

Major Study Themes of Faculty

(As of August 1, 2020)

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Department of Fundamental Biosciences	Division of Physics	Professor	Yutaka Mera	1. Study on nanomaterials, nanostructures and surfaces 2. Development of nano-spectroscopy 3. Medical application of nanotechnology
		Associate Professor	Nobuyasu Naruse	1. Research for optical properties of nano-,bio-materials 2. Research for material science using diffraction, microscopy, and spectroscopy 3. Physics research contributing to environmental science, agriculture, disaster prevention, and medical science 4. Research for science education
	Division of Chemistry	Professor	Yoshio Furusho	1. Development of medical materials based on supramolecular chemistry 2. Construction of soft materials utilizing formation of organic salt bridges driven by hydrogen bonding 3. Construction of molecular assembly through hierarchical organization of biomolecules
	Division of Biology	Professor	Takako Hirata	1. Molecular basis of immune cell trafficking 2. Control of lymphocyte migration to the skin and mucosa 3. Immune regulation by cytoskeleton-associated proteins
	Division of Mathematics	Associate Professor	Motoko Kawakita	1. Algebraic curves with many rational points
Department of Culture and Medicine	Division of Philosophy	Professor	Yoshihito Muroji	1. Buddha's teachings and his life 2. Philosophy of mahāyāna buddhism 3. Bioethics and medical ethics 4. Asian culture and religions
	Division of Psychology	Associate Professor	Takatsugu Kojima	1. Spatial cognition and language understanding 2. Affective information processing 3. Non-verbal cognition
	Division of Cultural Anthropology	Professor	Tsutomu Kaneshige	1. Anthropological studies on ethnic minorities of P.R.China 2. Anthropological studies on Fengshui 3. Anthropological studies on merit and merit-making
Department of Anatomy	Division of Anatomy and Cell Biology	Professor	Jun Udagawa	1. Analysis of the function of the brain phospholipid to the behavior 2. Elucidation of gene functions related to prenatal stress (DOHaD) 3. Study on the relationship between hand structure and grasping function
	Division of Neuroanatomy	Professor	Yu Katsuyama	1. Analysis of brain morphogenesis 2. Analysis of mechanisms of maintenance and differentiation of the stem cells 3. Analysis of model animals of psychiatric diseases.
		Associate Professor	Hayato Kaneda	1. Stem cell aging and tissue homeostasis 2. Search for biomarkers of age-related diseases 3. Brain morphogenesis
Department of Physiology	Division of Integrative Physiology	Professor	Seiji Hitoshi	1. Analysis of the generation, maintenance, and differentiation of neural stem cells 2. Development of regenerative therapy strategy for the damaged central nervous system 3. Understanding the pathogenesis of psychiatry diseases
	Division of Cell Physiology	Associate Professor	Mariko Omatsu	1. Characterization of stem or progenitor cells originated from fetal stages 2. Mechanisms of the regulation of intracellular Ca ²⁺

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Department of Biochemistry and Molecular Biology	Division of Molecular Physiological Chemistry	Professor	Yasutoshi Agata	1. Epigenetic regulation of gene expression and cancer development 2. Regulation of gene expression and cancer development by chromosome dynamics 3. Regeneration of cancer specific T cells from iPS cells
		Associate Professor	Koji Terada	1. Molecular mechanism of antigen receptor gene rearrangement in lymphocytes 2. Gene-regulation for lymphocyte development
	Division of Molecular Medical Biochemistry	Professor	Hisakazu Ogita	1. Signal transduction research and genetic analysis in the field of cancer biology and cardiovascular diseases 2. Molecular mechanism of cell adhesion
		Associate Professor	Akira Sato	1. Signal transduction and cell-cell communication in cancer and inflammatory diseases. 2. Adult diseases triggered by aberrant regulation of Wnt signaling.
	Division of Stem Cell Biology and Regenerative Medicine	Professor	Hideto Kojima	1. Regenerative medicine 2. Stem cell based organogenesis 3. Gene therapy
		Associate Professor	Tomoya Terashima	1. Engineering the novel molecular therapies with cell and tissue specific targeting 2. Application to the regenerative therapies with reprogramming of bone marrow-derived cells 3. Analysis of the relation between bone marrow-derived cells and neurological diseases
Department of Pathology	Division of Human Pathology	Professor	Ryoji Kushima	1. Gastrointestinal pathology 2. Diagnostic pathology
		Associate Professor	Kenichi Mukaisho	1. Gastric and esophageal carcinogenesis using various animal models 2. Analyses of extra-esophageal symptoms of GERD using reflux animal models 3. Influence of bile acids on carcinogenesis and cancer progression 4. Morphology of cancer cells using a novel 3D cell culture system
	Division of Pathogenesis and Disease Regulation	Professor	Yasushi Itoh	1. Development of vaccines and therapeutic agents against influenza virus 2. Research on genetic diseases and aging using a non-human primate model 3. Analysis of immune responses using cynomolgus macaques
	Division of Microbiology and Infectious Diseases	Associate Professor	Yukihiro Tnbe	1. Physiological function(s) of cancer-related genes. 2. Search for novel anti-tumor compounds.
Department of Pharmacology	—	Professor	Eiichiro Nishi	1. Molecular mechanism and pathophysiological role of ectodomain shedding 2. Regulatory role of transcriptional coregulator in metabolism 3. Role of metalloproteinases in cardiovascular disease, cancer and inflammatory diseases
		Associate Professor	Mikiko Ohno	1. Molecular mechanism and pathophysiological roles of heart rate control by the multifunctional protease. 2. Usefulness of the novel biomarker for the early detection of ACS 3. Regulatory role of protease in megakaryocyte maturation and platelet production 4. Role of metalloprotease in Alzheimer's disease
Department of Social Medicine	Division of Public Health	Professor	Katsuyuki Miura	1. Epidemiologic research of cardiovascular diseases 2. Preventive medicine of cardiovascular diseases 3. Nutritional epidemiology
		Associate Professor	Aya Kadota	1. Epidemiology on DM, CVD and NCD 2. Preventive medicine on DM, CVD and NCD 3. Epidemiologic study of subclinical atherosclerosis and dementia
	Division of Medical Statistics	Associate Professor	Sachiko Tanaka	1. Prediction of the future incidence and death 2. Statistical methods for epidemiologic researches 3. Pharmacoepidemiology
	Division of Legal Medicine	Professor	Masahito Hitosugi	1. Amalysis of traffic injuries 2. Pathophysiological analysis for sudden death cases due to thrombosis 3. Preventive medicine for deaths of external causes

Department / Centre	Division / Unit	Title	Name	Major Study Themes	
Department of Internal Medicine	Division of Cardiovascular Medicine	Professor	Yoshihisa Nakagawa	1. Coronary reconstruction in ischemic heart disease 2. Primary and secondary prevention for atherosclerosis 3. Optimal antithrombotic therapy	
		Associate Professor	Takashi Yamamoto	1. The research of catheter-based intervention for coronary artery disease, peripheral artery disease and structure heart disease 2. The research of nutritional science in patients with heart failure	
	Division of Respiratory Medicine	Professor	Yasutaka Nakano	1. Structure and function relationship of the lung 2. Structure and function relationship of respiratory diseases	
	Division of Gastroenterology and Hematology	Professor	Akira Andoh	1. Mucosal immunology 2. Gut microbiota 3. Cytokine network	
		Associate Professor	Katsuyuki Kito	1. Research about megakaryocytosis 2. Research for the treatment of hematological malignancies 3. Research on bone marrow transplantation	
		Associate Professor	Osamu Inatomi	1. Pancreatic fibrosis in pancreatic cancer and chronic pancreatitis 2. New development of endoscopic device in ERCP	
		Associate Professor	Masahiro Kawahara	1. Research for the maintenance of hematopoietic stem cells. 2. Research for the leukemia genesis and the development of novel drugs.	
	Division of Diabetology, Endocrinology and Nephrology	Professor	Hiroshi Maegawa	1. Nutrition and metabolic disease 2. Mechanism of insulin resistance 3. Diabetogenic genes	
		Associate Professor	Shinichi Araki	1. Mechanism of development of diabetic nephropathy 2. Risk factors on development of diabetic vascular complications 3. Nutritional research on renal pathophysiology	
		Associate Professor	Satoshi Ugi	1. Clarification of the mechanisms and pathophysiology of adipokines 2. Clarification of the molecular regulation of metabolism by nutrients 3. Clarification of the mechanisms of improvement in glucose metabolism by bariatric surgery	
	Division of Neurology	Professor	Makoto Urushitani	1. Molecular targeted therapy for amyotrophic lateral sclerosis 2. Cell biological analysis of neurodegenerative diseases 3. Noninvasive diagnosis of neurological diseases 4. Molecular pathology of cerebrovascular diseases 5. Functional brain image analysis of Nerve rehabilitation	
		Associate Professor	Mitsuru Sanada	1. Research for the pathogenesis of diabetic neuropathy 2. Research for the relationship between chronic inflammation and peripheral neuropathy	
	Department of Pediatrics	—	Professor	Yoshihiro Maruo	1. Molecular genetic analysis of hereditary unconjugated hyperbilirubinemia 2. Polymorphism of UDP-glucuronyltransferase and drug metabolism 3. Genetic analysis of congenital hypothyroidism
			Associate Professor	Takashi Taga	1. Clinical study for developing therapeutic approach of pediatric leukemia
Associate Professor			Toshihiro Sawai	1. Study on diagnosis and treatment of the atypical hemolytic uremic syndrome 2. Elucidation of the disease mechanism of C3 glomerulopathy 3. Research on factors involved in complement dysregulation	
Associate Professor			Katsuyuki Matsui	1. Study on the relevance of the therapeutic effect, treatment behavior, and QOL for pediatric type 1 diabetes 2. Study on diagnostic accuracy of hormone stimulation test in children	

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Department of Psychiatry	—	Professor	Yuji Ozeki	1. Etiology and pathophysiology of schizophrenia 2. Cardiovascular adverse effect by psychotropics
		Associate Professor	Kumiko Fujii	1. Etiology and pathophysiology of schizophrenia. 2. Mental illness with involuntary movemen.
		Associate Professor	Masahiro Matsuo	1. Imaging of neurophysiology underling cognitive and alerting functions 2. Assessment of dementia risk by use of calculative science technologies applied on bio/medical big data
		Associate Professor	Atsushi Yoshimura	1. Establishing novel biomarkers for post-operative delirium on elderly patients 2. Investigation for decreased quality of life and social function caused by sleep disorder 3. A retrospective observational study associated with electroconvulsive therapy by multiple facilities
Department of Dermatology	—	Professor	Noriki Fujimoto	1. Analysis of regulatory B cells on autoimmune diseases 2. Investigation for the treatment of cutaneous mailgnant tumors 3. Gene editing for treatment of epidermolysis bullosa
		Associate Professor	Takeshi Kato	1. Research in treatment of hair disease 2. Research in treatment of malignant skin tumor
		Associate Professor	Takeshi Nakanishi	1. Skin ulcer 2. Cutaneous allergic disorders
Department of Surgery	Division of Gastrointestinal Surgery and General Surgery	Professor	Masaji Tani	1. Clinical study for the prevention of post operative complications in pancreatectomy 2. Development of immunotherapies for gastrointestinal diseases 3. Study of the pancreatic function 4. Evaluation of mechanisms for the metastasis 5. Study of the intervention for surgical skill 6. Interaction between cancer cells and fibroblasts
		Associate Professor	Hiroya Iida	1. Assessment of frailty in elderly patients and perioperative intervention 2. Development of fluorecence navigation liver surgerny
		Associate Professor	Tohru Miyake	1. Study for Cancer fibrosis. 2. Study for Cancer metastasis. 3. Study for peri operative management in Colorectal Surgery.
	Division of Cardiovascular Surgery and Thoracic Surgery	Professor	Tomoaki Suzuki	1. Long term outcome of total arterial off-pump CABG 2. The outcome of total arch replacement under mild hypothermia 3. Technical aspect or long-term durability of mitral valve repair 4. Type A aortic surgery: optimal procedure or long-term remodeling
		Associate Professor	Jun Hanaoka	1. Minimally invasive surgery with VATS for chest diseases 2. A study of the operation method for lung cancer 3. da Vinci® robotic surgery in general thoracic surgery 4. A study of the identification technique of the interlobar/intersegmental plane 5. Evaluation of pulmonary function before and after lay resection using dynamic X-ray apparatus
		Associate Professor	Takeshi Kinoshita	1. Basic research in endothelial function of coronary artery bypass grafts 2. Three-dimensional quantitative assessment of mitral valve geometry and development of mitral valve repair technique

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Department of Orthopaedic Surgery	—	Professor	Shinji Imai	1. Improvement of clinical output in arthroscopic shoulder surgery 2. Improvement of clinical output in shoulder arthroplasty 3. Regenerative medicine for injuries of articular cartilage and spinal cord
		Associate Professor	Kanji Mori	1. Research for the ossification of the spinal ligaments 2. Research for the diagnosis and treatment for the disease with spine and spinal cord 3. Research for bone metabolism
		Associate Professor	Mitsuhiko Kubo	1. Improvement of clinical outcome in total knee arthroplasty 2. Research for kinematics of total knee arthroplasty 3. Basic and clinical research for articular cartilage repair 4. Research for pain in osteoarthritis of the knee
		Associate Professor	Takafumi Yayama	1. Research for ossification process in patients with ossification of spinal ligament 2. Pathological analysis for hypertrophy of ligament tissue
Department of Neurosurgery	—	Professor	Kazuhiko Nozaki	1. Research for cerebral ischemia 2. Research for cerebral aneurysms 3. Research for cerebral arteriovenous malformations
		Associate Professor	Atsushi Tsuji	1. Treatment and pathophysiology for ischemic cerebrovascular disease 2. Neuroendovascular treatment 3. Cerebral blood flow and metabolism
		Associate Professor	Tadateru Fukami	1. Research for the multidisciplinary treatment for glioma 2. Research for the safety and the risk of awake surgery 3. Research for the therapeutic indications about neuroendoscopic surgery
Department of Otorhinolaryngology	—	Professor	Takeshi Shimizu	1. Pathogenesis and regulation of upper airway inflammation 2. Mucus hypersecretion and goblet cell metaplasia 3. Immunology and allergy of upper airway
		Associate Professor	Shigehiro Owaki	1. Diagnosis and treatment of voice disorder 2. Diagnosis and treatment of headandneck cancer
		Associate Professor	Hideaki Kohzaki	1. The mechanism and control of epithelial-derived airway allergic diseases 2. The pathophysiological analysis of eosinophilic chronic rhinosinusitis 3. The pathophysiological analysis of Japanese cedar pollen rhinitis
		Associate Professor	Ichiro Tojima	1. Study of eosinophilic inflammation in upper airway 2. The pathophysiological research in allergic rhinitis 3. Mucus production and its regulation in airway epithelium
Department of Obstetrics and Gynecology	—	Professor	Takashi Murakami	1. Minimally invasive gynecologic surgery (hysteroscopic, laparoscopic, and robotic surgery) 2. Endometriosis and adenomyosis 3. Reproductive endocrinology and infertility
		Associate Professor	Fuminori Kimura	1. The regulation of activated primordial follicle 2. Fertility preservation in cancer patients 3. Elucidation of development in endometriosis and adenomyosis 4. Elucidation of pathophysiology of chronic endometritis
		Associate Professor	Shunichiro Tsuji	1. Maintenance and failure of pregnancy 2. Diagnosis of fetal anomaly using ultrasonography 3. Diagnosis and treatment of cesarean scar syndrome 4. The role of resident microglia to neonatal hypoxic ischemic encephalopathy
		Associate Professor	Kyoto Kasahara	1. Women's healthcare 2. Osteoporosis in women

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Department of Urology	—	Professor	Akihiro Kawauchi	1. Research on robotic surgery 2. Research on minimally invasive surgery 3. Research on development of new imaging modality
		Associate Professor	Mitsuhiro Narita	1. Research on the urological laparoscopic surgery. 2. Research on the treatments of the prostate cancer and the quality of life. 3. Research on the robot assisted surgery.
		Associate Professor	Kazuyoshi Johnin	1. Surgery in pediatric urology (Research for plastic and laparoscopic surgery) 2. Research for voiding dysfunction in children 3. Application of MRI imaging in pediatric urology
		Associate Professor	Susumu Kageyama	1. Research in urothelial cancer specific molecules 2. Development of new anti-cancer drugs for urologic malignancy 3. Proteomics research in urologic oncology
Department of Ophthalmology	—	Professor	Masahito Ohji	1. Study for vitreoretinal pathogenesis and development of new approach in vitreoretinal surgery 2. Study for intraocular pharmacokinetics of cytokines 3. Study for pathogenesis in the rat of diabetes model mice
		Associate Professor	Yoshitsugu Saishin	1. Molecular biology of retina 2. Intraocular drug therapy
		Associate Professor	Osamu Sawada	1. Pharmacokinetics of intravitreal agents 2. Treatment for diabetic macular edema
		Associate Professor	Masashi Kakinoki	1. Pharmacokinetics of intravitreal agents. 2. Pharmacokinetics of intravitreal agents in macaque monkeys. 3. New technics of vitreoretinal surgery.
Department of Anesthesiology	—	Professor	Hirotochi Kitagawa	1. Multimodal in vivo monitoring of ischemia reperfusion injury 2. Cardioprotection by anesthetic agents and opioids
		Associate Professor	Sei Fukui	1. MR Spectroscopy (Brain imaging of chronic pain) 2. Voxel based morphometry (Brain imaging of chronic pain) 3. Interdisciplinary pain management of chronic pain 4. Pulsed radiofrequency (PRF) (Minimum invasive therapy of Interventional pain treatment) 5. Resting state functional MRI (Brain imaging of chronic pain)
		Associate Professor	Akiko Kojima	1. Elucidation of molecular basis for the mechanisms underlying cardioprotective effect of anesthetics, focused on Ca ²⁺ transport proteins. 2. Investigation of modulatory effects of anesthetics on cardiac pacemaker function. 3. Electrophysiological and molecular biological analyses for the interaction between anesthetics and ion channels. 4. Investigation of modulatory effects of anesthetics on ionic mechanisms involved in arrhythmogenesis.
Department of Radiology	—	Professor	Yoshiyuki Watanabe	1. Study for pathophysiology of central nerves system disease and functional imaging using MRI and CT. 2. Artificial intelligence for medical imaging. 3. Human fluid flow imaging using MRI.
		Associate Professor	Shinichi Ohta	1. Fundamental research of IVR for clinical application 2. Research of abdominal diagnostic images
		Associate Professor	Akinaga Sonoda	1. Difference in tracheal diameter changes during deep breathing in a supine position between restrictive ventilator impairment patients, obstructive ventilator impairment patients and normal respiratory function patients using dynamic chest radiography 2. Difference in the pixel value change of lung field during deep breathing between restrictive ventilator impairment patients, obstructive ventilator impairment patients and normal pulmonary function patients using dynamic chest radiography 3. The effect of botulinum toxin A injection into the perirenal arterial space to treat hypertension
		Associate Professor	Ryuta Ito	1. Development of magnetic resonance imaging tools for brain morphological and functional analysis
		Associate Professor	Naoaki Kono	(Now in writing)

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Department of Oral and Maxillofacial Surgery	—	Professor	Gaku Yamamoto	1. Study of the osteoblast for regeneration 2. Pathogenesis and treatment of oral tumor 3. Study on the reconstruction of the jaw 4. Study on microbiota of the oral cavity 5. Study of the Sleep apnea syndrome
		Associate Professor	Masashi Yamori	1. Oral Cancer 2. Jaw Deformities and Cleft Palate 3. Anti-resorptive Agents-related Osteonecrosis of the Jaw 4. Obstructive Sleep Apnea Syndrome 5. Periodontal Disease 6. Dental Implant
		Associate Professor	Shinya Koshinuma	(Now in writing)
Department of Clinical Laboratory Medicine	—	Associate Professor	Tokuhiro Chano	1. Clinical application of genetic medicine 2. Analyzing the biological function RBICCI/FIP200 3. Inventing novel strategies for cancer treatment, applied with novel biomarkers 4. Drug development from targeting RAB39A
Diagnostic Pathology Section	—	Associate Professor	Suzuko Moritani	1. Diagnostic pathology 2. Pathology of the breast and gynecological organs
Department of Critical and Intensive Care Medicine	—	Associate Professor	Takahisa Tabata	1. Study of biological reaction mechanism in sepsis 2. Study of the diagnosis and treatment of multiple trauma
		Associate Professor	Yasuyuki Tsujita	1. Study of cardiac dysfunction and arrhythmia under excessive stress 2. Study of septic organ dysfunction 3. Epidemiological study of cardiovascular shock
		Associate Professor	Mikiko Matsushita	1. How to off and on the job training of BLS and ALS 2. Role and education of general physician in Japanese format 3. Analysis of social and environmental factors in emergency department attendance
Department of Medical Oncology (Cancer Center)	—	Professor	Yataro Daigo	1. Isolation and functional analysis of cancer-related genes. 2. Elucidation of molecular pathology of cancer by genomics and proteomics analysis. 3. Development of molecular-targeted drugs and cancer vaccines through translational research. 4. Development of precision medicine and new cancer biomarkers through translational research.
		Associate Professor	Satoshi Murata	1. Analysis of mechanisms and development of treatment for metastasis after surgery for gastrointestinal cancer 2. Control over the perioperative tumor microenvironment in gastrointestinal cancers 3. Development of immune cell therapy for solid cancers 4. Hyperthermic Intraperitoneal Chemotherapy (HIPEC)
Department of Comprehensive Internal Medicine	—	Professor	Toshiro Sugimoto	1. Medical diagnosis Avoiding diagnostic errors 2. Rural medicine 3. Clinical electrolyte acid-base abnormalities electrolyte; acid-base abnormalities 4. Development of continuing professional development using ICT
		Associate Professor	Masato Ohnishi	1. Pathophysiology and therapy of chronic heart failure 2. Diagnosis and therapy of hypertension in primary care 3. Simulation-based instruction in healthcare professionals
		Associate Professor	Akihiko Itoh	1. Percutaneous endoscopic gastrostomy and management of that patient. 2. Indication and complications of enteral nutrition. 3. Nutritional support team management and multi-occupation collaboration.
		Associate Professor	Yasuhiro Maeno	1. Development of effective regional cooperation for medical care of the diabetic patients 2. Development of effective educational techniques for the diabetic or pre-diabetic people
		Associate Professor	Hiroshi Wada	1. Research for the efficacy of regional cooperation in respiratory medicine examination. 2. Clinical examination of obstructive pulmonary disease.

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Department of Comprehensive Surgery	—	Professor	Eiji Mekata	1. Multimodality therapy for colorectal cancer 2. Development of the resin of the surgical instrument 3. Anticancer drug sensitivity test 4. Oncology (disease state, therapy and community cooperation)
		Associate Professor	Hiroyuki Ohta	1. Multimodality therapy for colorectal cancer 2. Clinical study of postoperative complication 3. Development of the resin of the surgical instrument
		Associate Professor	Hiroya Akabori	1. Study of gastrointestinal surgical stress 2. Development of microwave surgical device 3. Clinical study of the operation method for pancreas
		Associate Professor	Naomi Kitamura	1. Development of new endotoxin measurement method. 2. Postoperative analgesic effect for laparoscopic cholecystectomy.
Department of Plastic and Reconstructive Surgery	—	Associate Professor	Junko Okano	1. Development of new therapy of nonhealing skin ulcer using bone marrow cells 2. The role of bone marrow cells on skin homeostasis
Blood Purification Section	—	Associate Professor	Masami Kanasaki	1. Blood purification 2. Mechanism of development of diabetic nephropathy
Blood Service Section	—	Associate Professor	Hitoshi Minamiguchi	1. Phenotypic analysis of hematopoietic stem cell 2. Phenotypic analysis of leukemic stem cell
Clinical Nutrition	—	Associate Professor	Shigeki Banba	1. Indirect calorimetry 2. Energy consumption and cytokines 3. Nutritional therapy in inflammatory bowel diseases
Medical Informatics and Biomedical Engineering Section	—	Associate Professor	Yoshihisa Sugimoto	1. Medical electronics 2. Medical information system 3. Biomedical engineering for cardiology
Pharmacy	—	Professor	Tomohiro Terada	1. Science of individualized pharmacotherapy 2. Clinical pharmacology of drug transporters
		Associate Professor	Shinya Morita	1. Research on lipid transporters and lipid metabolism 2. Development of methods for measuring lipids
Medical Safety Section	—	Professor	Tomoharu Shimizu	1. Study of surgical stress 2. Development of new endotoxin measurement method 3. Studies of treatment for colorectal cancer and inflammatory bowel diseases
		Associate Professor	Ryoichi Mandai	1. in-hospital emergency system
Rehabilitation Section	—	Associate Professor	Narihito Kodama	1. A study of bone and soft tissue tumors 2. Microsurgical approach for orthopedics and reconstructive surgery 3. A study of the idiopathic interosseous nerve palsy
Center for Clinical Research and Advanced Medicine	—	Professor	Hironu Kutsumi	1. Regulatory science 2. Development of innovative medicine 3. Gastroenterological endoscopy
		Associate Professor	Mayumi Kurata	1. A Recognition Investigation about Living Donor Transplantation. : Analysis of the free description answer of the citizen by the Internet survey 2. Construction of the study entry applicant support system which utilized the Internet 3. Critical Review of Priority Relative-Offers in Revision of Organ Transplant Law
Clinical Education Center for Physicians	—	Associate Professor	Taku Kawasaki	1. Hip and knee arthroplasty 2. Epidemiology of rheumatoid arthritis 3. Locomotive rehabilitation

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Molecular Neuroscience Research Center	Basic Neuroscience Research Unit - Department of Molecular Neuropathology	Professor	Masaki Nishimura	<ol style="list-style-type: none"> 1. Molecular neuropathology of Alzheimer's disease 2. Development of preemptive medicine for Alzheimer's disease 3. Neuroscience on the principle underlying memory-based behaviors
	Translational Research Unit - Department of International Collaborative Research	Special Contract Professor	Walker Douglas Gordon	<ol style="list-style-type: none"> 1. Studies of transcription factor EB (TFEB) as they relate to defects in lysosomal and autophagy functions leading accumulation of toxic proteins in AD and PD 2. Regulation of the anti-inflammatory ligand CD200 by human neuronal cells in AD and PD 3. Discriminating between pathogenic and homeostatic microglia in AD brains: The use of P2RY12 and CD105 as markers 4. The role of O-GlcNAc-modified proteins in modulating neuro inflammation in AD 5. Development of Three dimensional in vitro tissue culture methods for AD research
	Translational Research Unit - Department of Diagnostics and Therapeutics for Brain Diseases	Associate Professor	Daijiro Yanagisawa	<ol style="list-style-type: none"> 1. Research on fluorine-19 MR imaging as a diagnostic tool for Alzheimer's disease 2. Research on pathogenesis and therapeutic targets in Alzheimer's disease 3. Research on diagnosis and treatment for neurodegenerative diseases
	Translational Research Unit - Department of Medical Chemistry	Special Contract Associate Professor	Masaki Mori	<ol style="list-style-type: none"> 1. Therapeutics for pediatric intractable disease and juvenescence 2. Therapeutics for neurological diseases 3. Regenerative medicine for genetic diseases 4. 3D organogenesis modeling and organ size control 5. Bioinformatics-assisted comprehensive analysis
	Translational Research Unit - Department of Biomedical MR Science	Associate Professor	Akihiko Shiino	<ol style="list-style-type: none"> 1. Development of molecularly targeted agents 2. Study and programing of diagnostic software for brain MR imaging 3. Magnetic resonance spectroscopy 4. Clinical study in neurological disorders
Research Center for Animal Life Science	—	Professor	Masatsugu Ema	<ol style="list-style-type: none"> 1. Research about monkey ES and iPS cells 2. Human disease modeling with genetically engineered monkey 3. Research about mouse ES and iPS cells 4. Molecular mechanism about angiogenesis
Health Administration Center	—	Associate Professor	Emiko Ogawa	<ol style="list-style-type: none"> 1. Research on the pathogenesis of chronic obstructive pulmonary disease (COPD) 2. Clinical research using COPD cohort data
Information Technology and Management Center	—	Professor	Takashi Ashihara	<ol style="list-style-type: none"> 1. Development of new strategy of catheter ablation for refractory arrhythmias. 2. Studies on the mechanism of electrical defibrillation and the development of new defibrillator. 3. Application of human iPS cell-derived cardiomyocytes to the studies on cardiovascular diseases. 4. Studies on cardiovascular diseases by in silico, artificial intelligence, and biomedical engineering.
		Associate Professor	Kazutaka Motoyama	<ol style="list-style-type: none"> 1. studies on star formation process 2. studies on evolution of interstellar medium 3. high performance computing
Education Center for Medicine and Nursing	—	Professor	Toshiyuki Ito	<ol style="list-style-type: none"> 1. Medical education
Department of Research and Development for Innovative Medical Devices and Systems	—	Special Contract Professor	Toru Tani	<ol style="list-style-type: none"> 1. Future surgical operation system 2. Robotic navigation surgical operation 3. Less invasive surgical operation 4. Microwave surgical devices 5. Hyperthermia treatment against malignancy

Department / Centre	Division / Unit	Title	Name	Major Study Themes
Community Healthcare Education and Research Center	—	Associate Professor	Tomoko Umeda	<ol style="list-style-type: none"> 1. Fibrinolysis factors (uPA etc.) and adhesion factors (CD44 variant etc.) related to the breast cancer invasion and the metastasis. 2. MRI mapping for the intraductal area of breast cancer 3. Tumor infiltrating cells around of the breast cancer, related to the trastuzumab after neoadjuvant chemotherapy
		Associate Professor	Shigemi Nakajima	<ol style="list-style-type: none"> 1. Community-based medicine 2. General medicine and internal medicine 3. Clinical gastroenterology, specially upper GI tract diseases and functional GI disorders 4. Health check-up and mass screening, specially gastric cancer screening