

## Organization and education research

※Responsible for multiple educational research

★Inquiries for Professor absence

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Course	Department	Division	Professor (First & Last name)	Education Research
Molecular and Cellular Medicine	Molecular Genetics	Omics Biology	Masaki Matsumoto Tel 2077 e-mail masakim@med.	<ul style="list-style-type: none"> <li>• Studies on the molecular basis of cancer and senescence using omics technology</li> <li>• Studies on the regulation of proteostasis</li> <li>• Systems biology based on multi-omics</li> <li>• Technology development in protein chemistry and proteomics</li> </ul>
		Molecular and Diagnostic Pathology	※ ★ Assistant Professor Yusuke Tani Tel 2095 e-mail tani@med.	<ul style="list-style-type: none"> <li>• Morphological and molecular pathology for gastrointestinal and hepatopancreatic biliary tract cancers and inflammatory bowel disease.</li> <li>• Surgical pathology</li> <li>• Histopathology for clinical image diagnosis</li> </ul>
		Radiation Oncology	※ Hiroyuki Ishikawa Tel 2315 e-mail iskw@med.	<ul style="list-style-type: none"> <li>• Clinical research on radiation Oncology</li> <li>• Basic research on the technique for radiotherapy</li> <li>• Research on the Health-Related Quality of Life after radiotherapy</li> <li>• Research on medical physics</li> </ul>
		Obstetrics and Gynecology	Kosuke Yoshihara Tel 2317 e-mail yoshikou@med.	1 Molecular etiology of endometriosis and related cancer 2 Genome-wide analysis and proteomics analysis of gynecologic cancer and its application to clinical oncology 3. Identification of cancer stem cell in gynecologic cancer and its role for chemo-resistance
		Hepatobiliary Oncology	※ Shuji Terai Tel 2203 e-mail terais@med.	<ul style="list-style-type: none"> <li>• Regenerative Medicine (Gastroenterology &amp; Hepatology)</li> <li>• Regulation for digestion, absorption and metabolism</li> <li>• Metabolic syndrome related steatosis, fibrosis, immunity and carcinogenesis</li> <li>• Applied Medicine using biomaterial, exosome and 3D printer.</li> </ul> Translational Medicine (Gene & Cell Therapy, Exosome Therapy, Designer cell, Endoscopy ).
		Surgical Oncology	※ Toshifumi Wakai Tel 2223 e-mail wakait@med.	<ul style="list-style-type: none"> <li>• Surgical Oncology</li> <li>• Early DNA damage response</li> <li>• Mechanism of multi-drug resistance</li> <li>• Molecular Biology of Cancer</li> <li>• Precision Medicine</li> <li>• Genome Medicine</li> <li>• Cancer and Microbiome</li> <li>• Artificial Intelligence</li> </ul>

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Molecular and Cellular Medicine	Molecular Genetics	Molecular Psychiatry	※ ★ Associate Professor Jun Egawa Tel 2212 e-mail jeg5414@med.	<ul style="list-style-type: none"> <li>• Functional analysis of risk genes for autism spectrum disorders using neurite and synapse development in cultured neurons as phenotypes.</li> <li>• Molecular genetic studies of schizophrenia and autism spectrum disorders</li> <li>• Pharmacogenomic studies on the effects and side effects of psychotropic drugs</li> </ul>
		Medical Oncology	Yasuo Saijo Tel 025-368-9003 e-mail yasosj@med.	Medical Oncology Molecular Targeting Drugs Stem Cells and Organ Regeneration
	Signal Transduction Research	Neurochemistry and Molecular Cell Biology	★ Associate Professor Fubito Nakatsu Tel 2084 e-mail nakatsu@med.	Molecular mechanisms of nerve growth and axon regeneration; Protein phosphorylation; Biological functions of chondroitin sulfate; Superresolution molecular imaging
		Pharmacology	Masanori Hirashima Tel 2087 e-mail masanori@med.	Molecular mechanisms of lymphatic vascular development. Blood vessel-derived factors regulating lymphatic vascular patterning. Generation of fetal disease mouse models and their pathogenesis. Mechanism of disease progression due to changes in vascular cell identity.
		Molecular Oncology	※ ★ Associate Professor Kazuhide Saito Tel 2285 e-mail kazsaito@med.	General Urologic Oncology <ul style="list-style-type: none"> <li>• Basic uro-oncology and molecular biology</li> <li>• Treatment of urological malignancies <ol style="list-style-type: none"> <li>a. Chemotherapy</li> <li>b. Immunotherapy</li> <li>c. Surgical treatment and Reconstructive surgery</li> </ol> </li> </ul>
	Cellular Function	Microscopic Anatomy and Bio-imaging	Shinsuke Shibata Tel 2058 e-mail shibatasa@med.	<ul style="list-style-type: none"> <li>• Development of structural and functional imaging procedure with various kinds of cells and tissues</li> <li>• Study for analysing the mechanism of neurogenesis and neural regeneration</li> <li>• Development of an artificial nerves using human iPS cell-derived nerve fibers</li> <li>• Development of a procedure for detecting neural activity by an electron microscope</li> <li>• Development of new imaging procedure to visualize the histological changes associated with neurodegenerative diseases</li> <li>• Study for analyzing the mechanism of chronic pain and cancer related pain</li> <li>• Analysis for the acquisition mechanisms of human-specific intelligence</li> <li>• Study of the pathogenesis of Hirschsprung's disease</li> <li>• Analysis for the maintenance mechanism of neural stem/progenitor cells</li> <li>• Development of novel imaging procedure for visualizing cell and tissue structure combining various microscopic technologies such as optical microscope and electron microscope</li> <li>• Computer science for developing a novel image analysis tools</li> </ul>

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Molecular and Cellular Medicine	Cellular Function	Molecular Pathology	★ Assistant Professor Katsuyoshi Takata Tel 2106 e-mail ktakata@med.	Molecular Tumor Pathology • Molecular analysis of malignant tumor (solid tumor, hematopoietic tumor) • Pathological analysis of human tumor tissues • Novel diagnostic technology of tumors • Nanomedicine for novel tumor therapeutics
		Gastroenterology and Hepatology	Shuji Terai Tel 2203 e-mail terais@med.	• Regenerative Medicine (Gastroenterology & Hepatology) • Regulation for digestion, absorption and metabolism • Metabolic syndrome related steatosis, fibrosis, immunity and carcinogenesis • Applied Medicine using biomaterial, exosome and 3D printer. Translational Medicine (Gene & Cell Therapy, Exosome Therapy, Designer cell, Endoscopy ).
		Dermatology	Riichiro Abe Tel 2282 e-mail aberi@med.	• Analysis of severe drug eruption • Analysis of cell death • Analysis of skin microbiome • Analysis of hair follicle-associated genes • Analysis of genodermatoses non-M.D. researcher is belong to our department and many members including Master's course are recruit. Researchers can perform the subject you like except for the above.
		Reproductive Medicine	※ Kosuke Yoshihara Tel 2317 e-mail yoshikou@med.	• Effectiveness of HPV vaccine and the mechanism of carcinogenesis caused by HPV infection • Identification and clinical application of gynecological cancer stem cells • Elucidation of the pathogenesis of endometrial-related diseases focusing on genomic abnormalities in the normal endometrium • Elucidation of the etiology of ovarian cancer and development of new treatments • Elucidation of fetal physiology and pathology using ultrasound • Elucidation of the pathogenesis of hypertensive disorders of pregnancy using mouse models • 3-D structural analysis of normal and abnormal placentas • Studies on gastrointestinal protection in preterm infants • Studies on recurrent pregnancy loss and immune-related diseases
		Molecular and Functional Pathology	★ Assistant Professor Yusuke Tani Tel 2095 e-mail tani@med.	• Analysis of cellular function, mucin phenotype, histogenesis and biological behavior of gastrointestinal carcinoma
		Reproductive and Perinatal Medicine	Koji Nishijima Tel 2320 e-mail kojigyne@med.	• Infertility and alloimmunity • Reproductive failure and autoimmunity • Pregnancy-induced hypertension and immunity • Reproductive disorders and gene polymorphism

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Molecular and Cellular Medicine	Molecular Neuroscience and Brain Diseases	Molecular Neurobiology		
		Neurology	Osamu Onodera Tel 0683 e-mail onodera@bri.	<ul style="list-style-type: none"> <li>• Researches for clinical neurology</li> <li>• Researches for pathogenesis and treatments for stroke</li> <li>• Researches for pathogenesis and treatments for neurodegenerative diseases</li> <li>• Researches for pathogenesis and treatments for neuroimmunological disorders</li> <li>• Researches for pathogenesis and treatments for neuromuscular disorders</li> </ul>
		Neurosurgery	★ Associate Professor Makoto Oishi Tel 0653 e-mail shindainogeka@bri.	<ul style="list-style-type: none"> <li>• Translational research for malignant brain tumors</li> <li>• Translational research for treatment of cerebral vascular disorders</li> <li>• Translation research for epilepsy</li> <li>• Translation research for treatment of pediatric neurosurgical disorders</li> <li>• Imaging of higher brain function</li> <li>• Elucidating mechanisms of cortical reorganization after cerebral diseases and clinical application</li> </ul>
		Neural function, development and reproductive engineering	Toshikuni Sasaoka Tel 2163 e-mail sasaoka@bri.  Associate Professor Manabu Abe Tel 0621 e-mail manabu@bri.	We produce genetically engineered animals that are useful as model animals in basic medical research, and conduct behavioral, biochemical, histological, and physiological analyses. We have also begun to create disease models by genetically modifying the common marmoset, a small primate that is currently the focus of much attention. In addition, we conduct a number of joint research projects with domestic and international researchers to elucidate higher brain functions. Through our research, we are able to acquire knowledge and skills in the latest neuroscience, molecular biology, and reproductive and developmental engineering. <ul style="list-style-type: none"> <li>• Production of model animals for human disease and development of gene manipulation techniques</li> <li>• Improvement of repro-developmental techniques applicable to assisted reproductive technology</li> <li>• Basic research on understanding of the molecular mechanisms of brain function using genetically modified animals</li> </ul>
		Neurogenetics	Takeshi Ikeuchi Tel 2343 e-mail ikeuchi@bri.	<ul style="list-style-type: none"> <li>• Biomarker development for dementia</li> <li>• Molecular genetics of dementia</li> <li>• Research &amp; development of familial Alzheimer's disease</li> <li>• Molecular pathogenesis of dementia</li> <li>• Bioresource establishment of dementia</li> </ul>
		Cellular Neuropathology	Takayasu Mikuni Tel 0926 e-mail tmikuni@bri.	<ul style="list-style-type: none"> <li>• In vivo genome editing techniques in the brain</li> <li>• In vivo molecular imaging techniques in the brain</li> <li>• Studying the mechanism of learning and memory</li> <li>• Studying the pathogenesis of developmental disorders</li> </ul>

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Molecular and Cellular Medicine	Molecular Neuroscience and Brain Diseases	Brain Tumor Biology	Nobuyuki Takei Tel 0617 e-mail nobtak@bri.	<p>We study intracellular events of normal and abnormal brain cells, focusing on</p> <ul style="list-style-type: none"> <li>·the analysis of signal transduction pathways in neural stem cells, neurons, glial cells and brain tumor cells.</li> <li>·the analysis of different metabolism in these cells.</li> <li>·the effects and actions of growth factors / cytokines on these cells.</li> <li>·the study of mTOR signaling and cell size control.</li> </ul>
		Neuroscience of Disease	Hideaki Matsui Tel 0646 e-mail hide0729@bri.	<ul style="list-style-type: none"> <li>• Laboratory Policy: Conquering Intractable Diseases – Supporting Each Other – Making Scientific History</li> <li>• Research on the pathophysiology of intractable diseases and aging: Among diseases, the current focus is on neurodegenerative diseases such as Parkinson’s disease, Alzheimer’s disease, and amyotrophic lateral sclerosis.</li> <li>• Research on mechanisms of developmental disorders</li> <li>• Collaboration with pharmaceutical companies and food manufacturers</li> <li>• The unique feature of this program is that it attempts to understand the nature of intractable diseases and aging by comparing various research subjects such as cultured cells, small fish, mice, and human autopsy brains.</li> </ul>
	Medical AI Center	Bioinformatics	Shujiro Okuda Tel 0390 e-mail okd@med.	<ul style="list-style-type: none"> <li>• Researches for human gut metagenome data</li> <li>• Researches for associations between human gut microbiome and diseases</li> <li>• Researches for cancer genome data</li> <li>• Comparative genome researches for phospho-sites</li> <li>• Construction for multi-omics databases</li> <li>• Researches for medical artificial intelligence</li> </ul>
	Cooperative graduate school (Visiting professor)	Neuropsychopharmacology	Kazutaka Ikeda Tel 03-6834-2390 e-mail ikeda-kz@igakuken.or.jp	<p>Tokyo Metropolitan Institute of Medical Science</p> <ul style="list-style-type: none"> <li>• Genome analyses, behavioral pharmacology, and clinical application for addictive disorders</li> <li>• Genome analyses, behavioral pharmacology, and personalized medicine for pain and analgesia</li> <li>• Behavioral pharmacology and molecular biology for neurodevelopmental disorders</li> <li>• Molecular mechanisms underlying pleasant feeling</li> </ul>
		Molecular Genetics	Yoshiaki Kikkawa Tel 03-5316-3311 e-mail kikkawa-ys@igakuken.or.jp	<p>Tokyo Metropolitan Institute of Medical Science</p> <ul style="list-style-type: none"> <li>• Investigation of the relationship between genetic mutations and phenotypes by using mammalian disease models</li> <li>• Development of novel mammalian models for investigating genetic disease pathologies</li> </ul>
		Neural Engineering	Yukio Nishimura Tel 03-6834-2373 e-mail nishimura-yk@igakuken.or.jp	<p>Tokyo Metropolitan Institute of Medical Science</p> <ul style="list-style-type: none"> <li>• Development of neuroprosthesis via artificial neural connection and its clinical application</li> <li>• Neural mechanisms of functional recovery after brain/spinal cord injury</li> <li>• Neural mechanisms of motor performance control by motivation and emotion</li> <li>• Understanding of fronto-basalganglia loop in action</li> </ul>

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Molecular and Cellular Medicine	Cooperative graduate school (Visiting professor)	pediatric neurology	Hiroshi Sakuma Tel 03-6834-2358 e-mail sakuma-hs@igakuken.or.jp	Tokyo Metropolitan Institute of Medical Science • Molecular basis of microglial development and differentiation • Pathomechanisms of pediatric virus-associated acute encephalopathy • Diagnosis of pediatric autoimmune encephalitis
		Biological Psychiatry	Makoto Arai Tel 03-6834-2380 e-mail, arai-mk@igakuken.or.jp	Tokyo Metropolitan Institute of Medical Science • Pathophysiological and clinical association of Schizophrenia with carbonyl stress • Development and analysis of mouse models based on Schizophrenia pathophysiology • Clinical investigation of the effects of a vitamin B6 derivative in patients with carbonyl stress-related Schizophrenia • Schizophrenia cell models and genetic counseling
		Integrative Brain Science for Psychiatry	Masanari Itokawa Tel 03-6834-1779 e-mail itokawa-ms@igakuken.or.jp	Tokyo Metropolitan Institute of Medical Science Basic and clinical research on neuropsychiatric diseases. Basic and clinical research on mental status and behaviors of human.
		Molecular neuropathology	Masato Hasegawa Tel 03-6834-2349 e-mail hasegawa-ms@igakuken.or.jp	Tokyo Metropolitan Institute of Medical Science • Molecular mechanisms of neurodegenerative diseases • Analysis of the cellular and animal models of neurodegenerative diseases • Search for diagnostic markers • Development of disease modifying therapies of neurodegenerative diseases
		Developmental Neurology	Chiaki Maruyama Tel 03-6834-2367 e-mail maruyama-ck@igakuken.or.jp	Tokyo Metropolitan Institute of Medical Science • Mechanisms of brain formation using mouse models • Comparative evolutionary analysis of brain development by interspecies comparison • Elucidation of molecular mechanisms of brain dysplasia • Basic research on psychiatric and neurological disorders
Biological Functions and Medical Control	Homeostatic Regulation and Development	Clinical Nephrology and Rheumatology	★ Associate Professor Shin Goto Tel 2193 e-mail gotos@med.	• Molecular biological analysis of the pathogenesis and progression of primary glomerulonephritis • Clinico-pathological research in primary and secondary kidney diseases • Development of new technologies of hemodialysis therapy and regeneration medicine • Research for treatment of renal anemia • The pathogenesis and treatment of rheumatic and autoimmune diseases • The pathophysiology and treatment of diabetic and hypertensive kidney diseases • Nutrition science in kidney diseases • Epidemiology for life-style related diseases using large-scale cohorts • Genetic analysis and development of treatment for congenital kidney diseases

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Biological Functions and Medical Control	Homeostatic Regulation and Development	Respiratory Medicine	※ Toshiaki Kikuchi Tel 025-368-9321 e-mail kikuchi@med.	<ul style="list-style-type: none"> <li>• Research for respiratory diseases</li> <li>• Research for respiratory infection</li> <li>• Research for psychosomatic medicine</li> <li>• Research for thoracic malignant diseases</li> </ul>
		Pediatrics	Akihiko Saito Tel 2222 e-mail asaitoh@med.	
		Endocrinology and Metabolism	Hirohito Sone Tel 025-368-9026 e-mail sone@med.	<ul style="list-style-type: none"> <li>• Research for the etiology, diagnosis and therapy of metabolic disorders (non-communicable diseases) including diabetes, dyslipidemia, hypertension, obesity and their complications and atherosclerosis</li> <li>• Research for the etiology, diagnosis and therapy for various endocrine disorders</li> </ul>
		General practice medicine	★ Associate Professor Takashi Hasegawa Tel 0718 e-mail htaka@med.	
		Clinical immunology		
		Palliative medicine Science	※ Yasuo Saijo Tel 025-368-9003 e-mail yasosj@med.	Palliative Medicine Clinical Research
	Cardiovascular and Vital Control	Cardiology	Takayuki Inomata Tel 2182 e-mail inotaka@med.	Basic and clinical research on atherosclerotic diseases Basic and clinical research on heart failure Basic and clinical research on cardiac arrhythmia
		Thoracic and Cardiovascular Surgery	Masanori Tsuchida Tel 2240 e-mail masatsu@med.	Thoracic Surgery Cardiac Surgery Vascular Surgery Artificial Organ, Anti- Thrombolytic Therapy Heart and Lung Transplantation
		Anesthesiology	Hiroshi Baba Tel 2323 e-mail baba@med.	Mechanisms of anesthetics. Mechanism of acute pain. Clinical physiology and pharmacology of neuron. (Functional monitoring of spinal cord ) Intraoperative monitoring of respiratory and circulatory function.
		Emergency and Critical Care Medicine	Kei Nishiyama Tel 2338 e-mail keinishi@med.	Data science on emergency medical system Research on resuscitation Research on management of critically ill patients Research on the development of medical treatment methods using artificial intelligence

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Biological Functions and Medical Control	Cardiovascular and Vital Control	Pathomorphology	※ ★ Assistant Professor Katsuyoshi Takata Tel 2106 e-mail ktakata@med.	Comprehensive molecular pathological analysis of neoplasm using molecular manipulation technologies, protein detection, multiomics on tumor cell lines, mouse tumor model and patient tumor tissues.
	Regenerative and Transplant Medicine	Anatomy	Noboru Sato Tel 2045 e-mail nsato@med.	<ul style="list-style-type: none"> <li>• Development of motoneurons and their target muscles</li> <li>• Evolution of the vertebrates</li> <li>• Function of novel molecules in the brain</li> <li>• Development of gene transfer and bioimaging system in vivo</li> </ul>
		Developmental Physiology	Sayaka Sugiyama Tel 2071 e-mail sugiyama@med.	<ul style="list-style-type: none"> <li>• Experience-dependent circuit formation</li> <li>• Molecular mechanisms of postnatal plasticity</li> <li>• Mechanism of homeoprotein transfer in brain</li> <li>• Circuit formation for individuality</li> <li>• Developmental procedure of vision or emotion</li> <li>• Reactivation of neuronal plasticity in adult</li> </ul>
		Digestive and General Surgery	Toshifumi Wakai Tel 2223 e-mail wakait@med.	<ul style="list-style-type: none"> <li>• Gastrointestinal Surgery</li> <li>• Hepato-Biliary-Pancreatic Surgery</li> <li>• Esophagus and Gastric Surgery</li> <li>• Colorectal Surgery</li> <li>• Breast and Endocrine Surgery</li> <li>• Surgical Metabolism and Nutrition</li> <li>• Organ Transplantation (Liver and Pancreas)</li> <li>• Precision Cancer Medicine</li> <li>• Robotic Surgery</li> <li>• Artificial intelligence</li> </ul>
		Orthopedic Surgery	Hiroyuki Kawashima Tel 2272 e-mail inskawa@med.	<ul style="list-style-type: none"> <li>• Repair and regeneration of locomotive organ (bone, joint, muscle, tendon, nerve)</li> <li>• Biomechanics of locomotive organ (bone, joint, muscle, tendon, nerve, spine)</li> <li>• Pathophysiology, repair and regeneration of spine and spinal cord</li> <li>• Pathophysiology and treatment for hand injury and diseases</li> <li>• Basic and clinical application of Microsurgery</li> <li>• Pathophysiology and treatment for bone and soft tissue tumor</li> <li>• Pathophysiology and treatment for RA</li> <li>• Osteoporosis and fragility fracture in elderly</li> <li>• Sarcopenia and frailty</li> <li>• Rehabilitation for patients with locomotive organ disease</li> <li>• QOL: quality of life in patients with locomotive organ disease</li> <li>• Trauma of extremities, pelvis and spine/spinal cord</li> <li>• Artificial joints of extremities and spine</li> </ul>
		Pediatric Surgery	Yoshiaki Kinoshita Tel 2258 e-mail kinoppy@med.	Neonatal surgery pediatric Endoscopic Surgery Pediatric Solid Tumor Pediatric Urology Congenital Pulmonary Lesions Pediatric Liver and Pancreatic Disease Pediatric Surgical Nutrition and Metabolism Pediatric Inguinal Disease



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Biological Functions and Medical Control	Regenerative and Transplant Medicine	Urology	★ Associate Professor Kazuhide Saito Tel 2285 e-mail kazsaito@med.	Structure and function of kidney, genitourinary tract and male genitalia Urological Oncology Urolithiasis Pathophysiology of urinary tract Kidney transplantation and immunosuppression Urinary tract reconstruction and plastic surgery Endourology, Urological endocrinology, andrology
		Hematology	※ Hirohito Sone Tel 025-368-9026 e-mail sone@med.	<ul style="list-style-type: none"> <li>• Research for the pathogenesis of hematological malignancies including leukemia, lymphoma and myeloma. Clinical research to develop new treatments for hematological disorders</li> <li>• Research for the transplantation immunoreaction on allogeneic hematopoietic cell transplantation</li> </ul>
		Bio-systemic Gastroenterology	Shuji Terai Tel 2203 e-mail terais@med.	<ul style="list-style-type: none"> <li>• Regenerative Medicine (Gastroenterology &amp; Hepatology)</li> <li>• Regulation for digestion, absorption and metabolism</li> <li>• Metabolic syndrome related steatosis, fibrosis, immunity and carcinogenesis</li> <li>• Applied Medicine using biomaterial, exosome and 3D printer. Translational Medicine (Gene &amp; Cell Therapy, Exosome Therapy, Designer cell, Endoscopy).</li> </ul>
	Sensory and Integrative Medicine	Neurobiology and Anatomy	Hirohide Takebayashi Tel 2053 e-mail takebaya@med.	<ul style="list-style-type: none"> <li>• Developmental neurobiology</li> <li>• Mechanisms of neuronal and glial cell differentiation from neural stem cells</li> <li>• Role of RNA-binding proteins on neural cell function</li> <li>• Pathological analysis of mouse models with neurodegenerative disease</li> <li>• Regenerative therapies for neurological disorders</li> <li>• Analysis of the neuronal circuits underlying higher brain function</li> </ul>
		Neurophysiology	Isao Hasegawa Tel 2068 e-mail isaohasegawa@med.	<ol style="list-style-type: none"> <li>1. Neural basis for visual perception and memory</li> <li>2. Neural basis for linguistic/symbolic structuring in primates</li> <li>3. Neural basis for cognitive social interactions in primates</li> </ol>
		Psychiatry	★ Associate Professor Jun Egawa Tel 2212 e-mail jeg5414@med.	<ul style="list-style-type: none"> <li>• Neural Circuit Analysis of "Theory of Mind"</li> <li>• Functional analysis of risk genes for autism spectrum disorders using neurite and synapse development in cultured neurons as phenotypes.</li> <li>• Research on brain pathology of autism spectrum disorder using magnetoencephalography</li> <li>• Molecular genetic studies of schizophrenia and autism spectrum disorders</li> <li>• Pharmacogenomic studies on the effects and side effects of psychotropic drugs</li> <li>• Clinical pharmacological research on biomarkers of treatment-resistant depression</li> <li>• Perinatal mental health research on psychosocial factors and biomarkers of perinatal depression</li> </ul>

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Biological Functions and Medical Control	Sensory and Integrative Medicine	Ophthalmology and Visual Sciences	Takeo Fukuchi Tel 2293 e-mail tfuku@med.	<ul style="list-style-type: none"> <li>• Cell biology, pathophysiology, pharmacology of glaucoma</li> <li>• Ocular imaging of glaucoma and vitreo-retinal diseases.</li> <li>• Ophthalmic surgery and laser treatments</li> <li>• Corneal transplantation</li> <li>• Ocular infection and chemotherapy, pharmacology</li> <li>• Ocular histology, pathology and oncology</li> <li>• Neurophthalmology</li> <li>• Pediatric ophthalmology</li> </ul>
		Otolaryngology	Arata Horii Tel 2303 e-mail ahorii@med.	Otology and neurotology, vestibular and auditory science, cochlear implants, middle ear surgery, head and neck surgery, endoscopic sinus surgery
		Functional Imaging	Hiroyuki Ishikawa Tel 2315 e-mail iskw@med.	<ul style="list-style-type: none"> <li>• Research on diagnostic radiology</li> <li>• Research on diagnostic imaging for lung cancer</li> <li>• Research on the application of new diagnostic imaging procedures</li> <li>• Research on therapeutic interventions using diagnostic imaging procedures</li> </ul>
	Nephrology	Cellular Physiology	Tomotake Kanki Tel 2156 e-mail kanki@med.	Molecular mechanism and physiological role of mitochondria autophagy. Clinical Application of mitochondria autophagy.
		Renal Cell Biology	Hiroshi Kawachi Tel 2159 e-mail kawachi@med.	<ul style="list-style-type: none"> <li>• Developmental mechanism of kidney glomeruli</li> <li>• Molecular structure of the barrier of glomerular capillary wall</li> <li>• Pathogenic mechanism of kidney diseases</li> <li>• Establishment of novel therapy for nephrotic syndrome</li> </ul>
	Functional Neuroscience	Neuropathology	Akiyoshi Kakita Tel 0673 e-mail kakita@bri.	Studies as a comprehensive, academic neuropathology department that functions as a team to deliver the highest quality diagnostic services and to perform researches on pathomechanisms underlying various brain disorders.
		Integrated Neuroscience	★ Biological Magnetic Resonance Professor Hironaka Igarashi Tel 0676 e-mail higara@bri.	<ul style="list-style-type: none"> <li>• In vivo functional Imaging of brain</li> <li>• In vivo magnetic resonance microscopy of brain</li> </ul>
		Biological Magnetic Resonance	Hironaka Igarashi Tel 0676 e-mail higara@bri.	<ul style="list-style-type: none"> <li>• In vivo molecular MR of brain</li> <li>• In vivo monitoring of water dynamics in brain</li> </ul>

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Biological Functions and Medical Control	Functional Neuroscience	Functional Neurology & Neurosurgery	Hitoshi Shimada Tel 2274 e-mail shimada.hitoshi@bri.	<ul style="list-style-type: none"> <li>• We will conduct basic/clinical neuroimaging study using PET and MRI.</li> <li>Our main research interests include 1) the pathological basis of neuropsychiatric disorders (especially neurodegenerative disorders such as Alzheimer's disease, Parkinson's disease, and their related disorders); 2) the homeostatic regulation of brain environment; and 3) the establishing of novel biomarkers contributing to promotion of drug discovery.</li> </ul>
		System Pathology for Neurological Disorders	Kazuki Tainaka Tel 0900 e-mail kztainaka@bri.	<ul style="list-style-type: none"> <li>• 3D imaging of cleared brain tissue</li> <li>• Pathological analysis of neural disease</li> </ul>
		System Pathology for Neurological Disorders	Masaki Ueno Tel 0684 e-mail ms-ueno@bri.	<ul style="list-style-type: none"> <li>• Development and plasticity of neural circuits</li> <li>• Connectivity and functions of motor and autonomic circuits</li> <li>• Neural regeneration and repair after spinal cord injury and stroke</li> <li>• Brain-organ-immune system interaction</li> </ul>
		Plastic and Reconstructive Surgery	Ken Matsuda Tel 2593 e-mail matsuken@med.	<p>Microsurgery</p> <p>Reconstructive surgery(head and neck, upper and lower limb, breast)</p> <p>Peripheral nerve regeneration</p> <p>Craniofacial surgery</p> <p>Maxillofacial surgery</p> <p>Wound healing</p>
Community Disease Control	Infectious Disease Control and International Medicine	Virology	★ Associate Professor Masahiko Takahashi Tel 2118 e-mail masahiko@med.	<ul style="list-style-type: none"> <li>• Viral and non-viral neurodegenerative diseases including Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis and HTLV-1-associated myelopathy</li> <li>• Viral leukemogenesis</li> <li>• Stress granule-mediated stress responses</li> <li>• Viral leukemogenesis</li> </ul>
		Immunology and Medical Zoology	Tomoya Katakai Tel 2133 e-mail katakai@med.	<ol style="list-style-type: none"> <li>1) Function and dynamics of immune cells</li> <li>2) Structure and function of lymphoid tissues</li> <li>3) Function of stromal cells in lymph node</li> <li>4) Molecular-pathophysiology of infection and immune-associated diseases</li> <li>5) Cellular and molecular mechanisms of anti-tumor immunity</li> </ol>
		Bacteriology	Sokichi Matsumoto Tel 2050 e-mail sohkichichi@med.	

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Community Disease Control	Infectious Disease Control and International Medicine	International Health	Reiko Saito Tel 2129 e-mail jasmine@med.	<ul style="list-style-type: none"> <li>• Influenza surveillance in Japan and other countries (Molecular epidemiology, drug resistance, evaluation of influenza vaccination)</li> <li>• Molecular epidemiology of respiratory syncytial virus (RSV)</li> <li>• Molecular epidemiology of SARS-CoV-2</li> <li>• J-GRID Project, "Study on influenza like illness and meningoencephalitis in Myanmar"</li> <li>• Infectious disease investigation in developing countries</li> <li>• Infectious disease epidemiology/modeling</li> </ul>
		Infection Control and Prevention	※ Toshiaki Kikuchi Tel 025-368-9321 e-mail kikuchi@med.	Research for infection diseases
		Gastroenterological Infection	Shuji Terai Tel 2203 e-mail terais@med.	<ul style="list-style-type: none"> <li>• Regenerative Medicine (Gastroenterology &amp; Hepatology)</li> <li>• Regulation for digestion, absorption and metabolism</li> <li>• Metabolic syndrome related steatosis, fibrosis, immunity and carcinogenesis</li> <li>• Applied Medicine using biomaterial, exosome and 3D printer. Translational Medicine (Gene &amp; Cell Therapy, Exosome Therapy, Designer cell, Endoscopy).</li> </ul>
		Translational research		
	Community Preventive Medicine	Social and Environmental Medicine	Kazutoshi Nakamura Tel 2124 e-mail kazun@med.	<ul style="list-style-type: none"> <li>• Epidemiology of dementia, osteoporosis, osteoarthritis, sarcopenia, etc.</li> <li>• Prevention of dementia using omics</li> <li>• Epidemiologic studies on vitamin D, and other nutrients for disease prevention</li> </ul>
		Forensic Medicine	Hisakazu Takatsuka Tel 2146 e-mail houji@med.	<ul style="list-style-type: none"> <li>• Forensic pathology</li> <li>• Postmortem radiology (Forensic radiology)</li> <li>• Forensic toxicology</li> <li>• Forensic dentistry</li> <li>• Forensic isotope hydrology</li> <li>• Clinical forensic medicine (Child abuse)</li> <li>• Forensic Law</li> </ul>
		Health Promotion	※ Reiko Saito Tel 2129 e-mail jasmine@med.	<ul style="list-style-type: none"> <li>• Evaluation of health and medical practice</li> <li>• Community Health</li> <li>• Epidemiology and control of noncommunicable disease</li> <li>• Health policy</li> </ul>
		Child Health	※ Akihiko Saito Tel 2222 e-mail asaitoh@med.	
		Rehabilitation Medicine	※ Hiroyuki Kawashima Tel 2272 e-mail inskawa@med.	Research on rehabilitation Research on life management and support Research on sports medicine

Course	Department	Division	Professor (First & Last name)	Education Research
Community Disease Control	Medical Informatics and Pharmaceutics	Medical Informatics and Biostatistics		
		Medical Evaluatics	Akira Toyama Tel 2782 e-mail toyama@med.	<ul style="list-style-type: none"> <li>• Drug administration planning based on pharmacokinetics and pharmacodynamics</li> <li>• Pharmacoeconomics</li> <li>• Pharmacoepidemiology and therapeutic risk management</li> </ul>
		Clinical Research and Regulatory Science	Yoshihiko Tomita  Associate Professor Mototsugu Tanaka Tel 2331 e-mail mototsugu-tanaka@med.	<ul style="list-style-type: none"> <li>• Regulations and policies on pharmaceuticals and medical devices</li> <li>• Development and review of pharmaceuticals and medical devices</li> <li>• Drug lag research</li> <li>• Methodology to evaluate efficacy and safety in clinical research</li> <li>• Adequacy of study design, implementation, analysis and reporting in clinical research</li> <li>• Appropriate use of medicines based on real-world data</li> </ul>