasaki, H.Sasaki: Comparison of temperature elevation in ocular tissue by 18-40 GHz radio-frequency exposure, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).
- 0970I014 E.Shibuya, Y.Sakamoto, N.Yamamoto, H.Sasaki: Influence of age and axial length on intraocular higher order aberrations, US-Japan Cooperative Cataract Research Group Meeting, (Hawaii, '09.12).

## 9050 Center for FDD-MB

### Faculty

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Title	Name	Field of Specialization
	TAKABAYASHI Haruo	fetal medicine, DNA medicine
	YUDITIYA Purwosunu	

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### Keywords of Research

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FDD-MB, single cell technology, NRBC, noninvasive fetal diagnosis, DNA diagnosis, fetal cell, woman's health, DNA array, Lab on a Chip

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### Outline of Research

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Mission of Center for FDD-MB

1. elucidation of the relationship between fetal cells and mother's health
2. development of fetal DNA diagnosis from maternal blood(FDD-MB)
3. development of single cell technology

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### Presentations at Conference

#### International Conference (Presentations)

9050I001 H.Takabayashi, P.Yuditiya, M.Kita, K.Ikawa, A.Sekisawa, H.Chiba, M.Kitagawa: FDD-MB 2.0 System and Future, CNAPS-IV Hong Kong, (Hong Kong, '09.11).



# Himi Municipal Hospital

## 9100 Himi Municipal Hospital.

### Faculty

Title	Name	Field of Specialization
	TAKASHIMA Shigeki	Surgery of Digestive Diseases, Coloproctological Surgery.
	IZUMI Youichi	Hypertension, Endocrinology
	SAKAMOTO Shigeru	Cardiovascular Surgery
	KUZAWA Yutaka	Cardio Vascular Surgery
	NAKASHIMA Aiko	Radiology
	NAKATANI Yusuke	Ophthalmology
	KURAUCHI Manabu	Cerebro vascular disease
	MATSUI Toshiaki	Oral & Maxillofacial Surgery
	URATA Kazuhiko	Obstetrics and gynecology
	SAITO Atsushi	Nephrology
	TAKATA Hideo	Orthopaedic Surgery
	WATANABE Kimimasa	Orthopaedic Surgery
	YAMASHITA Naohiro	Circulatory organs internal medicine
	MUKAI Hirokado	Oncology Surgery
	HASEGAWA Masayuki	regional medicine
	NAKANAMI Aki	Orthopaedic Surgery
	KUSABA Eizo	neurosurgery

### Publications

#### Originals

- 9100B001 Shin-ichiro Yoshitani, Shigeki Takashima: Efficacy of postoperative UFT (Tegafur /Uracil) plus PSK therapies in elderly patients with resected colorectal cancer, *Cancer Biother. Radiopharm.*, 24:35-39, 2009.

#### Case Reports

- 9100D001 M.Fukura, A.Saito, K.Ishigami, K.Konishi, M.Hasegawa, J.L.Wu, H.Kawahara, T.Kanda, T.Kigoshi, N.Takekoshi: Suicides in aged patients; Case reports and review of the literature, *J. Kanazawa. Med. Univ.*, 34:14-16, 2009.

### Presentations at Conference

#### International Conference (Presentations)

- 9100I001 H.Yokoyama, A.Saito, Y.Saito, I.Ishikawa: Intact parathyroid hormone levels at 3 hours of loading test reflect the effects of Cinacalcet in both hemodialysis and renal transplanted patients., *Renal Week 2009 ASN's 42nd Annual Meeting & Scientific Exposition, (SanDiego, '09.10).*

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