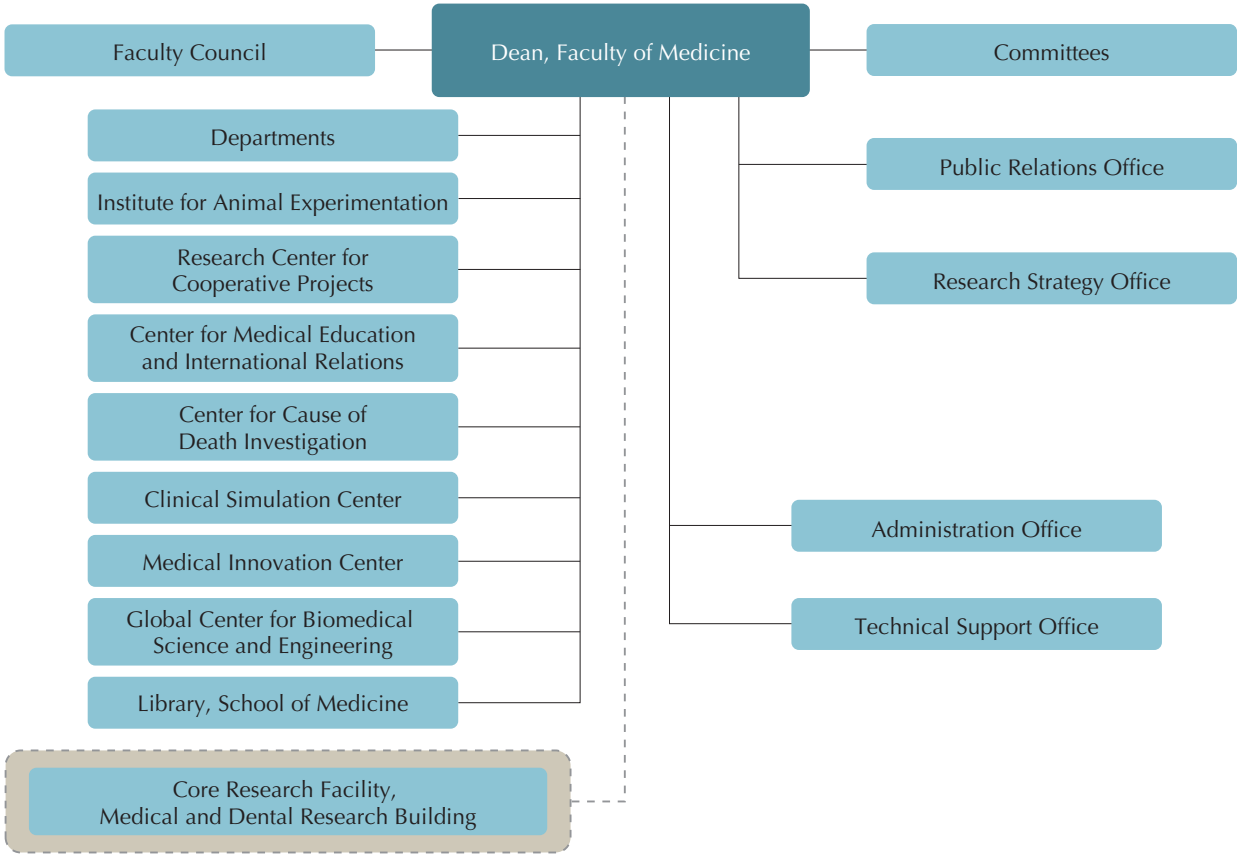
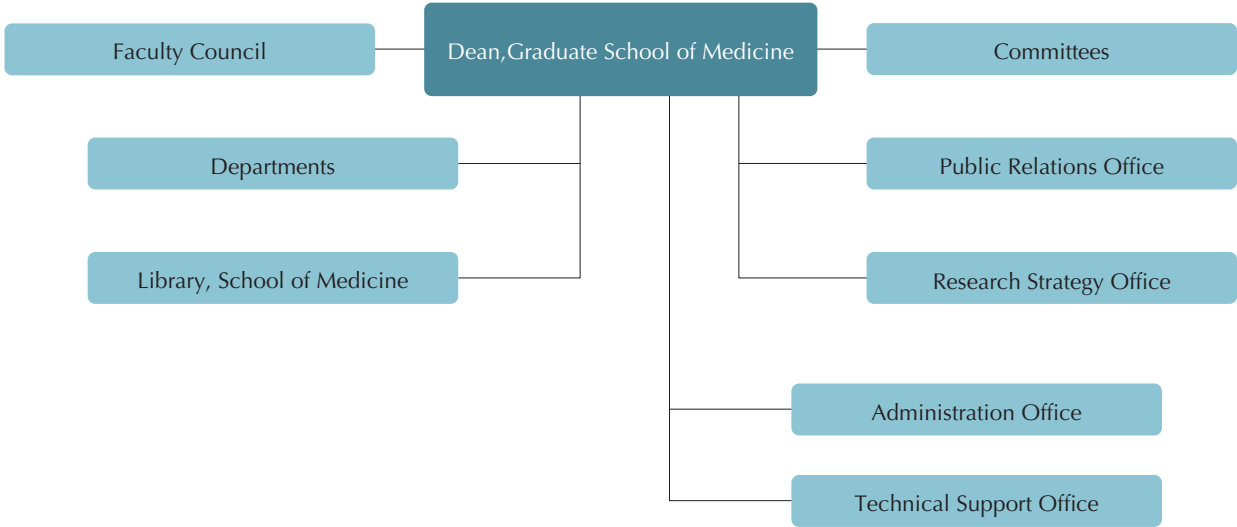


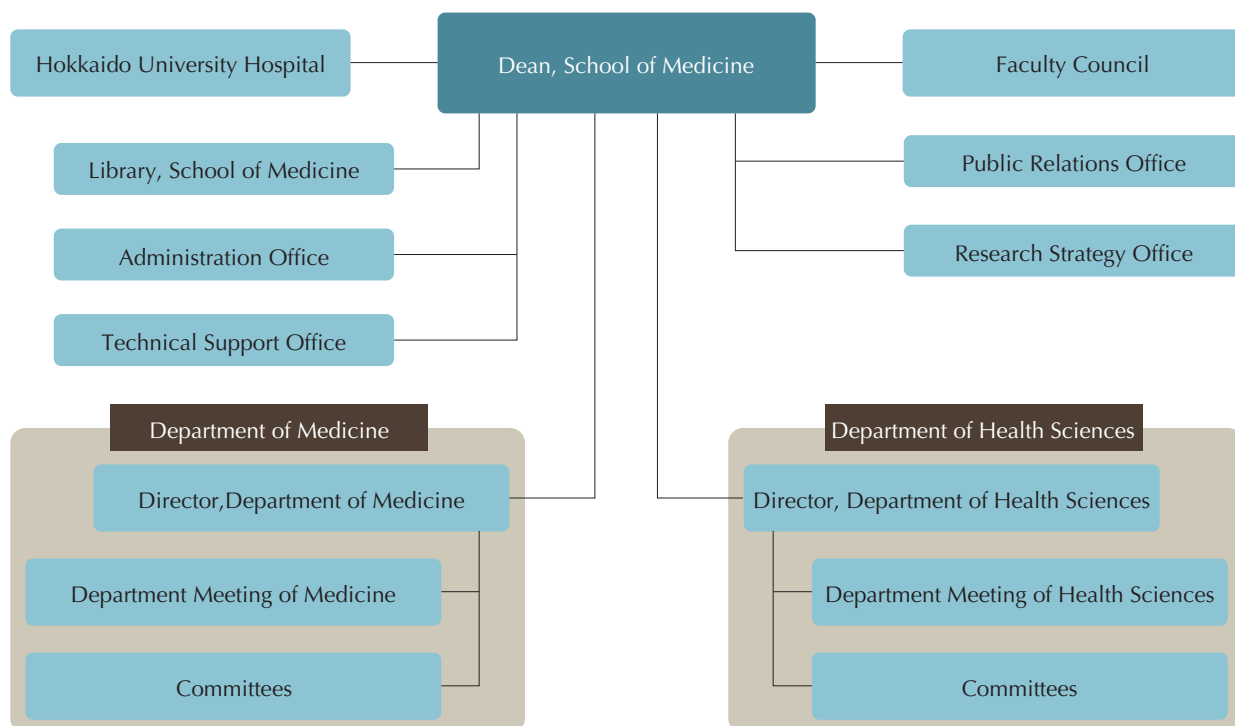
Faculty of Medicine



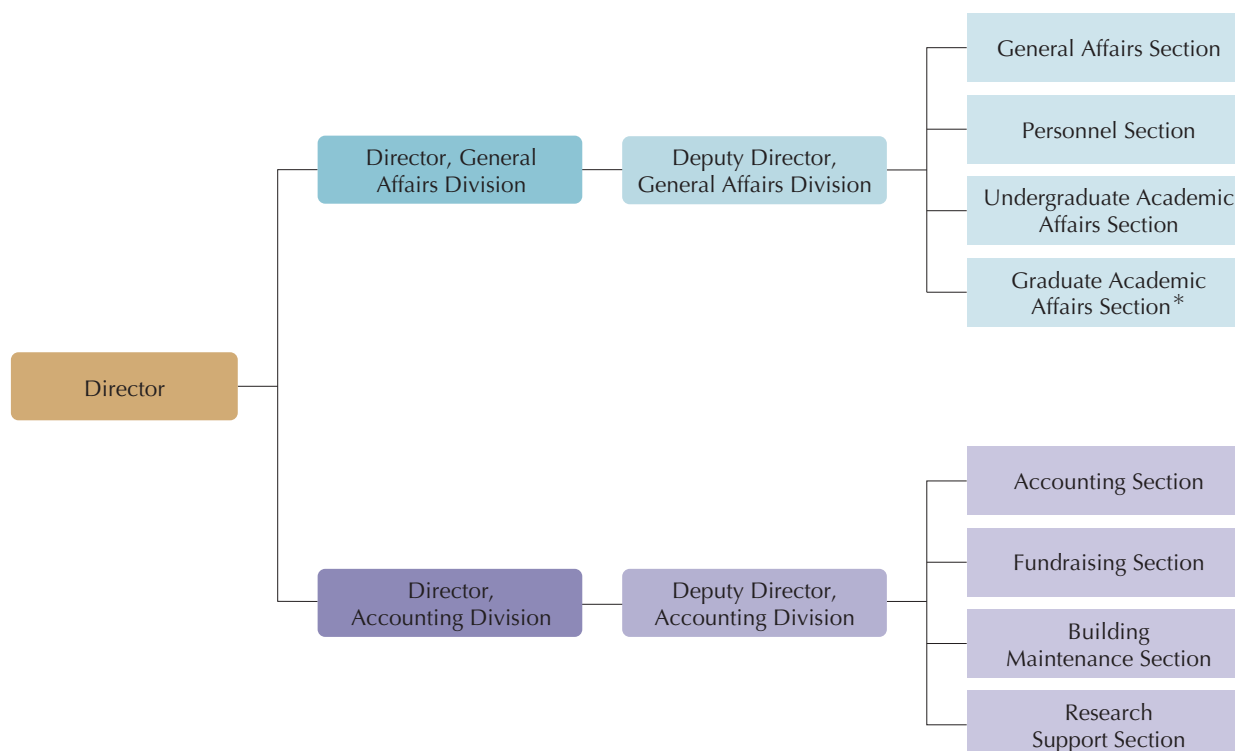
Graduate School of Medicine



School of Medicine



Administration Office (excluding the Library Management Section and the Faculty of Health Sciences' Administrative Division)



*In charge of the Graduate School of Medicine and the Graduate School of Biomedical Science and Engineering

Executives of Faculty Council and Administration Office

Data as of July 1, 2023

School of Medicine

Dean/Director	HATAKEYAMA Shigetsugu
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Graduate School of Medicine

Dean	HATAKEYAMA Shigetsugu
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Vice Dean	TANAKA Shinya
	HOMMA Akihiro

Associate Dean	YABE Ichiro
	FUJIYAMA Fumino
	AOYAMA Hidefumi

Faculty of Medicine

Dean	HATAKEYAMA Shigetsugu
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Vice Dean	TANAKA Shinya
	HOMMA Akihiro

Associate Dean	YABE Ichiro
	FUJIYAMA Fumino
	AOYAMA Hidefumi

Director of Institute for Animal Experimentation	OHBA Yusuke
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Director, Research Center for Cooperative Projects	HATAKEYAMA Shigetsugu
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Director, Center for Medical Education and International Relations	HATAKEYAMA Shigetsugu
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Director, Center for Cause of Death Investigation	HATAKEYAMA Shigetsugu
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Director, Clinical Simulation Center	HATAKEYAMA Shigetsugu
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Director, Medical Innovation Center	HATAKEYAMA Shigetsugu
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Director, Global Center for Biomedical Science and Engineering	HATAKEYAMA Shigetsugu
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Director of Library	IWASAKI Norimasa
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Director, Public Relations Office	TANAKA Shinya
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Director, Research Strategy Office	TANAKA Shinya
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Director, Technical Support Office	HATAKEYAMA Shigetsugu
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Director, Core Research Facility, Medical and Dental Research Building	OHBA Yusuke
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Director of Hokkaido University Hospital	ATSUMI Tatsuya
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Administration Office

Director	IRISAWA Hidetsugu
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Director, General Affairs Division	KIMURA Mika
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Director, Accounting Division	OGASAWARA Yoshikatsu
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Deputy Director, General Affairs Division	OMOTE Hiroyuki
	TERASHITA Masako

Deputy Director, Accounting Division	NIIMI Masayuki
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Chief, General Affairs Section	NAKAHARA Daisuke
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Chief, Personnel Section	TAKAYAMA Daiki
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Chief, Undergraduate Academic Affairs Section	HATANO Norihiro
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Chief, Graduate Academic Affairs Section (Medicine)	HARADA Naoko
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Chief, Graduate Academic Affairs Section (Biomedical Science and Engineering)	YOSHIOKA Hidemi
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Chief, Accounting Section	UENO Masashi
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Chief, Fundraising Section	MUROI Shunsuke
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Chief, Building Maintenance Section	IIDA Junzi
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Chief, Research Support Section	KUMASAKA Hiroshi
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Chief, Library Management Section	HIGUCHI Yoko
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History

Philosophy and Objectives

Past and Present Deans and Directors

Professors Emeriti

Honor Roll

Organizations / Finances

Students

International Affairs

Endowed Depts. and Industry Creation Depts.

Education and Research System

Campus

Number of Staff

Data as of May 1, 2023

Academic Staff

■ Graduate School of Medicine Staff

Classification	Number
Professor	36
Associate Professor	30
Lecturer	13
Assistant Professor	61
Research Associate	1
TOTAL	141

Professor*	4
Associate Professor*	7
Lecturer*	2
Assistant Professor*	24
TOTAL	37

Invited Teacher	40
Teaching Staff of Clinical Satellites	57

* Specially appointed academic staff

■ Teaching Staff

Classification	Number
Graduate School of Medicine	285 (Faculty of Medicine 131 Hokkaido University Hospital 140 Institute for Genetic Medicine 13 Health Care Center 1)
School of Medicine	349 (Faculty of Medicine 141 Hokkaido University Hospital 208)

Supporting Staff

Classification	Faculty of Medicine	Administration Office
Administrative Staff	–	45
Administrative Assistant (full-time)	43	12
Administrative Assistant (part-time)	54	9
Technical Staff	12	1
Technical Assistant (full-time)	16	–
Technical Assistant (part-time)	41	–
Specialist	4	–
Research Support Assistant	1	–
Postdoctoral Fellow	9	–
Research Fellow	8	–
TOTAL	188	67

Number of non-Japanese Staff

Academic staff and specially appointed academic staff	Other staff	TOTAL
11	4	15

Organizational Structure

Data as of June 1, 2023

Faculty of Medicine	7 Divisions / 16 Departments / 11 Endowed Departments / 3 Industry Creation Departments / (43 Laboratories)
Graduate School of Medicine	2 Divisions / 19 Departments / 63 Laboratories (incl. 2 Collaborative Laboratories) / 1 Clinical Collaborative Department (28 Related Facilities)
School of Medicine	1 Department / 26 Academic Subjects

History

Philosophy and Objectives

Past and Present Deans and Directors

Professors Emeriti

Honor Roll

Organizations / Finances

Students

International Affairs

Endowed Depts. and Industry Creation Depts.

Education and Research System

Campus

Departments at a Glance

Data as of June 1, 2023

Faculty of Medicine

* Endowed Departments

■ Industry Creation Departments

Physiological Science	Biochemistry	Molecular Biology
		Medical Chemistry
	Anatomy	Anatomy and Embryology
		Histology and Cytology
	Physiology	Cell Physiology
Pathological Science		Systems Neuroscience
	Pharmacology	Neuropharmacology
		Cellular and Molecular Pharmacology
	Pathology	Pathology
		Cancer Pathology
Social Medicine	Immunology	Immunology
		Microbiology and Infectious Diseases
	Social Medicine	Hygiene
		Public Health
		Forensic Medicine
Internal Medicine		Health Care Policy
		Biostatistics
	Internal Medicine	Respiratory Medicine
		Rheumatology, Endocrinology and Nephrology
		Gastroenterology and Hepatology
		Cardiovascular Medicine
		Medical Oncology
		Hematology
	Radiology	Radiation Oncology
		Diagnostic Imaging
Surgery		Respiratory and Cardiovascular Innovative Research *
		Minimally Invasive Advanced Heart Failure Therapeutics *
		Innovative Heart Failure Telemedicine *
		Community Heart Failure Healthcare and Pharmacy *
		Advanced Diagnostic Imaging Development *
	Surgery	Gastroenterological Surgery I
		Gastroenterological Surgery II
		Renal and Genitourinary Surgery
		Cardiovascular Surgery
	Anesthesiology and Critical Care Medicine	Anesthesia and Perioperative Medicine
Specialized Medicine		Acute and Critical Care Medicine
		Transplant Surgery *
		Community Urological Healthcare System *
	Reconstructive Surgery and Rehabilitation Medicine	Orthopedic Surgery
		Plastic and Reconstructive Surgery
	Reproductive and Developmental Medicine	Pediatrics
		Obstetrics and Gynecology
	Sensory Organ Medicine	Dermatology
		Otolaryngology-Head and Neck Surgery
		Ophthalmology
	Neurological Disorder	Psychiatry
		Neurosurgery
		Neurology
		Advanced Medicine for Spine and Spinal Cord Disorders *
		Advanced telemedicine for future clinical field *
		Ocular Circulation and Metabolism *
		Advanced Stroke Medicine and Healthcare Economics *
		Advanced Research for Locomotor System ■
		Functional Reconstruction for the Knee Joint ■
		Biomaterial Function Regeneration ■
Interdisciplinary Medicine	Medical Biology	Neurobiology
		Human Evolution Studies

Graduate School of Medicine

Division of Medicine

Physiological Science	Biochemistry	Molecular Biology
		Medical Chemistry
	Anatomy	Anatomy and Embryology
		Histology and Cytology
	Physiology	Cell Physiology
		Systems Neuroscience
	Pharmacology	Neuropharmacology
		Cellular and Molecular Pharmacology
Pathological Science	Pathology	Pathology
		Cancer Pathology
		Diagnostic Pathology
	Microbiology and Immunology	Immunology
Social Medicine	Social Medicine	Microbiology and Infectious Diseases
		Hygiene
		Public Health
		Forensic Medicine
		Health Care Policy
		Biostatistics
		Medical Education and General Medicine
		Regulatory Science
		Translational Research Management
		Patient Safety
		Health Data Science
		Clinical Genetic and Medical Ethics
		Pharmaceuticals and Medical Devices Regulatory Science ★
Internal Medicine	Internal Medicine	Respiratory Medicine
		Rheumatology, Endocrinology and Nephrology
		Gastroenterology and Hepatology
		Cardiovascular Medicine
		Medical Oncology
		Hematology
		Health Care Medicine
		Clinical Cancer Genomics
	Radiology	Radiation Oncology
		Diagnostic Imaging
		Comprehensive Radiological Science ★
	Surgery	Gastroenterological Surgery I
		Gastroenterological Surgery II
		Renal and Genitourinary Surgery
		Cardiovascular Surgery
		Breast Surgery
		Thoracic Surgery
	Anesthesiology and Critical Care Medicine	Anesthesia and Perioperative Medicine
		Acute and Critical Care Medicine
Specialized Medicine	Reconstructive Surgery and Rehabilitation Medicine	Orthopedic Surgery
		Plastic and Reconstructive Surgery
		Rehabilitation Medicine
		Sports Medicine
	Reproductive and Developmental Medicine	Pediatrics
		Obstetrics and Gynecology
	Sensory Organ Medicine	Dermatology
		Otolaryngology-Head and Neck Surgery
		Ophthalmology
	Neurological Disorder	Psychiatry
		Neurosurgery
		Neurology

★ Collaborative Laboratory Established by Collaboration among Universities

Interdisciplinary Medicine	Medical Biology	Neurobiology
		Human Evolution Studies
	Immunology	Immunobiology
		Molecular Psychoimmunology
		Biological Molecular Mechanisms
	Pathological Oncology	Stem Cell Biology
	Clinical Collaboration	Biomedical Oncology
		(Hospitals Serving as Clinical Collaboration) ●

Division of Medical Science

	Medical Science	
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List of Hospitals Serving as Clinical Collaboration

In Sapporo

Sapporo Medical Center NTT EC
Kashiwaba Neurosurgical Hospital
Sapporo Azabu Neurosurgical Hospital
Hokkaido P.W.F.A.C. Sapporo-Kosei General Hospital
Sapporo Neurology Hospital
Sapporo Hokuyu Hospital
Sapporo City General Hospital
Teine Keijinkai Hospital
Tonan-Hospital
National Hospital Organization Hokkaido Medical Center
National Hospital Organization Hokkaido Cancer Center
Hokkaido Orthopaedic Memorial Hospital
Hokkaido Neurosurgical Memorial Hospital
Hokuyukai Neurological Hospital
Japan Community Health care Organization Hokkaido Hospital

In Hokkaido

Japanese Red Cross Asahikawa Hospital
Eniwa Hospital
Keiwakai Ebetsu Hospital
Otaru General Hospital
Hokkaido P.W.F.A.C. Obihiro-Kosei General Hospital
Kushiro Rosai Hospital
Kushiro City General Hospital
Hakodate Municipal Hospital
Tomakomai City Hospital
Hakodate Orthopedics Clinic
Hakodate Central General Hospital
National Hospital Organization Hakodate National Hospital
Hokkaido Spinal Cord Injury Center

Professors and Research Fields

Data as of July 1, 2023

□ Endowed Departments ■ Industry Creation Departments ★ concurrent ○ Specially Appointed Professor * Visiting Professor

	Departments	Professor	Theme of Research
Physiological Science	Molecular Biology	HATAKEYAMA Shigetsugu ★	1. Cell integrity based on cellular metabolisms and nuclear geometry 2. Nano structures controlling organelle dynamics 3. Molecular bases of cancer therapeutic resistance
	Medical Chemistry	HATAKEYAMA Shigetsugu	1. Ubiquitin system in protein degradation 2. Intracellular signal in cancer and immune system 3. Functional analysis of proteins/lipids by mass spectrometry
	Anatomy and Embryology	WATANABE Masahiko ○	1. Visualization of expression and localization of neural signaling molecules 2. Glial roles in neural development and function 3. Molecular mechanisms for synaptic circuit development
	Histology and Cytology	FUJIYAMA Fumino	1. Anatomy and function of central nervous system 2. Elucidation of Parkinson's disease 3. Sensing mechanism in the mechanical and chemical sensory apparatuses
	Cell Physiology	OHBA Yusuke	1. Visualization of cell functions using fluorescence bioimaging 2. Spatiotemporal regulation of intra- and intercellular signal transduction 3. Regulation of membrane dynamics 4. Development and application of fluorescent biosensors
	Systems Neuroscience	TANAKA Masaki	1. Neural control of voluntary movements 2. Functional analysis of the frontal cortex 3. Functional analysis of the basal ganglia 4. Functional analysis of the cerebellum
	Neuropharmacology	YOSHIKAWA Takeo	1. Neuropharmacological studies of the histaminergic nervous system 2. Analysis of neuropeptides in wakefulness 3. Drug development targeting sleep disorders 4. Molecular biology of hyaluronic acid 5. Optical imaging of learning-induced neural circuit reorganization 6. Neural basis of autism spectrum disorder and social behavior 7. Cognitive mechanisms of virtual reality 8. Development of novel neural activity imaging techniques
	Cellular and Molecular Pharmacology	YOSHIKAWA Takeo ★	1. Mechanism and function of REM and non-REM sleep 2. Cellular basis of memory 3. Alzheimer's disease 4. Molecular and cellular basis of hibernation
Pathological Science	Pathology	TANIGUCHI Koji	1. Research on inflammation and cancer 2. Research on inflammation and tissue regeneration 3. Mechanisms of autoimmune and inflammatory diseases 4. Research on tight junction 5. Development of new cancer-on-chip to elucidate the pathophysiology of intractable cancer 6. Human pathology and surgical pathology
	Cancer Pathology	TANAKA Shinya	1. Research on diagnostic and surgical pathology 2. Cancer progression, cancer stem cells, and therapeutics 3. Profiling analysis of various diseases 4. Bioimaging and rapid-immunohistochemistry 5. Biomaterial for analysis of cellular reprogramming 6. NGS-based research on brain tumor and sarcoma 7. Student-oriented innovative research
	Diagnostic Pathology *2	MATSUNO Yoshihiro	1. Diagnostic surgical pathology (including cytopathology) 2. Application of molecular studies in diagnostic pathology 3. Quality control and standardization in pathology laboratories 4. Clinicopathologic analysis of human malignancy

	Departments	Professor	Theme of Research
Pathological Science	Immunology	KOBAYASHI Koichi	<ol style="list-style-type: none"> 1. Host protection mediated by TLR and NLR family proteins 2. Role of the innate immune system in the onset of infection and inflammatory diseases 3. Nod2-dependent intestinal mucosal homeostasis and pathogenesis of Crohn's disease 4. CITA/NLRC5: a key regulator of MHC class I genes 5. Mechanisms of immune evasion by cancers 6. Development of novel biomarkers and immunotherapies for cancer patients 7. Vaccine development against cancer and coronaviruses using a novel vaccine technology
	Microbiology and Infectious Diseases	FUKUHARA Takasuke	<ol style="list-style-type: none"> 1. Studies on viral and host factors involved in the propagation of hepatitis virus (HBV, HCV) 2. Studies on the mechanism of pathogenicity of virus infection through molecular biological analysis and animal experimentation 3. Studies on the diagnosis and drug discovery of viral infection (Coronavirus, Flavivirus) 4. Epidemiological and molecular biological studies on zoonotic diseases (Hantavirus, Flavivirus)
Social Medicine	Hygiene	UEDA Kayo	<ol style="list-style-type: none"> 1. Environmental epidemiological studies 2. Quasi-experimental assessment of population-level health interventions (interrupted time series, instrumental variables) 3. Emergency preparedness for climate change, natural disasters, and infectious diseases in healthcare facilities 4. Epidemiological study on behavioral and psychological symptoms of dementia 5. Assessment of health effects of climate change and global environment
	Public Health	TAMAKOSHI Akiko	<ol style="list-style-type: none"> 1. Field study on diet and health 2. Studies on unhealthy status and its related factors of the elderly 3. Longitudinal study of age-related neuropsychiatric function among a community-based elderly 4. Studies on lifestyle factors and health in adults
	Forensic Medicine	MATOKA Kotaro	<ol style="list-style-type: none"> 1. Studies on medico-legal diagnosis of cause of death, postmortem interval, wounds, asphyxia, identification and postmortem CT diagnosis 2. Studies on the mechanisms of generation concerning exogenous unusual findings
	Health Care Policy	TAMAKOSHI Akiko ★	<ol style="list-style-type: none"> 1. Study on measures of healthcare and welfare for community-dwelling people in low fertility and ageing society 2. Epidemiological study on HIV/AIDS/STIs and other includes Zoonosis and Life-Related diseases 3. Study on risk perception/management/communication for infectious diseases 4. Development of indicators to measure/raise community awareness against diseases
	Biostatistics	HATAKEYAMA Shigetsugu ★	<ol style="list-style-type: none"> 1. Multivariate survival analysis 2. Development and evaluation methodology for diagnostic method and clinical prediction model 3. Development and application of clinical trial design 4. Joint model of longitudinal data with flexibility 5. Clinical epidemiology using big-data and public database
	Medical Education and General Medicine *2	TAKAHASHI Makoto	<ol style="list-style-type: none"> 1. Development of innovative teaching methods and materials 2. Development of innovative evaluation methods 3. Studies on factors that affect learning behavior 4. Studies on factors that affect physicians' carrier selection
	Regulatory Science *2	ARATO Teruyo	<ol style="list-style-type: none"> 1. Studies on data necessary for the development of advanced biological medicines 2. Studies on developmental strategy for orphan drugs 3. Studies on post marketing surveillance of pharmaceuticals and medical devices
	Translational Research Management *2	SATO Norihiro	<ol style="list-style-type: none"> 1. Methodology of clinical research 2. Data management of clinical trial 3. Management of cell processing for cell therapy and regenerative medicine 4. Methodology of translational research support
	Patient Safety *2	NASUHARA Yasuyuki	<ol style="list-style-type: none"> 1. Research on the methodology about system approach to patient safety 2. Research on the methodology for cultivating talented risk managers in hospitals 3. Research on the methodology about standardization of medical accident investigation

	Departments	Professor	Theme of Research
Social Medicine	Health Data Science *2	ITO Yoichi	1. Studies on the methodology of clinical trials 2. Studies on the methodology of drug safety data analysis 3. Studies on the multivariate data analysis
	Clinical Genetics and Medical Ethics *2	YAMADA Takahiro	1. research on disclosure of secondary findings in genomic medicine 2. Research on newborn screening and genetic counseling 3. Research on tele-medicine in genetic counseling 4. Research on genetic counseling in presymptomatic genetic testing 5. Research on providing systems for prenatal genetic testing and genetic counseling
	Pharmaceuticals and Medical Devices Regulatory Science (Collaborative Lab.) *2		
Internal Medicine	Respiratory Medicine	KONNO Satoshi	1. Prospective cohort studies of asthma and/or COPD 2. Research on molecular mechanisms, diagnosis, and treatment of thoracic malignancies 3. Research on molecular mechanisms of chronic airway disease and/or diffuse lung disease 4. Basic/clinical research on pulmonary hypertension and cardiac sarcoidosis 5. Basic/clinical research on respiratory infectious diseases
	Rheumatology, Endocrinology and Nephrology	ATSUMI Tatsuya	1. Basic and clinical research on autoimmune disorders 2. Research on the pathophysiology, diagnosis and therapy of diabetes, obesity and dyslipidemia 3. Research on the pathophysiology and therapy of endocrine diseases 4. Basic and clinical research on renal diseases
	Gastroenterology and Hepatology	SAKAMOTO Naoya	1. Research for pathophysiology, diagnosis and treatment of liver diseases 2. Research for pathophysiology, diagnosis and treatment of pancreatobiliary diseases 3. Research for pathophysiology, diagnosis and treatment of malignant tumor of digestive system 4. Research for pathophysiology and treatment of inflammatory bowel diseases 5. Research for pathophysiology, diagnosis and treatment of digestive diseases
	Cardiovascular Medicine	ANZAI Toshihisa	1. Research on pathophysiology, diagnosis, and treatment for ischemic heart disease 2. Molecular biological and clinical research on pathophysiology and treatment for heart failure 3. Research on etiology, diagnosis, and treatment for cardiomyopathy 4. Research on molecular and genetic basis, diagnosis, and treatment for lifestyle disorder 5. Research on etiology, diagnosis, and treatment for arrhythmia 6. Development of non-invasive technique for diagnosis of heart disease
	Medical Oncology	KONNO Satoshi ★	1. Research on diagnosis and treatment of malignant tumors 2. Research on molecular pathophysiology, diagnosis and treatment of lung cancers and mediastinal tumors 3. Research on molecular pathophysiology, diagnosis and treatment of tumors of the digestive organs 4. Research on cancer drug therapy 5. Research on molecular targeting therapy of cancer 6. Research on genome analysis, companion diagnostics and precision medicine of cancer
	Hematology	TESHIMA Takanori	1. Research on molecular pathogenesis, diagnosis, treatment of hematological malignancies 2. Basic and clinical researches to improve outcome of hematopoietic stem cell transplantation and immune cell therapy 3. Basic research to understand cellular & molecular biology of hematopoiesis 4. Basic and clinical researches on cell therapies against viral infections and malignant diseases 5. Pathogenesis, diagnosis, and treatment of immunodeficiencies, including AIDS 6. Research to improve safety and efficacy of blood transfusion 7. Research on platelet function, blood coagulation and fibrinolysis

	Departments	Professor	Theme of Research
Internal Medicine	Health Care Medicine *2	ASAKURA Satoshi	1. Research for impaired health caused by stresses 2. Research for evidence based medicine in health examination 3. Research for occupational mental health 4. Research for adolescent mental health 5. Research for therapeutic interventions of mental disorders
	Clinical Cancer Genomics *2	KINOSHITA Ichiro	1. Research for cancer genomics 2. Research for genomic abnormality of cancer 3. Research for epigenetic alteration of cancer 4. Development of novel biomarker on cancer 5. Research for molecular targeted therapy on cancer
	Radiation Oncology	AOYAMA Hidefumi	1. Research for external irradiation 2. Research for high precision X ray therapy 3. Research for particle therapy and proton therapy 4. Research for medical physics 5. Research for radiobiology for radiotherapy
	Diagnostic Imaging	KUDO Kohsuke	1. Diagnostic radiology using CT, MRI, ultrasound, and nuclear medicines 2. Vascular imaging and interventional radiology 3. Radioisotope treatment 4. Imaging analysis of tracer kinetics and artificial intelligence 5. Synthesis of contrast media and radiopharmaceuticals 6. Molecular imaging using stable isotopes and radio isotopes
	Respiratory and Cardiovascular Innovative Research □ *1	TSUJINO Ichizo ○	1. Pathogenesis and development of pulmonary hypertension 2. Right heart function in pulmonary hypertension 3. Imaging and treatment of cardiac sarcoidosis
	Minimally Invasive Advanced Heart Failure Therapeutics □ *1	ANZAI Toshihisa ★	1. Appropriate use criteria for percutaneous coronary intervention 2. Development of novel minimal invasive procedures for structural heart disease 3. Cost-effectiveness analysis of transcatheter aortic valve replacement 4. Predictors for thrombus formation on prosthetic valve following transcatheter aortic valve replacement
	Innovative Heart Failure Telemedicine □ *1	ANZAI Toshihisa ★	1. Development of remote monitoring for heart failure patients using electrophysiologic devices 2. Optimal medical treatment for heart failure by remote hemodynamic monitoring 3. Prevention of sudden cardiac death 4. Development of large-scale heart failure registry
	Community Heart Failure Healthcare and Pharmacy □ *1	ANZAI Toshihisa ★	1. Development of community heart failure healthcare system with local pharmacy 2. Research of palliative care for patients with heart failure 3. Research in the field of onco-cardiology
	Advanced Diagnostic Imaging Development □ *1	KUDO Kohsuke ★ NAKAYA Jun ○	1. Stable isotope and multi-nuclear MRI 2. Image processing and computer-assisted diagnosis using AI 3. Efficacy for diagnostic imaging
Surgery	Gastroenterological Surgery I	TAKETOMI Akinobu	1. Basic research and treatment on the surgical GI tract and HPB diseases 2. Development of endoscopic and/or robotic surgery for the GI tract and HPB diseases 3. Study for the pathogenesis and management of transplant immunology 4. Research for the improvement of organ preservation 5. Clarification of pathogenesis and development of new strategy of cell transplantation 6. Artificial Intelligence (AI) applied research in the field of gastroenterological surgery 7. Study of the surgical education and surgical training 8. Basic research and treatment on pediatric surgical oncology and pediatric hepatobiliary diseases 9. Basic and clinical research on the function of pediatric digestive system

	Departments	Professor	Theme of Research
Surgery	Gastroenterological Surgery II	HIRANO Satoshi	1. Clarification of pathophysiology and development of surgical treatments of the malignancy of the digestive system 2. Development of endoscopic surgery and its devices 3. Clinical research for perioperative management of highly invasive digestive surgeries 4. Study for multidisciplinary treatment of pancreato-biliary cancer 5. Molecular research on biomarkers associated with oncological malignancy 6. Exploring translational research on immunotherapy 7. Analysis of immune responses in tumor microenvironments 8. Study of gene therapy for intractable cancers 9. Study for surgical education 10. Study for bariatric and metabolic surgery
	Renal and Genitourinary Surgery	SHINOHARA Nobuo	1. The mechanism of development of detrusor overactivity associated with lower urinary tract obstruction 2. Neural transmitted pathway at the bladder stimulation 3. The development of chronic rejection in transplanted kidney 4. The analysis of immunology in renal transplantation and development of the treatment of immunological regulation 5. The mechanism of carcinogenesis and progression in kidney cancer 6. The mechanism of metastasis and progression of urothelial cancer 7. QOL study on the treatment of prostate cancer 8. The development of minimal invasive surgery
	Cardiovascular Surgery	WAKASA Satoru	1. Research on surgery for severe heart failure 2. Research on surgery for functional mitral regurgitation 3. Research on myocardial protection 4. Research on cold preservation and autophagy in the heart 5. Metabolic disturbances in atrial fibrillation 6. Endovascular stent graft therapy for aortic diseases
	Breast Surgery *2	TAKAHASHI Masato	1. Research on biological characteristics in breast cancer 2. Research on endocrine therapy in breast cancer 3. Research on mechanisms of breast cancer development and prevention 4. Research on the development of new breast cancer screening methods 5. Research on the development of breast cancer surgical methods 6. Research on the perioperative drug therapy for breast cancer 7. Research on drug therapy for metastatic breast cancer 8. Research on hereditary breast cancer
	Thoracic Surgery *2	KATO Tatsuya	1. Development of minimally invasive thoracic surgery 2. Surgery in multimodality therapy for lung cancer 3. Lung transplantation 4. Photodynamic therapy using nanoparticle for thoracic malignant tumors 5. Development of early diagnosis and molecular targeted therapy using next generation sequence for lung cancer 6. Photoimmunotherapy for lung cancer 7. Therapy for malignant mesothelioma and dissemination of cancer
	Anesthesia and Perioperative Medicine	MORIMOTO Yuji	1. Cerebral protection and resuscitation 2. Care and cure for the whole body against invasive biological stress 3. Neurotoxicity by anesthetics 4. Mechanism of postoperative cognitive dysfunction 5. Mechanism and treatment of pain 6. Mechanism of respiratory cycle and effect of drugs 7. Hyperbaric oxygen therapy 8. Patient management system in the operating room and the medical economics
	Acute and Critical Care Medicine	MORIMOTO Yuji ★	1. Body responses to various insults -pathophysiology and their control- 2. Multiple organ dysfunction syndrome -pathophysiology and treatment- 3. Critical care medicine 4. Cardiopulmonary cerebral resuscitation 5. Toxicology 6. Traumatology 7. Disaster medicine 8. Medical, transportation, and information system for acute medicine

	Departments	Professor	Theme of Research
Surgery	Transplant Surgery □*1	TAKETOMI Akinobu ★	<ol style="list-style-type: none"> 1. Basic studies for the safe use of Expanded Criteria Donor (ECD) grafts: improvement of organ storage and development of organ perfusion 2. Novel methods to enhance the survival signal in the graft 3. Basic study to construct cell resource bank of human liver-derived stem cells 4. Experimental and clinical studies to establish immunological tolerance introduced by regulatory T cells and its evaluation of immunological status 5. Basic studies for the improvement of the prognosis after cell transplantation 6. Clinical studies for the improvement of pancreatic islet transplantation
	Community Urological Healthcare System □*1	SHINOHARA Nobuo ★	<ol style="list-style-type: none"> 1. Research on urologist training system for wide medical areas in collaboration with Hokkaido university hospital and training cooperation hospitals 2. Research on the development of urological surgery education system 3. Research on construction of a remote medical care system that can safely perform advanced urological surgical treatment such as robot-assisted surgery 4. Research on the development of the Internet of Things (IoT) service about bladder and bowel dysfunction
Specialized Medicine	Orthopedic Surgery	IWASAKI Norimasa	<ol style="list-style-type: none"> 1. Elucidation of pathology and development of therapeutic strategy for arthritis 2. Identification of role of glycans in bone and cartilage metabolism 3. Study of pathology and development of therapeutic strategy for osteoporosis 4. Clarification of pathology and development of therapeutic strategy for intervertebral disc degeneration 5. Biomechanical study for pathology and treatment options of musculoskeletal diseases 6. Research about pathology and treatment strategy for spinal cord and peripheral nerve diseases 7. Development of novel analytic tools for musculoskeletal diseases using AI 8. Research about genetic and epidemiologic aspects of musculoskeletal diseases
	Plastic and Reconstructive Surgery	YAMAMOTO Yuhei	<ol style="list-style-type: none"> 1. Translational research in wound healing 2. Translational research in treatment of keloid 3. Development of surgical technique in free tissue transfer 4. Basic research in surgical oncology 5. Translational research of angiogenesis of vascular and lymphatic vessel 6. Regenerative medicine based on tissue engineering method 7. Development of therapeutic technique in cranio-maxillo-facial surgery
	Rehabilitation Medicine *2	MUKAINO Masahiko	<ol style="list-style-type: none"> 1. Research on motion analysis of movement disorders 2. Research on activity monitoring 3. Research on functioning statistics for daily life 4. Research on telerehabilitation 5. Research on assessment methods for cognitive impairment
	Sports Medicine *2	KONDO Eiji	<ol style="list-style-type: none"> 1. Motion analysis of athletes for performance improvement 2. Development of reconstruction surgery for osteoarthritis 3. Tissue regeneration of joints 4. Elucidation of remodeling mechanism of soft tissue 5. Medical application of synthetic polymer gel 6. Development of advanced treatment technology for musculoskeletal disorder
	Pediatrics	MANABE Atsushi	<ol style="list-style-type: none"> 1. Establishing methods for early diagnosis of primary immunodeficiency diseases 2. Molecular epidemiological studies on macrolide-resistant mycoplasma pneumoniae 3. Clinical and molecular study for diagnosis and management in pediatric hematology and oncology 4. Clinical and molecular study in pediatric stem cell transplantation and cell therapy 5. Molecular analysis of pediatric endocrine disease 6. Pathological analysis and therapeutic development using neurological disease model animals 7. Histopathological analysis on the role of activated glomerular parietal epithelial cell in childhood kidney disease 8. Development of a Mitochondrial Drug Delivery System for Myocardial Regeneration Therapy 9. Study to improve outcome of neonatal chronic lung disease 10. Basic and Clinical study in inborn errors of metabolism
	Obstetrics and Gynecology	WATARI Hidemichi	<ol style="list-style-type: none"> 1. Basic studies on the physiology of fetus and amnion 2. Clinical studies on the antenatal diagnosis and fetal therapy 3. Studies on the development of new strategy for the management of complicated pregnancies 4. Clinical studies on the treatment of infertility 5. Intrafollicular physiology 6. Molecular mechanism of genesis and metastasis of uterine cancer 7. Chemoresistance of female reproductive cancer 8. Molecular mechanism of placental growth and differentiation 9. Development of novel molecular-targeting therapy for ovarian cancer 10. Establishment of new effective screening method for cervical cancer

	Departments	Professor	Theme of Research
Specialized Medicine	Dermatology	UJIE Hideyuki	1. Molecular biological research of epidermis 2. Research on pathophysiology, diagnosis and treatment of genetic skin disorders 3. Research on pathophysiology, diagnosis and treatment of autoimmune blistering skin diseases 4. Research on pathophysiology, diagnosis and treatment of malignant skin tumors 5. Research on pathophysiology, diagnosis and treatment of atopic dermatitis 6. Research on tissue engineering and wound healing 7. Research on novel therapeutic modalities for genetic skin disorders
	Otolaryngology-Head and Neck Surgery	HOMMA Akihiro	1. Basic research and clinical analysis for pathogenesis of sensorineural hearing loss 2. Basic research and clinical analysis of sensorineural hearing loss by viral infection 3. Basic research and clinical analysis of nasal allergy 4. Basic research and clinical analysis of Eosinophilic chronic rhinosinusitis 5. Immunological approach for head and neck cancer 6. Basic research and clinical analysis of chemotherapy for head and neck cancer 7. Molecular biologic studies on head and neck cancer
	Ophthalmology	ISHIDA Susumu	1. Retinal cell biology 2. Ocular Immunology and inflammation 3. Ocular neuroprotection 4. Ocular oncology and pathology 5. Pathophysiology and treatment of ocular surface disease 6. Ocular circulation and metabolism
	Psychiatry	KUSUMI Ichiro	1. Psychopathology of psychiatric diseases 2. Development of new psychotherapy techniques 3. Development of new diagnostic techniques and new treatment of epilepsy 4. Molecular genetic study of psychiatric diseases 5. Development of animal models of psychiatric diseases and neuroscience 6. Development of new psychotropic drugs and psychopharmacology 7. Neuroimaging in psychiatric diseases 8. Neurophysiological and neuropsychological study of psychiatric diseases
	Neurosurgery	FUJIMURA Miki	1. Basic and clinical research on malignant glioma 2. Basic and clinical research on cerebrovascular disorders 3. Basic and clinical research on spinal cord disorders 4. Translational research on CNS regeneration 5. Surgical anatomy of skull base surgery 6. Genomic research on cerebrovascular disorders 7. Cerebral hemodynamics and metabolism 8. Clinical research on pediatric neurosurgery
	Neurology	YABE Ichiro	1. Molecular biology and genetics for neurological disorders 2. Immunohistochemistry of muscles and peripheral nerves 3. Basic studies for the disease mechanism and therapeutic approach in neuro-immunological disorders 4. Biomarkers in neurological disorders 5. Clinical neuroelectrophysiology 6. Cogitive brain function 7. Neuroepidemiology
	Advanced Medicine for Spine and Spinal Cord Disorders □*1	IWASAKI Norimasa ★ SUDO Hideki ○	1. Intervertebral disc regeneration based on its degeneration mechanism 2. Development of innovative diagnostic and treatment strategy for spinal deformity and degenerative diseases
	Advanced telemedicine for future clinical field □*1	IWASAKI Norimasa ★	1. Development and clinical application of palpation technology in telemedicine 2. Development of telecommunication network and legislation for telemedicine 3. Clinical application of new digital medical devices and AI-assisted medical technology
	Ocular Circulation and Metabolism □*1	ISHIDA Susumu ★	1. Development of novel methodology for fundus image analysis 2. Application of deep learning for retinal vasculature evaluation 3. Clinical application of quantitative assessment for ocular circulation

	Departments	Professor	Theme of Research
Specialized Medicine	Advanced Stroke Medicine and Healthcare Economics □ *1	FUJIMURA Miki ★	<ol style="list-style-type: none"> 1. Healthcare economic research on advanced stroke medicine 2. Healthcare economic research on the management of subarachnoid hemorrhage in the acute stage 3. Impact of stroke care advancements on the healthcare economics
	Advanced Research for Locomotor System ■ *1	IWASAKI Norimasa ★	<ol style="list-style-type: none"> 1. Development of analysis method or regulation system of locomotor organs 2. Development of screening, prevention, and treatment strategy for locomotor diseases 3. Development of strategy for regeneration of nervous system
	Functional Reconstruction for the Knee Joint ■ *1	IWASAKI Norimasa ★	<ol style="list-style-type: none"> 1. Development of novel joint preservation surgery for knee osteoarthritis 2. Novel evaluation method for knee function 3. Establishment of the surgical strategy for joint preservation surgery optimized for individual knee function
	Biomaterial Function Regeneration ■ *1	IWASAKI Norimasa ★	<ol style="list-style-type: none"> 1. Development of less invasive regenerative medicine for musculoskeletal disorders 2. Development of novel devices for the treatment of musculoskeletal disorders 3. Development of postoperative training programs for less invasive regenerative medicine 4. Research on evaluation techniques for combination therapy of biomaterials and cells
Interdisciplinary Medicine	Neurobiology	KAMIYA Haruyuki	<ol style="list-style-type: none"> 1. Neurobiology of axon 2. Neurobiology of synapse
	Human Evolution Studies	HATAKEYAMA Shigetsugu ★	<ol style="list-style-type: none"> 1. Paleopathology of prehistoric inhabitants of Hokkaido 2. Development of morphological analysis methods of human fossils 3. Human-environment relationships in Eurasian Paleolithic 4. Archaeometry of obsidian 5. Research on prehistoric cultures of Hokkaido
	Immunobiology *2	SEINO Ken-ichiro	<ol style="list-style-type: none"> 1. Tumor Immunology 2. Transplant Immunology 3. Development of a novel immune cell therapy using cell reprogramming technique
	Molecular Psychoimmunology *2	MURAKAMI Masaaki	<ol style="list-style-type: none"> 1. Molecular mechanism for T cell-specific autoimmune disease development by the gateway reflexes 2. Bioelectronic medicine by the gateway reflexes and the VNS 3. Molecular mechanisms underlying inflammation development via the IL-6 amplifier activation 4. Research for functional roles of SNPs associated with chronic inflammatory diseases (the IL-6 amplifier) 5. Development of novel drugs and biomarkers for diseases associated with chronic inflammation (the IL-6 amplifier)
	Molecular Mechanisms *2	NODA Nobuo	<ol style="list-style-type: none"> 1. Molecular mechanism of autophagy 2. Molecular mechanism of life phenomena regulated by liquid-liquid phase separation 3. Elucidating the molecular functions of biomolecules based on their structure
	Stem Cell Biology *2	KONDO Toru	<ol style="list-style-type: none"> 1. Molecular mechanism involved in the maintenance and differentiation of neural stem/precursor cells 2. Molecular mechanism of neural stem/precursor aging 3. Characterization of cancer stem cells and analysis of their therapeutic targets 4. Relationship between neural stem cells and age-related disorders
	Biomedical Oncology *2	SONOSHITA Masahiro	<ol style="list-style-type: none"> 1. Studying how cancers develop 2. Elucidating the mechanisms of how drug resistance occurs in cancer 3. Generating novel anti-cancer therapeutics

Centers and Facilities

Center for Medical Education and International Relations

(Established: September 1, 2010; reorganized: April 1, 2018)

Data as of April 1, 2023

The center was established to support the conduct of R&D in medical education and promote medical education and international relations through planning, drafting, coordination and other considerations for educational activities and international relations.

Steering Committee

The committee is tasked with deliberations on important matters regarding the center, as follows:

- (1) teaching staff
- (2) budgeting and settlement of accounts
- (3) international relations
- (4) operations of the Center
- (5) events held by the Center
- (6) other important matters related to the Center

[Members]

- (1) Director, Center for Medical Education and International Relations
- (2) Chief Vice Director, Center for Medical Education and International Relations
- (3) Vice Directors, Center for Medical Education and International Relations
- (4) Committee Chairperson, Academic Affairs Division, School of Medicine
- (5) Committee Chairperson, Academic Affairs Division, Graduate School of Medicine
- (6) Full-time faculty member of the Center for Medical Education and International Relations (excluding Assistant Professors for Educational Support and Assistant Professors)
- (7) Several other individuals with a role deemed necessary by the Director of the Center for Medical Education and International Relations

Executive Committee

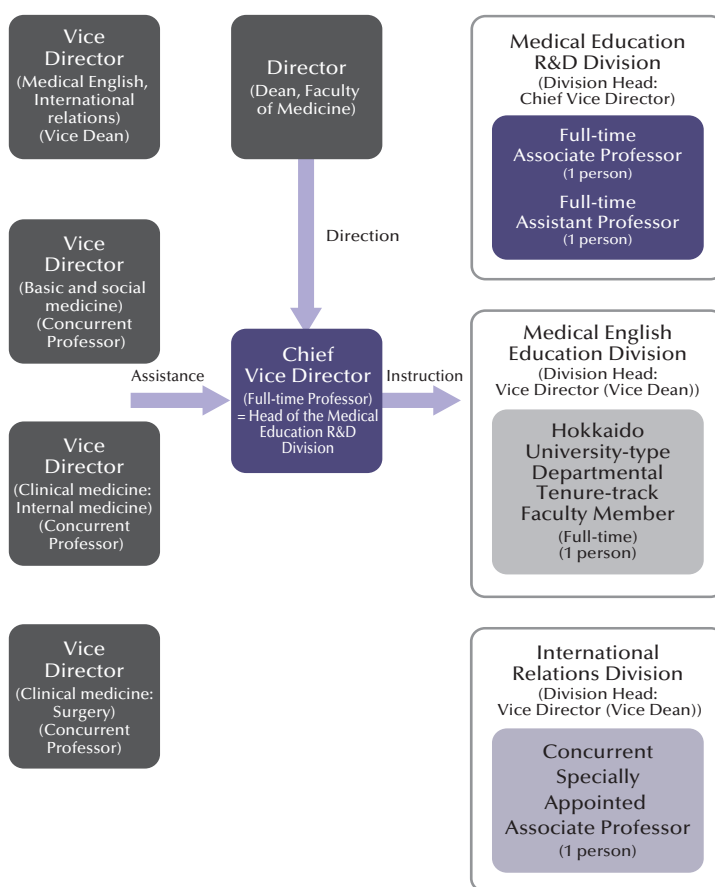
The Executive Committee is set up within the Center for Medical Education and International Relations of the Hokkaido University Faculty of Medicine to examine specific implementation measures of programs and events that have been designed and planned by the Center and to implement them in collaboration with the Faculty of Medicine, Graduate School of Medicine, School of Medicine and Hokkaido University Hospital.

[Members]

- (1) Chief Vice Director, Center for Medical Education and International Relations
- (2) Vice Directors, Center for Medical Education and International Relations
- (3) Committee Chairperson, Academic Affairs Division, School of Medicine
- (4) Committee Chairperson, Academic Affairs Division, Graduate School of Medicine
- (5) A full-time faculty member of the Postgraduate Clinic Training Center, Hokkaido University Hospital
- (6) Full-time faculty member of the Center for Medical Education and International Relations (excluding Assistant Professors for Educational Support)
- (7) Several other individuals with a role deemed necessary by the Director of the Center for Medical Education and International Relations

[Aim]

The aim of the Center for Medical Education and International Relations is to contribute to the promotion of medical education and international relations at the Faculty of Medicine, the Graduate School of Medicine, and the School of Medicine by promoting R&D on medical education at the Faculty of Medicine and designing, planning and coordinating medical educational and international relations programs at the Graduate School of Medicine and the School of Medicine.



Overview of Faculty Development (FD) Activities (FY2022)

Host: Center for Medical Education and International Relations

Number	Date	Theme
60 th	June 24 (Fri.), 2022 13:30–17:15 Online	Theme: Overview of the medical education system and teaching methods Purpose: To deepen understanding of the current medical education system (e.g., the model core curriculum for medical education, accreditation for medical education, and clinical training system for physicians) and teaching methods
61 st	July 26 (Tue.), 2022 17:30–19:00 Online	Theme: Evaluation of the clinical clerkship Purpose: To review the 2021 clinical clerkship in core clinical departments and explain the use of CC-EPOC, a tool for recording the observation and evaluation of clinical education, the mini-clinical evaluation exercise (mini-CEX) observation evaluation method, and case-based discussions (CbDs)
62 nd	August 18 (Thu.), 2022 10:00–17:00 Place: School of Medicine Centennial Hall	Theme: Diploma policy (academic objectives) and evaluation Part 1 Purpose: To define learning outcomes and their evaluation methods to assess whether students have acquired the necessary abilities for graduation as indicated in the degree awarding standards (diploma policy) (conducted as a series of two one-day workshops during the academic year).
63 rd	December 22 (Thu.), 2022 15:30–17:00 Place: The Alumni Hall "Frate"	Theme: Efforts and educational and research activities to achieve the SDGs at Hokkaido University Purpose: To learn about the SDGs-related points raised in the University's Fourth Period of Mid-Term Goals and Mid-Term Plan (FY 2022–2027) by inviting a lecturer from the University's SDGs Initiative Office, and thus further deepen insight into the achievement of the SDGs
64 th	February 9 (Thu.), 2023 10:00–17:00 Place: School of Medicine Centennial Hall	Theme: Diploma policy (academic objectives) and evaluation Part 2 Purpose: See that of the 62 nd .
65 th	March 8 (Wed.), 2023 17:00–18:30 Online	Theme: Results of the JACME audit and revision of the core curricula Purpose: To analyze the results of the accreditation for medical education approved in FY2022, and to organize and share the issues that the Hokkaido University School of Medicine must address regarding medical education, based on the revised model core curriculum for medical education of FY2022.

■ Medical Education R&D Division

- R&D, design, planning, implementation, guidance and advice for medical educational programs
- R&D on educational assessment systems
- Gathering and analysis of information on medical education
- Administration and management of Common Achievement Tests (OSCE and CBT)
- Planning and implementation on faculty development
- Miscellaneous R&D and the promotion of medical educational programs

■ Medical English Education Division

- Design, planning and implementation of medical English programs

Followed by the recent trend of globalization, the International Relations Division was established to further enhance the international profile of the School of Medicine, the Graduate School of Medicine, and the Faculty of Medicine on the international scene to promote the internationalization of education and research.

In the field of education, we seek to foster future professionals through in-bound and out-bound student exchange programs to develop individuals capable of playing active roles on the global stage. Creating a firm partnership with overseas universities and research institutions is essential to practice close and sustainable international relationships.

To facilitate smooth and robust student exchange program for both native and overseas medical students, we proactively support students by concluding inter-university and departmental exchange agreements with outstanding universities to provide quality education to meet the needs of the times. (Refer to the map below)

Due to the COVID-19 pandemic, student exchange programs with our partner universities were temporarily suspended from FY 2020.

for the School of Medicine

- Design, planning and organization of medical English seminars

■ International Relations Division

(International Relations Office: established on July 13, 2006; reorganized on April 1, 2018)

- Support for the sharing of research results with the international community
- Exchanges with overseas universities
- Exchanges with international students
- International development cooperation
- International Exchange Fund of the Faculty of Medicine, the Graduate School of Medicine and the School of Medicine

During this period of inactivity, we have however reviewed the student exchange program and improved our crisis management system to ensure the safe and secure implementation of international exchange activities, even amid the COVID-19 pandemic, and have resumed phased dispatch of 6th-year students abroad and hosting of international students from overseas partner universities for clinical electives starting in FY 2023. (Refer to the map below)

In the field of research, we provide indirect support for international students enrolled in the Graduate School of Medicine who has started to build a career path as a researcher. At present, 73 students from 11 countries on doctoral and master's programs as of April 2023 are studying in an environment significantly different from their home country. Full-time staff and students support staff of the International Relations Division provides students with advice and assistance to create a secure environment for students to spend a comfortable campus life.

To disseminate efforts both inside and outside the university, we publish the newsletter Voice of the International Students (VIS) in the hope to further propel internationalization.



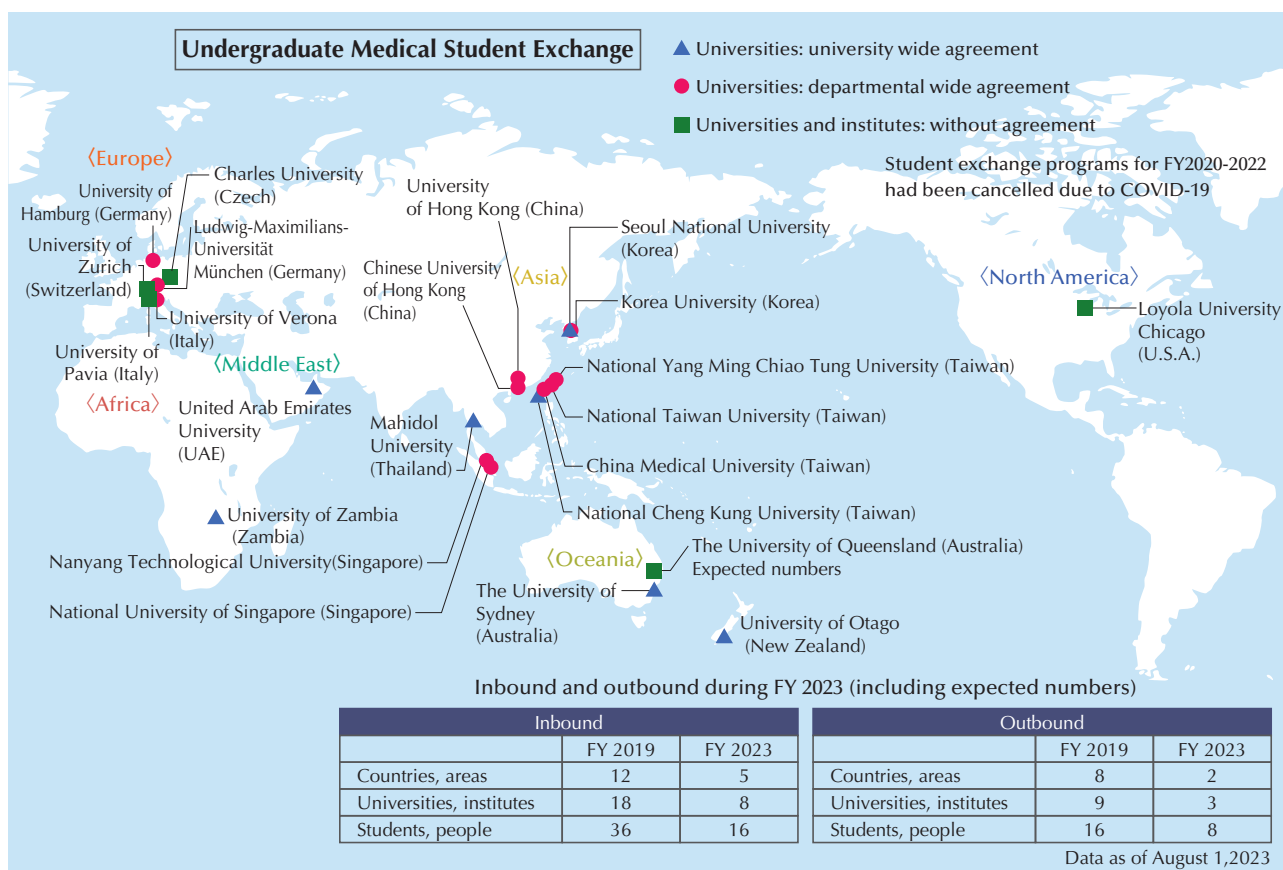
International Relations Division



A Visit from The University of Melbourne (Australia)



Events to interact with international students



Research Center for Cooperative Projects “Frate”

(Established: April 1, 2006)

The center was established to promote translational research, in which the results of basic life science research are applied to clinical research for the purpose of contributing to medical science, medical care and health maintenance.

The Center supports initiatives such as large-scale research projects of the the Global Center for Biomedical Science and Engineering, Faculty Medicine (GI-CoRE Cooperating Hub).

The promotion of collaborative research by teams from a wide range of disciplines has produced a variety of world-leading results in interdisciplinary areas covering medical science, life science, general science and engineering.

In 2017, the naming of divisions/departments changed in association with reorganization of the Graduate School of Medicine. In 2020, the Department of Molecular and Cellular Function Imaging and the Department of Treatment/Working Balance Medicine and in 2021, the Department of Medical AI Education and Research, were

newly established. In 2021, the Department of Photonic Bioimaging and the Department of Treatment/Working Balance Medicine, having served their purposes, were abolished, and research activities are currently conducted at four departments.



■ Organization

Data as of April 1, 2023

Regenerative Medicine and Tissue Engineering Director TANAKA Shinya The research department focuses on the development of new comprehensive treatment strategies for the provision of rational medical solutions to issues of joint restoration/reconstruction.	Cancer Pathology	Orthopedic Surgery
	Pathology	
Medical and Health Research Promotion Involving Human Subjects Director TAMAKOSHI Akiko The department focuses on research involving human subjects in order to promote human health maintenance and promotion, accelerate patients' recovery from illness and help improve the quality of their lives.	Public Health	Clinical Research and Medical Innovation Center, Hokkaido University Hospital
	Biostatistics	Data Science Center, Hokkaido University Hospital
	Hygiene	
Molecular and Cellular Function Imaging Director KUDO Kohsuke The department focuses on research aimed at elucidating biological functions and pathological conditions by clarifying molecular and tissue functions using functional imaging at the molecular and cellular levels.	Diagnostic Imaging	Molecular Psychoimmunology, Institute for Genetic Medicine
	Rheumatology, Endocrinology and Nephrology	
Medical AI Education and Research Director KUDO Kohsuke The focus at this department is research and development of cutting-edge medical AI while medical AI educational programs are available for graduate students and working adults.	Diagnostic Imaging	Laboratory for Bioanalysis and Molecular Imaging, Graduate School of Pharmaceutical Sciences
	Advanced Diagnostic Imaging Development	Dept. of Biomedical Science and Engineering, Faculty of Health Sciences
	Laboratory of Media Dynamics, Graduate School of Information Science and Technology	Dept. of Health Sciences and Technology, Faculty of Health Sciences
		Dept. of Emergent Neurocognition, Faculty of Health Sciences

■ Principal Laboratory

An organization selected from among key departments (including affiliated educational and research facilities) in the Faculty of Medicine; close relations with the Collaborative Laboratory

■ Collaborative Laboratory

An organization with external funding at which research projects are implemented in collaboration with the Principal Laboratory

■ Extra Support Organization

A non-Faculty of Medicine organization contributing to project research collaboratively implemented by the Principal Laboratory and the Collaborative Laboratory

Institute for Animal Experimentation

(Established: May 1, 1972)

The institute was established to support animal experimentation for life science research, and was renovated in 2014.

■ Eligible animal species

Mice, rats, rabbits, dogs, pigs, sheep, monkeys and other animals

■ Rearing rooms and laboratories

Animal rearing rooms, surgery and experimental treatment rooms, behavioral analysis room, biological specimen analysis room, experimental infection rooms, X-ray irradiation room and imaging room

■ Analytical instruments

X-ray irradiation system, in vivo imaging system, two-photon microscopy

■ Technical support

Basic technical training, genetic stock preservation (frozen embryos, sperm preservation), genetic stock maintenance, reproductive technology (embryo and sperm freezing, individual creation), anesthesia induction support, experimental and therapeutic support of laboratory animals



Number of Registered Laboratories and People

(Data as of March 31, 2023)

	Laboratories	Numbers Registered
Faculty of Medicine	26	204
Other Faculties in the University	7	45

Number of Facility Users (Fiscal Year 2022)

Number of Users (Apr. 1, 2022 - Mar. 31, 2023)	28,983
Daily Average Number of Users	79

Library, School of Medicine

(Established: December 1970)

■ Collections (Data as of March 31, 2023)

Classification	Japanese Books	Foreign Books	TOTAL
Number of Books	52,432	93,455	145,887
Journals	3,263	2,585	5,748

■ Library Use Information (academic 2022)

Visits	Regular opening hours Special usage hours TOTAL	22,541 4,304 26,845
Days Opening		241
Borrowers	Staff Members Students TOTAL	877 4,965 5,842
Total circulation	Staff Members Students TOTAL	1,191 6,155 7,346
Interlibrary loan document delivery	Requests to Others Requests from Others	651 613
Interlibrary loan	Requests to Others Requests from Others	9 10
Reading Desks/Seats		48

■ Library Hours (academic 2023)

Regular opening hours Monday through Friday 9:00–22:00
Aug., Sep. and Mar. 9:00–17:00

Special usage hours Monday through Friday 5:00–9:00
Aug., Sep. and Mar. 5:00–9:00, 17:00–22:00

Saturday, Sunday, and Holidays 5:00–22:00
Special usage requires registration in advance.

■ Closed

Saturday, Sunday and Holidays
Year-end/New Year Holidays (December 28 – January 4)



History

Philosophy and Objectives

Past and Present Deans and Directors

Professors Emeriti

Honor Roll

Organizations / Finances

Students

International Affairs

Endowed Depts. and Industry Creation Depts.

Education and Research System

Campus

Medical and Dental Research Building

(Established: March 1, 2004)

Medical and Dental Research Building is a unique facility in Hokkaido University that is managed jointly by two different departments: one medical and the other dental. Undergraduate and graduate students are educated here.

■ Department of Education and Practices

Anatomy Lab, Histology and Pathology Lab, Biochemistry and Microbiology Lab, Physiology and Pharmacology Lab, Lab of Forensic Medicine (Center for Cause of Death Investigation), Lab of Medical Informatics

■ Core Research Facility

Cell Biology Lab, Molecular Biology Lab, Ultramicroscopic Lab, Brain Science Lab

■ Department of Experimental Animals

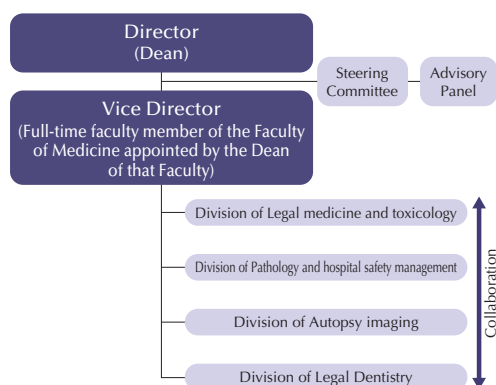
Small Animal Rearing Room, Small Animal Procedure Room, Lizard Rearing Room, General Animal Laboratory

■ Rental Laboratory

Center for Cause of Death Investigation (Established: April 1, 2016)

The center was established for education and research on cause-of-death investigation*, the development and implementation of educational programs on human resource cultivation, and sharing knowledge on cause-of-death investigation and improvement in diagnostic technology in collaboration with relevant organizations in Hokkaido University and elsewhere.

*Cause-of-death investigation includes cause-of-death determination by forensic or pathological autopsy and postmortem imaging, personal identification by dental findings and the appropriate response to crimes, abuse and accidents based on clinical forensic medicine.



[Mission]

- (1) Implementation of forensic autopsies and body examinations and the fostering of autopsy practitioners and assistants
- (2) Postmortem diagnostic imaging and interpretation of images, and cause-of-death investigation using autopsy imaging
- (3) Cause-of-death investigation related to cases of death in hospitals and medical accidents, and the fostering of pathologists with basic knowledge of forensic medicine
- (4) Fostering of specialists who can make identity confirmations based on dental findings and promptly detect child abuse cases
- (5) Fostering of specialists who are involved in diagnosis in abuse and injury cases
- (6) Other matters related to cause-of-death investigation

[Steering Committee]

(Matters to be discussed)

- | | |
|--|---|
| (1) Personnel affairs of faculty members | (2) Budget and settlement |
| (3) Educational programs | (4) Other important matters related to the center |

Interprofessional Education and Research Building

(Established: April 1, 2016)

Interprofessional Education and Research Building provides an environment for interprofessional education in which students and staff from different health professions (including medicine, dentistry, pharmacy and nursing) learn together. It houses the Clinical Simulation Center, the Medical Innovation Center and other facilities.

■ Facilities

East Bldg.

2F and 3F Clinical Simulation Center

The center provides simulation-based educational programs for students of the School of Medicine (Faculty of Medicine and Faculty of Health Sciences), the School of Dental Medicine and the School of Pharmaceutical Sciences and Pharmacy as well as staff of Hokkaido University Hospital (e.g., doctors, nurses and pharmacists).

1F, 3F and 4F Medical Innovation Center

The Medical Innovation Center was established as a fruit of the Matching Program for Innovations in Future Drug Discovery and Medical Care. At the facility, researchers from Hokkaido University and private companies work closely together in promoting cutting-edge interdisciplinary education and research through industry-academia collaboration.



West Bldg.

2F and 3F Space for Undergraduate Medical Students and Others

This space includes seminar rooms for students and staff of the School of Medicine (Faculty of Medicine and Faculty of Health Sciences), the School of Dental Medicine and the School of Pharmaceutical Sciences and Pharmacy. It is also used as a venue for practical training, conferences, self-study and other events for staff of Hokkaido University Hospital.

Established in 1921, Hokkaido University Hospital provides high-quality medicine, trains competent medical professionals, promotes advanced medical technology, and seeks to contribute to the health and well-being of the community.

(Medical Clinical Department)

Clinical Sections	Number of Beds	Number of Patients (FY 2022)	
		Out-Patients	In-Patients
Respiratory Medicine	48	21,148	17,233
Diabetes and Endocrinology	14	24,027	3,317
Rheumatology and Nephrology	35	35,225	11,148
Gastroenterology and Hepatology	48	40,858	16,696
Cardiovascular Medicine	35	18,789	11,601
Hematology	40	14,634	12,912
Medical Oncology	21	5,953	6,130
Gastroenterological Surgery I	47	9,782	13,583
Gastroenterological Surgery II	29	5,243	9,574
Cardiovascular Surgery	23	3,486	5,758
Thoracic Surgery	9	2,911	2,529
Orthopedic Surgery	59	28,046	18,576
Urology	33	22,989	10,389
Anesthesiology	2	19,220	2
Plastic Surgery	25	7,806	6,049
Breast Surgery	6	7,425	2,831
Emergency Medicine	15	3,113	5,498
Neurology	25	13,942	7,598
Ophthalmology	35	35,951	12,609
Otolaryngology-Head and Neck Surgery	38	16,310	12,093
Dermatology	23	16,720	7,225
Psychiatry and Neurology	70	37,037	14,691
Neurosurgery	39	9,562	13,193
Rehabilitation and Physical Medicine	20	61,770	1,091
Obstetrics	42	9,125	11,786
Gynecology	32	20,831	7,069
Pediatrics	33	18,509	9,374
Radiation Oncology	18	23,398	5,369
Diagnostic and Interventional Radiology	1	56,693	187
Nuclear Medicine	9	5,463	1,775
Surgical Pathology	-	-	-
Intensive Care Unit (ICU)	8	0	(2,152)
Emergency Room	5	0	(2,127)
Neonatal Intensive Care Unit (NICU)	9	0	(2,806)
Growing Care Unit (GCU)	(11)	0	(1,315)
Maternal Fetal Intensive Care Unit (MFICU)	(3)	0	(997)
High Qualified Clean Ward	6	0	(1,276)
TOTAL	902	595,966	257,886

* Beds within Obstetrics section.

** Patients from each clinical section.



(Dental Clinical Department)

Clinical Sections	Number of Beds	Number of Patients (FY 2022)	
		Out-Patients	In-Patients
Preventive Dentistry	23	6,382	5,917
Operative Dentistry		12,012	
Periodontics		20,103	
Removable Prosthodontics		13,942	
Crown and Bridge Prosthodontics		10,908	
Gerodontology		12,849	
Orthodontics		13,607	
Dentistry for Children and Disabled Persons		9,947	
Oral Medicine		19,472	
Oral and Maxillofacial Surgery		11,897	
Dental Radiology		3,808	
Dental Anesthesiology		2,028	
Center for Advanced Oral Medicine		8,640	
Division for General Dentistry		3,329	
TOTAL	23	148,924	5,917

Clinical Section	Number of Beds	Number of Patients (FY 2022)	
		Out-Patients	In-Patients
GRAND TOTAL	925*	744,890	263,803

*The number of the registered beds is 944.

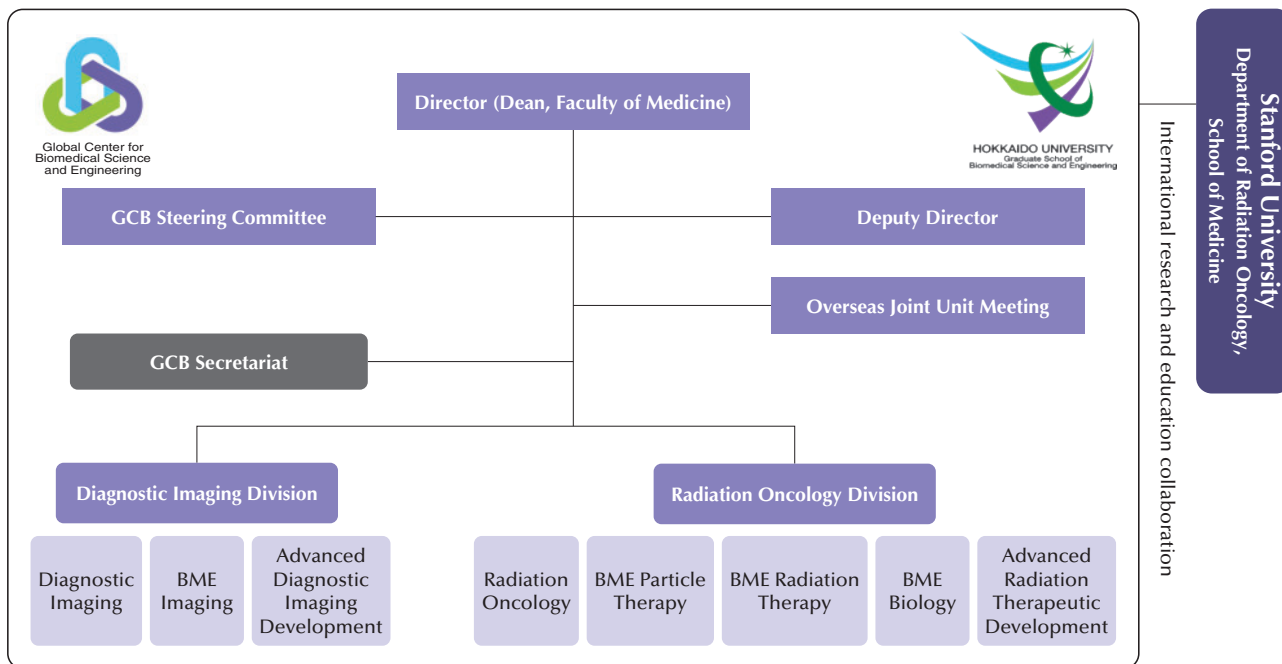


Global Center for Biomedical Science and Engineering (Established: April 1, 2020)

The Global Center for Biomedical Science and Engineering (GCB) took over the activities of the Global Station for Quantum Medical Science and Engineering at the Global Institution for Collaborative Research and Education (GI-CoRE), which had operated as an organization under the direct control of the President for six years since its establishment in April 2014. In collaboration with world's leading universities and research institutes, including Stanford University, the GCB is engaged in research of "radiation therapy and particle beam radiation therapy utilizing quantum, atom- and accelerator-related quantum science and engineering knowledge and technology

in medicine," as well as "molecular imaging, molecular biology, and radiation biology for scientific knowledge and technology of molecular behavior in the living body in medicine." The aim is also to develop individuals with an international perspective who can conduct research/development and quality control of medical devices and technologies founded on science and engineering at the Graduate School of Biomedical Science and Engineering. The GCB has also been certified as a "GI-CoRE Cooperating Hub" and continues research and education activities in collaboration with GI-CoRE.

Organizational structure of the Global Center for Biomedical Science and Engineering, Faculty Medicine



Abbreviation: BME, Biomedical Science and Engineering

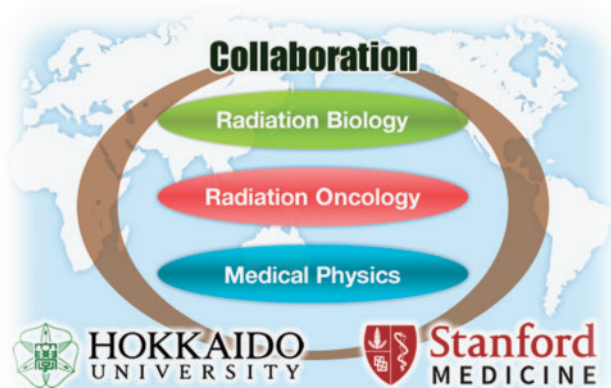
Mission

- (1) Implementation of biomedical science and engineering research and education
- (2) Research/development and quality control of medical devices and technologies founded on science and engineering
- (3) International collaborative educational programs
- (4) Facility cooperation with domestic and overseas universities and research institutes
- (5) Other medical science and engineering education and research/development

Steering Committee

Responsibilities

- (1) Personnel affairs of faculty members
- (2) Budget and settlement
- (3) International collaborative education programs (including Summer Institute and Summer School)
- (4) Other important matters related to the center



医理工学
グローバルセンター
Global Center for
Biomedical Science and Engineering

Educational and Research Support

Public Relations Office (Established: April 1, 2007)

Objectives and Activity Outline

The Public Relations Office was established to support proactive and effective academic public relations and outreach activities for the Faculty of Medicine, the Graduate School of Medicine and the School of Medicine.

Specifically, the Office primarily works to improve information environments through website management/administration and the planning/production of a variety of public relations media as well as planning/drafting public relations activities for the Faculty of Medicine, the Graduate School of Medicine and the School of Medicine as a whole.

Research Strategy Office (Established: April 1, 2014)

Objectives and Activity Outline

The Research Strategy Office was established to ensure efficient promotion and smooth implementation of research activities at the Faculty of Medicine, the Graduate School of Medicine and the School of Medicine through related planning and drafting based on

the research strategies of Hokkaido University.

The Office also promotes and supports: 1. research concepts for the future; 2. research support systems; 3. research projects; 4. government-industry-academia collaboration; 5. medium-term and annual plans; and 6. matters regarding research budgets.

Public Relations

Data as of July 2023

Official Publications

Title	Publication Frequency	Year and Month of Latest Publication
Guidebook of the Faculty of Medicine/Graduate School of Medicine/School of Medicine (Japanese ver./English ver.)	Annual	September/October 2023
Newsletter of the Faculty of Medicine/Graduate School of Medicine/School of Medicine	3 times a year	June 2023
Activity Report of the Graduate School of Medicine/School of Medicine	Occasional	2004 Edition
DVD outlining the School of Medicine	Occasional (e.g., years when courses are reorganized)	July 2017
Videos outlining the School of Medicine (Japanese ver./English ver.)	Occasional	October 2018
Guidebook of the Master's Program (Japanese ver./English ver.)	Annual	May/July 2023
Guidebook of the Doctoral Program (Japanese ver./English ver.)	Annual	May/July 2023
Syllabus of the Graduate School of Medicine Master's Program (English and Japanese)	Annual	2023 Edition
Syllabus of the Graduate School of Medicine Doctoral (PhD) Program (English and Japanese)	Annual	2023 Edition
Graduate School of Medicine (Master's Program/Doctoral Program) Student Handbook	Annual	2023 Edition
Guidebook of the School of Medicine	Annual	June 2023
Student Life in Tandem with Medical Science	Annual	2023 Edition
Voice of the International Students (VIS) Newsletter of the International Relations Division (English and Japanese)	Several times a year	October 2022
Outline of the Research Center for Cooperative Projects and its Achievements	Annual	March 2023

Press Release (Academic 2022)

Press Release Title	Researcher	Release Date
ATP from sensory neuron-interneuron crosstalk is key to spreading inflammation in Rheumatoid Arthritis	Professor MURAKAMI Masaaki	May. 17, 2022
Molecular pathway by which stress affects lupus discovered	Professor MURAKAMI Masaaki	Jul. 22, 2022
How heart failure disrupts the cell's powerhouse	Visiting Professor SABE Hisataka	Oct. 24, 2022
Root of Triple Negative Breast Cancer immunosuppression and chemoresistance revealed	Professor SEINO Ken-ichiro	Nov. 1, 2022
Intestinal microorganisms influence white blood cell levels in blood	Associate Professor HASHIMOTO Daigo	Nov. 22, 2022
Good and bad feelings for brain stem serotonin	Lecturer OHMURA Yu	Dec. 28, 2022
Hokkaido University's Takanori Teshima receives the Health Culture Award	Professor TESHIMA Takanori	Feb. 14, 2023
Healing the brain: hydrogels enable neuronal tissue growth	Professor TANAKA Shinya	Feb. 24, 2023
A common metabolite may help treat autoimmune diseases	Assistant Professor KONO Michihito	Mar. 15, 2023

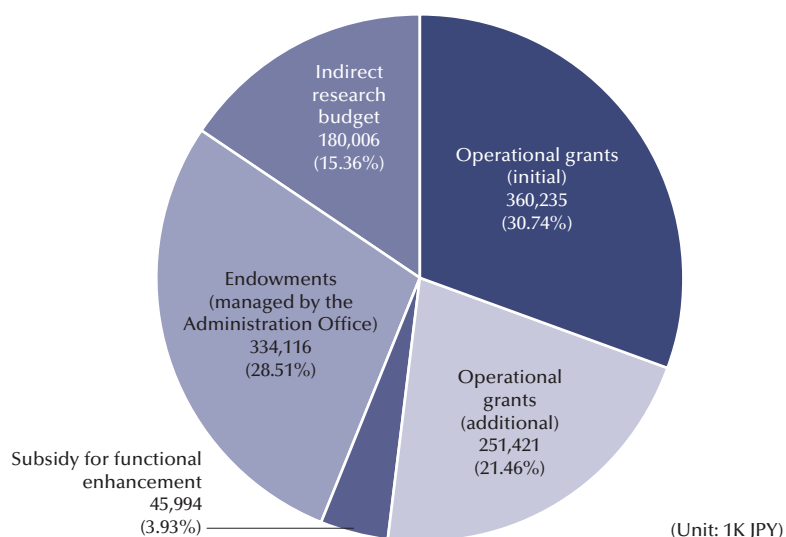
For more information and updates, please visit the website
https://www.med.hokudai.ac.jp/en/press_release/



Total Revenue and Expenditure in Fiscal 2022

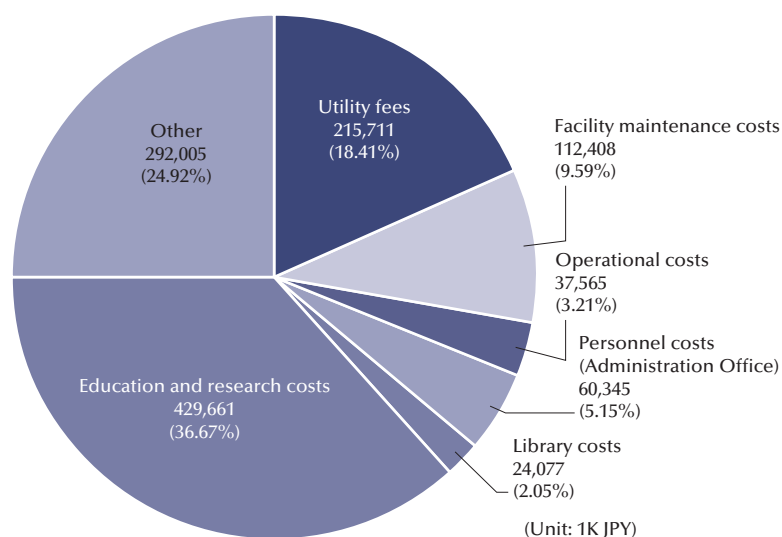
Revenue

1,171,772 (Thousand yen)



Expenditure

1,171,772 (Thousand yen)



Grants-in-Aid for Scientific Research, etc.

2022 Fiscal Year
(Unit: 1K JPY)

Category	Faculty of Medicine		Hokkaido University Hospital	
	Number of Grants	TOTAL	Number of Grants	TOTAL
Grants-in-Aid for Scientific Research	46	303,680	11	30,550
Grant-in-Aid for Scientific Research (Multi-year Fund)	163	255,008	130	187,070
Health, Labour and Welfare Sciences Research Grant	0	0	24	23,033
Joint Research	49	142,508	57	308,895
Consigned Research *1	122	1,135,072	93	271,845
Other Grants-in Aid (Competitive Funds)	10	67,210	43	2,002,255
Income of Other Funded Research *2	-	160,367	257	834,202
Income of Endowments for Research	428	702,110	263	257,413

*1 Includes competitive funds

*2 Includes Clinical Study of Pharmaceutical Products, Inception Fee of Pathological Materials, etc.