AY2024

Graduate School of Biomedical and Health Sciences

(Doctoral Course　4years)

Division of Biomedical Sciences

2024

Student Application Guidelines

[Special Selection for International Students] (Internet Interview)

For Students Living Outside Japan

October 2023

Hiroshima University

All dates and times mentioned are Japan Standard Time.

◆ Admission Policy

The Graduate School of Biomedical and Health Sciences seeks the following students with necessary basic academic ability, based on its diploma policy and curriculum policy:

Division of Biomedical Sciences

Based on its diploma policy and curriculum policy, the Division of Biomedical Sciences seeks the following students:

1 Those who are willing to be engaged in basic and clinical advanced research in the fields of medicine, dentistry, pharmaceutical science and radiation medical science

2 Those who are willing to acquire basic and clinical knowledge widely in life science or radiation biology and medicine, beyond the current disciplinary borders of medicine, dentistry, pharmaceutical science and radiation medical science

3 Those who are willing to be engaged in highly advanced medical treatment

4 Those who are willing to obtain high expertise and play an active role internationally in the fields of medicine, dentistry, pharmaceutical science and radiation medical science

5 Those who are willing to continue their career enhancement in a medical field and contribute to community health care as members of the society

In order to admit such individuals, the division selects applicants through a multifaceted and comprehensive evaluation process based on its own Diploma Policy and Curriculum Policy, using interviews, academic tests, and external examinations.

Privacy Policy

ined through student selection (name, date of birth, sex, and other private information, etc.) will be used for the purposes of selecting students, notifying, and processing their admission.

After admission, the school will use this information for the p

etc.), as well as investigation or study (such as investigation or analysis for potential improvements in admission examinations and application trend). Private information will not be used for other purposes or provided to people other than relevant staff of our school.

(8) Those appointed by MEXT

Those who have studied medicine or dentistry at the medical or dentistry faculty of a university prescribed by the old University Ordinance (Imperial Ordinance No. 388 of 1918), and who have graduated from either of these faculties.
7 388

Those who have graduated from the National Defense Medical College according to the Act for Establishment of the Ministry of Defense (Act No. 164 of 1954).
29 164

rofessional degree course prescribed by Paragraph 2 of Article 99 of the School
ed for at least two years in a doctoral course that is neither categorized as a two- -year doctoral course, who have undertaken at least 30 academic credits in addition to the required research guidance (including those falling under Article 6-1 of the Academic Degree Regulations [Education Ministry Ordinance No. 9, 1953] prior to amendment according to the Ministerial Ordinance on the Partial Amendment of the Academic Degree Regulations [Education Ministry Ordinance No. 29 of 1974]), and who are deemed by the Graduate School or relevant department to have academic ability equivalent or superior to that of a graduate of a university medicine, dentistry, or pharmaceutical science course, of which the main purpose is to develop practical skills regarding clinical fields or a graduate of a university veterinary medicine course.
22 26 99 2
2 3 2 30
49 29
28 9 6 1

Those who, after graduating from university (excluding those who have completed a 6-year program in medicine, dentistry, pharmaceutical science, or veterinary medicine) or completing 16 years of overseas curricular education, have undertaken at least two years of research at a university or research institute and are deemed by the Graduate School on the basis of their research accomplishments to have academic ability equivalent or superior to that of a graduate of a university medicine, dentistry, or pharmaceutical science course of which the main purpose is to develop practical skills regarding clinical fields or a graduate of a university veterinary medicine course.
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16 2

(9) In accordance with the provision in Paragraph 2 of Article 102 of the Law, individuals who have enrolled at a graduate school (only medicine, dentistry, pharmaceutical science, or veterinary medicine programs qualify), and who are recognized as having sufficient academic ability to study at the Graduate School.
102 2 ( )

(10) Those who are recognized by the Graduate School as having academic ability equivalent or superior to those who have graduated from a university, and who have reached 24 years of age (such recognition is done on a case-by-case basis and is based on the qualifications of each applicants)
24

(11) Those who enrolled at the faculties of medicine, dentistry, or veterinary medicine of a university, or have taken pharmaceutical science courses whose main purpose is to cultivate clinically related practical skills for at least four years (including those who received a designation by MEXT as individuals with similar qualifications), and have obtained credits stipulated by the Graduate School with excellent marks.
4 ( )

(12) Those who are expected to obtain one of the qualifications described above by March 31, 2024.
2024 3 31

Note: Those who enter the program under the above eligibility criterion (11) after having been enrolled in a university at least four years but not having graduated will be regarded as having left the university without graduation. a) Applicants must have earned more than 75%of all credits necessary for graduation from university by the end of the fourth year.
b)
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3 Preliminary Evaluation for Application Eligibility

Applications will be evaluated for their eligibility in advance, so please submit all required documents by post to the address shown on page 10 (S Address for Application and Inquiries . It must arrive at the Student Support Office **by 3:00 PM on Friday, October 27, 2023.**

Then, applicants will be able to apply after receiving an evaluation result.

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In case of applying for the same course in two years after passing the preliminary examination, the applicants shall be permitted to apply for the admission without retaking the preliminary examination.

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(1) Documents required for submission

Applicants can download and use the prescribed form on the Hiroshima University website (https://www.hiroshima-u.ac.jp/bhs).

If, due to name change, etc., your current name is different from the name shown on the document you are providing, attach a copy of an official document issued by a public institution, such as a copy of your family register.

https://www.hiroshima-u.ac.jp/bhs

	Documents	Contents
	Application Form for the Preliminary Evaluation of the Entrance Examination	Please fill in the prescribed form.
	Certificate of Past Research Activity	Please fill in the prescribed form.
	Summary of Past Research and Clinical Activities etc.	Please fill in the prescribed form.
	List of Past Research Achievements	Please fill in the prescribed form.
	Certificate of Graduation, or Certificate of Expected Graduation ( )	Must be issued by the dean or president of the university or college.
	Those who have graduated or a current student of a university in China.	If you are a graduate or a current student of a university in China, please obtain 历证书查询 tp://www.chsi.com.cn/xlcx/bgys.jsp), and submit it to us together 毕业证书 硕 证书 (Graduates or current students from universities in other countries or regions <including Taiwan, Hong Kong and Macau> do not need to submit them.) Graduates: Online Verification Report of Higher Education Qualification Certificate (历证书电 备) Expected Graduates: Online Verification Report of Student Record(线验证报) Please note that applicants must pay the issuing fee for the Online Verification Report (2 / certificate) by themselves. Also be sure that there are 20 or more days left until the expiration date of the online verification at the time of its submission. 毕业证书 证书 (历证书查询 http://www.chsi.com.cn/xlcx/bgys.jsp) ( ) Web 20 (历证书电 备) (线验证报)

*1: Please enter your name as shown in your passport.

*2: If you submit more than two certificate, write the numbers corresponding to that indicated on Summary of Past Research and Clinical Activities etc. at the left top.

*3: If certificates and other documents to be submitted are written in a language other than Japanese or English, then Japanese or English translations must be attached. Translations may be prepared by applicants.

(2) Decision to accept or refuse the application

Those who are approved shall receive a letter of recognition for application by November 24, 2023. Please keep this document safe until the entrance examination. Approved applicants must complete the necessary procedure (REFERENCE: 4.Application Procedure) in accordance within the specified timeframe.

2023 11 24

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4 Application Procedure

(1) Application period

item	period Japan Standard Time
Data entry and application fee payment	Friday, November 24 Thursday, November 30, 3:00 PM, 2023, without exception
Submission period of application documents which must be mailed *For the mailing address of application documents, see page 10. 10	2023 11 24 2023 11 30 3

(2) Application Fee 30,000JPY 30p800@%±;í K°;Ñc

https://www.webshutsugan.com/hiroshima-u/portal/top/

https://www.hiroshima-u.ac.jp/nyushi

(5) Application documents

Applicants must submit all the documents listed below within the above stated Application Period.

If the name on the submitted documents is different from the name on the passport due to a change of family name, etc., please attach a copy of the document showing the change.

	Documents	Contents
(A)	Statement of motivation for application	About 1,200 words in English: Please fill in the prescribed form(Access the Hiroshima University Graduate School of Biomedical and Health Sciences website and download the form.) 1,200
(B)		Three sheets of A4 paper, typed horizontally using a word processor or computer. Figures and tables may be included. A4 3 5,000 Margins should be no less than 3 cm on the top, 2.5 cm on the bottom, and 2 cm on the both sides. 3 2.5 2

*** However, submission is not required for those who have completed a 6-year program in medicine, dentistry, pharmaceutical science, or veterinary medicine.**

CEFR CEFR

Type / Level	Cambridge English	EIKEN test	GTEC CBT Type Only CBT	IELTS TM Academic Module	TEAP 4skills	TEAP CBT 4skills	TOEFL iBT®	TOEIC® Listening & Reading Test and TOEIC® Speaking & Writing Tests Note3
C2	200-230			8.5-9.0				
C1	180-199	Grade 1	1350-1400	7.0-8.0	375-400	800	95-120	1845-1990
B2	160-179	Grade Pre-1	1190-1349	5.5-6.5	309-374	600-795	72-94	1560-1840
B1	140-159	Grade 2	960-1189	4.0-5.0	225-308	420-595	42-71	1150-1555
A2	120-139	Grade Pre-2	690-959		135-224	235-415		625-1145

Note1) Please contact us for any inquiries.

Note2) Any transcript from online exams at home is unacceptable.

Note3) For TOEIC®, both L&R and S&W certificates are required. Please add up S&W score multiplied by 2.5 to L&R score.
TOEIC® L&R S&W S&W L&R

The standards of the external English examinations designated by the Graduate School of Biomedical and Health Sciences

Division	Program		
Doctoral Course（4 years） Division of Biomedical Sciences	Program of Medicine	500 over	500 over
	Program of Dental Sciences	500 over r	500 over
	Program of Pharmaceutical Sciences	500 over	500 over
	Program of Radiation Biology and Medicine	500 over	500 over

Note1) Please contact us for any inquiries.

Note2) Any transcript from online exams at home is unacceptable.

(6) Others

The certificates to be submitted must be the originals or certified photocopies. Uncertified copies will not be recognized as official certificates. However, e-mail submissions are accepted as long as the documents are later replaced by official certificates.

Any forgery or falsification of the documents and/or academic fraud will result in cancellation of acceptance even after passing the entrance examination or being accepted for admission to the Graduate School, Hiroshima University.

If applicants cannot graduate from their current university before the admission date, they will not be admitted to the Graduate School, Hiroshima University.

5 Expected software to be used for internet interview and expected date, time and location

Date: December 6 December 7, 2023 (weekday) 12 6 12 7
Time: UTC 00:00 09:00 JST 09:00 18:00
Interviews relating to expected educational subjects and research abilities will be conducted through Zoom or other software.
Zoom
A connection test shall be conducted before the examination. (Date, time and location shall be informed separately.) The date and time of the interview will be arranged within the university and each applicant will be contacted.

6 Student Selection Method (Academic Examinations)

Interview (in English) **Conducted by several professors etc.**

7 Standard Criteria for Marking, Evaluation, and Acceptance

Students shall be selected via interview based on their expected research theme. The admission committee shall evaluate students into 4 grades (A, B, C, and D). Students who are evaluated as D will fail to pass the examination.

4 A B C D D

8 Announcement of Successful Applicants

Monday, December 25, 2023 2023 12 25
A written notice will be sent to all successful applicants by e-mail.

9 Notes

(1) Changes to application documents are not accepted after the original application documents have been received.

(2) Application documents and fee cannot be returned/refunded for any reason.

(3) Personal information submitted upon application will not be used for any purpose other than for the admission selection.

(4) **Applicants must consult with a prospective academic supervisor before application.**

(5) **Uploading Photographs for Online Application**

The uploaded photo, which will be used for identification at the examination, will be also used for your student ID card after enrollment and

Therefore, please upload an appropriate photo for use after enrollment as well.

Once uploaded, your photo will not be allowed to be replaced.A fee of JPY 1,000 will be charged for changing the content of your student ID card (photo and your name) after enrollment.

( ) 1,000

10 Admission Procedure

Successful applicants shall submit necessary documents and pay the specified fees within the period of the admission procedure. (Applicants will receive all relevant details regarding the submission of documents and the payment of fees in a separate correspondence).

For Reference

(1) Fee

Admission Fee	282,000JPY	
Tuition Fee	(Per half year)	267,900JPY
	(Per year)	535,800JPY

All fees paid are non-returnable.

The above fees are correct as of April 2023. Any changes to the tuition fee will be applied if the tuition fee is changed during the enrollment procedure.

2023 4

The admission fee s family income criteria and academic criteria. More details will be sent separately. We will notify you of the relevant details.

(2) Hiroshima University Excellent Student Scholarship

Hiroshima University offers the second semester tuition exemption system to students with an excellent academic performance. These students will be selected based on their research results and other achievements during the program.

11 Others

Smoke-free campus

Smoking has been prohibited entirely in all HU campuses from January, 2020.

2020 1

Address for Application and Inquiries

Student Support Group (Graduate Students),
Graduate School of Biomedical and Health Sciences, Hiroshima University

1-2-3, Kasumi, Minami-Ku, Hiroshima, Japan (Zip 734-8553)

734-8553 2 3

TEL +81-82-257-1538 5051

E-mail: kasumi-gaku-g@office.hiroshima-u.ac.jp

Laboratories & Research Topics

*** If there is a description in the column of teachers scheduled to be instructed (scheduled to retire in March XX), you may not be able to receive guidance until the graduation. Be sure to consult with your desired academic advisor about retirement guidance.**

Program of Medicine

Professor	Contents of education and research
IKEGAMI Koji TEL 082-257-5110 FAX 082-257-5114 E-mail k-ikegami@hiroshima-u.ac.jp Department of Anatomy and Developmental Biology	1 New morphological changes of cilia in intercellular and inter-tissue communications 2 Discovery of novel extracellular vesicles, and histological and morphological analyses on their function 3 Morphological analyses on functional regulation of polar structures by post-translational modifications of cytoskeleton 4 Understanding biological evolution focusing on gametogenesis 5 Regionalization of the body wall and specification of the neuromuscular connectivity 6 Behavior of the lateral plate cells on the morphogenesis of body wall during chicken development
AIZAWA Hidenori TEL 082-257-5115 E-mail haizawa@hiroshima-u.ac.jp Department of Neurobiology	1 Animal model for depression 2 Neural substrate underlying behaviors to cope with social stress 3 Role of neural excitability in stroke and migraine 4 Neural circuit regulating transition between REM and non-REM sleep 5 Development and functional analysis of left-right asymmetry in the brain 6 Role of glial cells in psychiatric and neurological disorders
FUJIWARA Yuichiro TEL E-mail Department of Cardiovascular Physiology and Medicine	
HASHIMOTO Kouichi TEL 082-257-5125 E-mail hashik@hiroshima-u.ac.jp Department of Neurophysiology	1 Mechanisms for postnatal development of the neuronal circuit 2 Regulatory mechanisms for the synaptic transmission 3 Mechanisms for membrane potential oscillation 4 In vivo Electrophysiological properties of in vivo neurons 5 Analysis of model mice of mental disorders

IMAIZUMI Kazunori TEL 082-257-5130 FAX 082-257-5134 E-mail imaizumi@hiroshima-u.ac.jp Department of Biochemistry 2025 3 Retirement at the end of March 2025 SAITO Atsushi Associate professor E-mail saitoa@hiroshima-u.ac.jp KANEMOTO Soshi Associate professor E-mail soshi-kanemoto@hiroshima-u.ac.jp	1 Research for molecular and cellular biology of stress response 2 Research for signal transduction of neuronal death 3 Research for development and differentiation of neuronal cells 4 Research for functions of endoplasmic reticulum in development and differentiation of skeletal system 5 Research for development of animal modeles of various diseases
To be decided Department of Biomedical Chemistry	
SAKAI Norio TEL 082-257-5140 FAX 082-257-5144 E-mail nsakai@hiroshima-u.ac.jp Department of Molecular and pharmacological neuroscience 2026 3 Retirement at the end of March 2026	1 Analysis of pathophysiology of neurodegenerative disease and screening of its therapeutic drugs 2 Function of microglia and its relation to the neuropsychiatric disease 3 G Role of constitutively-activated G-protein coupled receptor in CNS and its relation to pathogenesis of neural diseases 4 Analysis of pathophysiology of ischemic neural disease and development of therapeutic methods 5 Function of serotonin transporter 6

KUBO Tatsuhiko TEL 082-257-5165 FAX 082-257-5169 E-mail tkubo@hiroshima-u.ac.jp Department of Public Health and Health Policy	1 Disaster Public health, social systems including health policy and health administration to protect health during emergencies and disasters 2 Occupational Health, epidemiological study of shift work and other occupational exposures 3 Emergency Medical Team (EMT), Daily reporting by the EMT such as the WHO EMT Minimum Data Set
NAGAO Masataka TEL 082-257-5170 FAX 082-257-5174 E-mail nagao@hiroshima-u.ac.jp Department of Forensic Medicine 2026 3 Retirement at the end of March 2026	1 Noncholinergic mechanism of nerve agent 2 Rat having acquired resistance to paraquat 3 Analysis of paraquat resistant rat having head dysplasia 4 Medical toxicant immunoassay 5 DNA DNA polymorphism 6 Clinical forensic medicine 7 Development a new quick laboratory procedure to medical toxicant 8 Analysis of drug ingestion records 9 Identifying ingredients of poisonous plants
NAMERA Akira TEL 082-257- 5172 FAX 082-257-5172 E-mail namera@hiroshima-u.ac.jp Department of Forensic Medicine	1 Development of new analytical methods and procedures by using a mass spectrometry 2 Estimation of intaken drugs by a drug metabolite profiling 3 Development of new quick laboratory procedures to medical toxicant 4 Analysis of drug ingestion history 5 Identifying of ingredients of poisonous plants
YASUDA Tomoharu TEL 082-257-5175 FAX 082-257-5179 E-mail yasudat@hiroshima-u.ac.jp Department of Immunology	1 The antigen receptor and mediated signals in the immune system 2 The regulation of immune cell division limit and hematological malignancy 3 The regulation of immune cell lifespan 4 The immune surveillance to viral infection and cancer 5 The allergic diseases and immune tolerance 6 The gene therapy of primary immunodeficiency
OKA Shiro TEL 082-257-5190 FAX 082-257-6220 E-mail oka4683@hiroshima-u.ac.jp	

TAKAHASHI Shinya TEL 082-257-5215 FAX 082-257-5219 E-mail takahacv@hiroshima-u.ac.jp Department of Surgery	1 Research of inflammatory bowel disease 2 Research of response for surgical infection 3 Genetic analysis of biliopancreatic cancer 4 5 Genetic analysis of anti-cancer drug resistance in biliopancreatic cancer 6 Pancreatic function after pancreatectomy 7 DNA Clinical significance of biomarkers for early detection of pancreatic cancer Circulating tumor DNA 8 Genetic analysis of pediatric cancer 9 Mechanism and treatment of atrial fibrillation 10 Development of safety technique for acute aortic dissection
OHDAN Hideki TEL 082-257-5220 FAX 082-257-5224 E-mail hohdan@hiroshima-u.ac.jp Department of Gastroenterological and Transplant Surgery	1 Development of methods for immune-monitoring and induction of immune-tolerance 2 Development of immune-regulatory strategies in xenotransplantation 3 Elucidation of mechanism underlying antibody-mediate rejection 4 Elucidation of characteristics of liver-resident immunocytes 5 Development of approaches for immune-therapy against cancer 6 Elucidation of mechanism underlying liver regeneration 7 Development Of procedures for isolation, culture and transplantation of islet cells 8 Development of measures for patient managements after kidney, pancreas and liver transplantation 9 Development of strategies for ameliorating organ ischemia-reperfusion injury 10 Development of approaches for molecular-targeting therapy against gastroenterological cancer 11 Development of procedures gastroenterological surgeries 12 Development of humanized mouse model for investigating gastroenterological cancer 13 Development of devices for less invasive surgeries 14 Genetic and epigenetic analyses in gastroenterological cancer

HORIE Nobutaka TEL 082-257-5225 FAX 082-257-5225 E-mail horie@hiroshima-u.ac.jp Department of Neurosurgery	1. Verification of the outcome of endovascular treatment for extracranial artery stenosis 2. Verification of growth and shape change of unruptured cerebral aneurysm based on atherosclerotic changes 3. Natural history of unruptured vertebral basilar artery dissection: Temporal changes in imaging findings and contributory factors 4. small RNA circulating tumor DNA Establishment of brain tumor marker by liquid biopsy of small RNA/ circulating tumor DNA, and development of nucleic acids medicine for brain tumors 5. radiogenomics Radiogenomics research of brain tumors 6. Multicenter clinical trials targeting malignant brain tumors 7. Verification of remote EEG and the data analysis for screening of epilepsy 8. AI Development of AI programs for EEG analysis differentiating between epilepsy and dementia 9. Simultaneous recording of invasive EEG from insular cortex and MEG for development of technology visualizing the Kansei 10. The study of intravenous administration of autologous cranial bone derived mesenchymal stem cells for moderate or severe cerebral infarction patients needed decompressive surgery 11. II The Bevacizumab-alleviates-NF2 trial(BeatNF2 trial) 12. The study of the correlation between spinal alignment and outcome of spinal surgery 13. Efficacy of growth hormone replacement based on measuring higher brain functions 14. Development of new biomarkers which enable the diagnosis of hypothalamo-pituitary tumors using liquid biopsy
ADACHI Nobuo TEL 082-257-5230 FAX 082-257-5234 E-mail nadachi@hiroshima-u.ac.jp Department of Orthopaedic Surgery	1 Regenerative medicine (cartilage, bone, ligament, tendon, muscle) 2 microRNA MicroRNA, exosome and virus treatment for musculoskeletal disease 3 ACL/PCL reconstruction 4 Cartilage repair and Bone healing 5 Mechanical behavior of articular cartilage 6 Video analysis for sports injury 7 Anatomical investigation of arthropathy and neuropathy 8 Tissue engineering and Regenerative medicine (central nerve system) 9 Tissue engineering and Regenerative medicine (peripheral nerve system) 10 Electrophysiological assessments of pain perception in patients with knee and spinal osteoarthritis 11 The role of endoplasmic reticulum (ER) stress transducer for spinal cord regeneration 12 Detection of prognostic factors of bone & soft tissue tumors 13 Gene, exosome, oncolytic virus, molecular targeting therapy for bone & soft tissue tumors 14 Pathophysiology of avascular necrosis of the femoral head

TANAKA Akio TEL 082-257-5235 FAX 082-257-5239 E-mail akiotan@hiroshima-u.ac.jp Department of Dermatology	1 Study on epidemiology and pathogenesis of urticaria and atopic dermatitis 2 Elucidation of skin sensory mechanisms 3 Elucidation of itching control mechanism in atopic dermatitis 4 Analysis of skin microbiome from atopic dermatitis on skin immunity 5 Development of new treatment method using mesenchymal stem cells for skin ulcers 6 Research on the differentiation mechanism of sweat gland tissue
HINATA Nobuyuki TEL 082-257-5240 FAX 082-257-5244 E-mail hinata@hiroshima-u.ac.jp Department of Urology	1 Analysis of molecular mechanism underlying the loss of hormone dependency of prostate cancer and development of novel clinical application 2 Functional preservation after radical prostatectomy for prostate cancer 3 Prostate cancer and metabolic syndrome 4 Development of minimally invasive surgery for urological cancer 5 Development of personalized medicine for urological cancer based on the genome profile 6 Analysis of the role of microenvironment in urological cancer 7 Regeneration of urogenital organs 8 Analysis of resistant mechanism of anticancer drug in advanced urothelial cancer and development of new treatment approach
To be decided Department of Ophthalmology and Visual Science	
TAKENO Sachio TEL 082-257-5250 FAX 082-257-5254 E-mail takeno@hiroshima-u.ac.jp Department of Otorhinolaryngology, Head and Neck Surgery	1 Pathological analysis and treatment strategies for refractory middle ear infection and cholesteatoma 2 Molecular and genetic analysis of profound hearing loss. Development of novel sound conductive devices 3 Development of rehabilitation training for hearing loss patients 4 Regenerative and differentiative process of olfactory epithelium Development of treatment strategies for smelling disorders 5 Development, introduction and evaluation of objective biomarkers for intractable upper airway inflammation 6 Development of new scoring system and algorithm for assessing eosinophilic chronic rhino /P f*562.

AWAI Kazuo TEL 082-257-5257 FAX 082-257-5259 E-mail awai@hiroshima-u.ac.jp Department of Diagnostic Radiology 2026 3 Retirement at the end of March 2026 NAKAMURA Yuko Associate professor E-mail yukon@hiroshima-u.ac.jp	1 CT Development of new technologies for radiation dose reduction at CT (1) CT Improvement of low dose CT images quality using deep learning (2) CT Improvement of CT images quality using model based iterative reconstruction 2 Dual energy CT Development of new technologies for dual energy CT (1) Development of new fast kV switching (2) Improvement of accuracy of material decompostion 3 CT Studies about CT urography CTU 4 CT Studies about low CT lung cancer screening 5 MRI Development of functional analysis methods in body MR imaging 6 CT DNA Analysis of DNA injury at CT examination 7 CT CT image retrieval based on morphological similarity using artificial intelligence 8 CT MRI Computer simulation of Pharmacokinetics of contrast materials for CT and MRI 9 body perfusion CT Development of body perfusion CT for the liver and heart 10 Computed DWI Improvement of computed diffusion images at MRI computed diffusion 11 CT Radiation dose reduction at pediatric CT 12 MRI Demonstration of bone cortex by MRI
To be decided Department of Radiation Oncology	
KUDO Yoshiki TEL 082-257-5260 FAX 082-257-5264 E-mail yoshkudo@hiroshima-u.ac.jp Department of Obstetrics and Gynecology 2025 3 Retirement at the end of March 2025	1 Maternal-fetal transport of nutritional metabolism in human placenta 2 Immunological tolerance formation on maternal body to fetus 3 Study on cell fusion (syncytium)of placental villus cells

NAKANO Yukiko TEL 082-257-1543 FAX 082-257-1569 E-mail nakanoy@hiroshima-u.ac.jp Department of Cardiovascular Medicine	1 Epidemiology and Preventive Medicine in Cardiovascular Diseases 2 Pathophysiology and Subcellular Signaling in Cardiomyocyte and Vascular Cells 3 NO Endothelial Dysfunction and Atherosclerosis 4 QOL QOL Care and Long-term Clinical Management of Heart-Failure Patients 5 CT MRI SPECT PET Cardiovascular Imaging in Future (CT, MRI, PET etc.) 6 Investigation of New Arrhythmia Treatment Strategies 7 Clinical and Molicular Biological Research of Fatal Arrhythmia 8 Clinical and Molicular Biological Research of Atrial Fibrillation 9 Coronary Circulation and Atheromatous Plaques in Coronary Arteries 10 Changes in Sympathetic Nervous Activity Following the Treatment of Valvular Heart Diseases 11 Clinical Research of Sleep-Disordered Breathing in Patients with Valvular Heart Disease 12 Vascular Regenerative Therapy by BM-derived Autologous Stem Cells 13 Cardiopulmonary Exercise Study (CPX) and Advanced Echocardiography for Heart Failure Patien 14 Pathophysiological and Clinical Research of Catheter Intervention for Structural Heart Disease 15 3D Echocardiography-Based Diagnosis and Treatment Strategies for Structural Heart Disease 11 Mechanism of aortic aneurysm / dissection by using aortic hemodynamic simulation 12 Development of technique of aortic root reconstruction by using extracorporeal circulatory model 13 Development of stent graft for aortic aneurysm and dissection 14 Prevention of spinal cord ischemia during aortic aneurysmal surgery 15 Regeneration of vessels, myocardium and spinal cord using mesenchymal stem cells 16 Development of highly reproducible technique of mitral valve plasty
SHIME Nobuaki TEL 082-257-5456 FAX 082-257-1600 E-mail nshime@hiroshima-u.ac.jp Department of Emergency and Critical Care Medicine	1 Development of a novel method to detect pathogens in respiratory samples using a next generation sequence method 2 C/EBP 3 Metagenomic analysis on respiratory pathogens in acute respiratory failure 4 DAMPs Anti-inflammatory response via DAMPs during sepsis 5 Biomarkers in interstitial pneumonia 6 ECMO Pulmonary pathology in acute respiratory failure requiring extracorporeal membrane oxygenation 7

OHGE Hiroki TEL 082-257-1613 FAX 082-257-1613 E-mail ohge@hiroshima-u.ac.jp Department of Infectious Diseases	1 Prevention and treatment of surgical site infection 2 Resistance of Enterobacteriacae 3 Association between hydrogen sulfide and intestinal diseases 4 Breath hydrogen test for assessment of intestinal fermentation 5 Penetration of antimicrobials into peritoneal cavity 6 Prevention of nosocomial infection
MIKAMI Yukio TEL 082-257-5566 FAX 082-257-5594 E-mail mikamiy@hiroshima-u.ac.jp Department of Rehabilitation Medicine	1 VICON Liverty Three-dimensional motion analysis (VICON, Liverty) 2 Joint proprioception and motor control 3 Lower limb amputation and artificial limb 4 The impact of early mobilization to the respiratory and circulatory system 5 Cancer rehabilitation 6 Rehabilitation of developmental disorders 7 Cardiac Rehabilitation 8 Sports rehabilitation 9 Consistent rehabilitation from medical insurance to long-term care insurance 10 Gastroenterological rehabilitation
ARIHIRO Koji TEL 082-257-5590 FAX 082-257-5590 E-mail arihiro@hiroshima-u.ac.jp Department of Anatomical Pathology	1 Study of clinical application of genetic abnormality including miRNA and so on using cytological samples 2 Study of detection method for genetic abnormality of cytological samples 3 heterogeneity Study of clinicopathological significance of breast cancer heterogeneity 4 Study of application of whole slide imaging to both pathological diagnosis and averaging of cancer treatment
MASAKI Takao TEL 082-257-1506 FAX 082-257-1508 E-mail masakit@hiroshima-u.ac.jp Department of Nephrology	1 Renal interstitial fibrosis 2 Peritoneal fibrosis 3 Physiology of renal tubular cells 4 Hypertension induced renal injury 5 Mechanism of renal failure 6 Gene analysis of renal failure 7 Mesenchymal stem cell research in kidney and peritoneum 8 Hemodialysis and apheresis
To be decided Department of Plastic Surgery	
To be decided Department of Clinical Oncology	
HINOI Takao TEL 082-257-2019 FAX 082-257-2019 E-mail thinoi@hiroshima-u.ac.jp Department of Genetic Medicine	1 Surveillance and development of treatment based on cancer genome profiling analysis in solid tumor 2 Development of genetic counseling and surveillance system for hereditary cancer syndrome 3 Research for Ethical, Legal and Social Issues ELSI of genome medicine to improve genome medicine literacy 4 Investigation of molecular genetics and molecular pathology of hereditary cancer syndrome 5 Analysis of mechanism in colorectal cancer development, invasion, and metastasis based on subtype classification, and establishment of disease model for colorectal cancer

OGAWA Keiko TEL 082-257-1921 FAX 082-257-2021 E-mail okeiko22@hiroshima-u.ac.jp Department of Kampo（Japanese Traditional）Medicine	1 The effect of Kampo medicine on lymphatic malformations 2 COVID-19 The effect of Kampo medicine on COVID-19 3 The effects of direct moxibustion on immune function 4 Functional dyspepsia: FD The therapeutic effect of Kampo medicine on Functional Dyspepsia (FD) 5 The effect of daiobotanpito on colon diverticulitis 6 Influence of Kampo medicine on blood coagulation 7 Investigation of changes in immune cell function induced by Kampo medicine in patients with solid cancers 8 Development of a diagnostic system focusing on Kampo medicine diagnosis 9 The effect of goreisan on trigeminal neuralgia 10 The effect of contact needle therapy (acupuncture) on fatigue in cancer patients hospitalized for palliative care 11 The effect of acupuncture treatment for cancer patients with chemotherapy-induced neuropathy 12 The efficacy of Kampo medicine for Nonalcoholic steatohepatitis (NASH) 13 The effect of acupressure on pediatric cancer patients 14 Research on Traditional medicine classics
IIDA Koji TEL 082-257--1719 FAX 082-257-1719 E-mail iidak@hiroshima-u.ac.jp Department of Epileptology	1 Pathophysiology of epileptogenic lesion and epileptogenic zone 2 Study of antiepileptic mechanism of vagus nerve stimulation 3 Analysis of epileptic seizure using long-term video EEG monitoring 4 Verification of remote EEG data analysis for screening of epilepsy 5

MARUYAMA Fumito TEL 082-424-7048 E-mail fumito@hiroshima-u.ac.jp Department of Microbial Genomics and Ecology	i) ii) iii) iv) v) : https://mge.hiroshima-u.ac.jp Our research focuses on understanding how microorganisms interact with each other, with their symbiotic hosts and with the environment, both experimentally and through big data analysis. In particular, we focus on the relationship between climate change and microbes (infectious diseases), genomic dynamics of pathogenic microbes in habitats, and pathogenic microbes and antibiotic resistance in aquaculture. In this framework, we will focus on: i) homeostasis mechanisms through the analysis of microbial community (microbiome) dynamics in the environment using large DNA sequence data analysis and bioinformatics; ii) definition of abnormal and normal states through microbial interaction analysis and holobiome analysis; and iii) the experimental study of bacterial evolution and diversity using comparative (meta)genomic and epigenomic analysis. iii) experimental and bioinformatics studies of microbial evolution and diversity by comparative (metagenomic) and epigenomic analyses, iv) basic research on the design of environments with artificial mixtures of microorganisms, and v) the search for useful microorganisms (especially, bacteria) from the environment (bioaerosols), which is so called bioprospecting. For more information see below: https://mge.hiroshima-u.ac.jp/en/

Program of Dental Sciences

Professor	Contents of education and research
To be decided Department of Calcified Tissue Biology	
TERAYAMA Ryuji TEL 082-257-5623 FAX 082-257-5689 E-mail ryujit@hiroshima-u.ac.jp Department of Maxillofacial Anatomy and Neuroscience	1 Study on nociceptive transmission in the spinal and trigeminal sensory system 2 Study on mechanisms underlying the development of neuropathic pain 3 Development of a novel method of treating intractable pain disease 4 - Study on neuron-glia interactions 5 Study on the descending pain modulatory system
SUGITA Makoto TEL 082-257-5626 FAX 082-257-5627 E-mail sugisan@hiroshima-u.ac.jp Department of Physiology and Oral Physiology	1 Neuronal bases underlying taste cognition and taste-evoked behavioral and emotional responses 2 The molecular and cellular mechanisms of ion and fluid transport in salivary glands 3 The molecular mechanisms in development, morphogenesis and functional maintenance of salivary glands 4 CFTR Studying how the disease-causing mutations in CFTR affect the functions of epithelial cells 5 Neuronal mechanisms underlying feeding behaviors 6 Developmental biology of taste systems

SHUKUNAMI Chisa TEL 082-257-5628 FAX 082-257-5629 E-mail shukunam@hiroshima-u.ac.jp Department of Molecular Biology and Biochemistry	1 2 3 4 5 We are currently involved in the following research projects: 1 Molecular mechanisms of tendon/ligament formation 2 Molecular mechanisms of endochondral bone formation 3 Molecular mechanisms regulating the formation and maintenance of periodontal ligaments 4 Molecular mechanisms regulating differentiation of dental pulp stem cells
To be decided Department of Oral and Maxillofacial Pathobiology	
KOMATSUZAWA Hitoshi TEL 082-257-5635 FAX 082-257-5639 E-mail komatsuz@hiroshima-u.ac.jp Department of Bacteriology	1 Factors for virulence and antibiotic resistance in Staphylococcus aureus 2 Mechanism of S. aureus and oral streptococci infection to the host 3 Analysis of oral microbiome 4 Factors for virulence and antibiotic resistance in periodontal bacteria 5 MDRP MRSA ESBL Molecular epidemiology of nosocomial antimicrobial resistant pathogens (MDRP, MRSA, ESBL producers) 6 Study on new antibacterial agents
AGO Yukio TEL 082-257-5640 FAX 082-257-5640 E-mail yukioago@hiroshima-u.ac.jp Department of Cellular and Molecular Pharmacology	1 Studies on the mechanisms of action of the drugs in depression, schizophrenia, anxiety, and neurodegenerative diseases 2 Studies on the roles of gene-environment interactions in brain development 3 Studies on the roles of cell migration, adhesion, and proliferation in biological and pathological processes
KATO Koichi TEL 082-257-5645 FAX 082-257-5649 E-mail kokato@hiroshima-u.ac.jp Department of Biomaterials	1 Technologies for manufacturing stem cells to be used in clinical regenerative dentistry and medicine 2 Design principles that enable duplication of histologically-ordered tissue structure found in living organisms.
TAKAHASHI Ichiro TEL 082-257-5650 FAX 082-257-5650 E-mail snatum@hiroshima-u.ac.jp Department of Mucosal Immunology 2025 3 Retirement at the end of March 2025 TOBIUME Kei （Associate professor） E-mail tobi5651@hiroshima-u.ac.jp	Molecular and cellular analysis for the creation and maintenance of physiological inflammation in the gastrointestinal tissue and its application for a novel medical intervention
FUJII Makiko TEL 082-257-1503 FAX 082-257-1572 E-mail fujiim@hiroshima-u.ac.jp Department of Genomic Oncology and Oral Medicine	1 Development of molecular target therapy for cancer 2 Establishment of cancer treatment using heavy ion radiotherapy 3 Research on mechanisms of squamous cell carcinoma invasion and metastasis 4 TGF- TGF- 5 Research and development of educational methods in health care professional education

MIZUNO Noriyoshi TEL 082-257-5660 FAX 082-257-5664 E-mail mizuno@hiroshima-u.ac.jp Department of periodontal medicine	1 Study on the gnetic and molecular analyses of aggressive periodontitis 2 Study on the improvement of diagnostic yield in aggressive periodontitis 3 Study on the relationship between the periodontitis and systemic diseases 4 Study on therapies for periodontal tissue regeneration 5 Study on the prevention of periodontal disease 6 Study on the halitosis
YANAMOTO Souichi TEL 082-257-5665 FAX 082-257-5669 E-mail syana@hiroshima-u.ac.jp Department of Oral Oncology	1 Multicenter clinical research on oral cancer 2 Genetic and molecular diagnostic and therapeutic research on oral cancer and salivary gland tumors 3 Molecular and genetic diagnostic and therapeutic research on craniofacial, maxillofacial, and oral diseases 4 iPS Pathogenic mechanism, diagnosis and treatment research using disease-specific iPS cells 5 Research on dental treatment of obstructive sleep apnea 6 Research on the development of remote-controlled dental chair
AIKAWA Tomonao TEL 082-257-5670 FAX 082-257-5671 E-mail aikawat@hiroshima-u.ac.jp Department of Oral Maxillofacial Surgery	1 Research of mechanisms of jaw bone resorption by oral diseases, e.g. oral cancer and jaw bone tumor. 2 Pathological and molecular analyses of TMJ-osteoarthritis and condyle resorption. 3 Clinical study on orthognathic surgery for cleft palate. 4 Clinical study on post-operative stability, effects on sleep apnea, and effects on TMJ pathological condition, of orthognathic surgery. 5 Research of a novel anti-angiogenic agent for oral squamous cell carcinoma. 6 Research of responsible gene for cemento-osseous lesion of the jaw.
TSUGA Kazuhiro TEL 082-257-5675 FAX 082-257-5679 E-mail tsuga@hiroshima-u.ac.jp Department of Advanced Prosthodontics 2026 3 Retirement at the end of March 2026 （Associate professor） E-mail abey@hiroshima-u.ac.jp YOSHIKAWA Mineka （Associate professor） E-mail mineka@hiroshima-u.ac.jp	1 Clinical investigation on relationships between oral functions and general diseases/health 2 Seeking dentin producing stem cell for tissue engineering on tooth reproduction 3 PEEK Development of new application of PEEK plastic in clinical dentistry 4 Development of sophisticated Nano-bio interface controlling method on apatite with UV 5 Development of novel clinical test of jaw bone quality using ultrasonic sound 6 Development of physiological testing methods for oral functions applicable for dementia patients 7 Development of high-efficiency functional oral rehabilitation method for nursing care prevention 8 Molecular biological research for relationship between Alzheimer's disease and loss of teeth/occlusion 9 Molecular biological research for learning/memory impairment with teeth loss 10 Elucidating relationship between oral parafunction and daily psychological stress

TANIMOTO Kotaro TEL 082-257-5686 FAX 082-257-5687 E-mail tkotaro@hiroshima-u.ac.jp Department of Orthodontics and Craniofacial Developmental Biology	1 Elucidation of pathogenic mechanism in malocclusion and management of oral maxillofacial skeletal growth 2 Optimization of tooth movement by orthodontic force 3 Establishment of a new orthodontic treatment based on the image and biochemical diagnosis of temporomandibular disorders (TMD) 4 Application of regeneration medicine to orthodontic treatment 5 Suppression of caries risk in orthodontic treatment 6 Evaluation of the contribution of various oral functions to general fitness 7 Development of new instruments and materials for orthodontic treatment
KAKIMOTO Naoya TEL 082-257-5690 FAX 082-257-5692 E-mail kakimoto-n@hiroshima-u.ac.jp Department of Oral and Maxillofacial Radiology	1 Research and quantitative analysis of image diagnosis on oral and maxillofacial area 2 Clinical research of radiation therapy for oral cancer 3 Image diagnosis as screening for osteoporosis 4 Physical characteristics and quantitative analysis of image diagnostic machine 5 Radiological effect for bone metabolism 6 Image analysis of brain function for oral sensation
SHIBA Hideki TEL 082-257-5656 FAX 082-257-5659 E-mail bashihi@hiroshima-u.ac.jp Department of Biological Endodontics	1 / Study on regeneration of dentin / pulp complex and periapical tissues 2 Study on biological obturation of root canals at apical areas 3 Study on development of a therapeutic medicament for pulpitis 4 Study on development of an intracanal medicament possessing the ability to regulate cell function 5 Study on development of a new therapeutic agent for intractable pain
Nomura Ryota TEL 082-257-5695 FAX 082-257-5695 E-mail rnomura@hiroshima-u.ac.jp Department of Pediatric Dentistry	1 Pathogenicity of oral streptococci against cardiovascular diseases 2 Mechanism of *Helicobacter pylori* colonization via the oral cavity 3 Inhibitory effects of novel agents on cariogenic and periodontopathic bacteria 4 IgA Pathogenic mechanisms of oral bacteria against IgA nephropathy 5 Pathogenicity of periodontopathic bacteria in companion animals
To be decided Department of Dental Anesthesiology	
KAWAGUCHI Hiroyuki TEL 082-257-5748 FAX 082-257-5717 E-mail hkawarp@hiroshima-u.ac.jp Department of Dental Education	1 Development of novel curriculum for dental education 2 Development of effective learning methods for clinical competencies 3 Development of novel assessments for clinical competencies 4 Epidemiological studies on clinical evaluation of perioperative oral management 5 Clinical studies on relationships between dental treatments and systemic diseases

OKADA Yoshiyuki TEL 082-257-5753 FAX 082-257-5753 E-mail okay@hiroshima-u.ac.jp Department of Special Care Dentistry	1 Evaluation of the circulatory systems in patients with cardiovascular and congenital heart diseases 2 Effects of vasoconstrictor in local anesthesia on baroreflex sensitivity 3 Relationship between central arterial stiffness and periodontal diseases, and the influence on baroreflex sensitivity 4 Influences of sleep bruxism in hypoxia on the central cardiovascular control system 5 Underlying mechanisms of suppressed pressor responses to pain stimulation by N2O 6 Alterations of pulse wave reflection by sedative agents 7 Effects of physical training on the oral immunofunction
KAJIYA Mikihito TEL 082-257-5727 FAX 082-257-5727 E-mail mkajiya@hiroshima-u.ac.jp Department of Innovation & Precision Dentistry	1. 3 Develop the promising tissue regenerative therapy using stem cells and 3D culture techniques. 2. Establish a novel culture system that can mimic the oral cavity using 3D cell constructs and micro-devices 3. Identify novel biomarkers that can predict the degree of oral diseases and response to treatment for each patient, and develop an optimal therapy
SUGAI Motoyuki TEL 082-257-5635 FAX 082-257-5639 E-mail sugai@hiroshima-u.ac.jp Department of Antimicrobial Resistance	1 Comparative genome analysis of Staphylococcus aureus 2 Transcription factors involved in S. aureus virulence 3 Virulence factors produced by S. aureus 4 Cross talk of S. aureus and Pseudomonas aeruginosa 5 MDRP MRSA ESBL Molecular epidemiology of nosocomial antimicrobial resistant pathogens (MDRP, MRSA, ESBL producers) 6 CDT Cell-cycle specific toxin, CDT

Program of Pharmaceutical Sciences

Professor	Contents of education and research
NOMURA Wataru TEL 082-257-5308 FAX 082-257-5309 E-mail wnomura@hiroshima-u.ac.jp Department of Genome and Biomolecular Engineering for Drug Discovery	1 DNA Genome editing using DNA recombinases 2 Suppression of off-target effects for precise genome editing 3 DNA Epigenome editing using DNA methylases 4 Gene regulation by artificial transcription factors 5 Chemical biology by protein engineering and genome editing 6 Visualization of in situ protein dynamics using fluorescent imaging 7 BRET BRET-based compound screening for drug discovery 8 Roles of phosphoinositides in signal transduction system 9 Roles of phosphoinositides in intracellular vesicular trafficking 10 Research on tumor metabolism

KOTAKE Yaichiro TEL 082-257-5325 FAX 082-257-5329 E-mail yaichiro@hiroshima-u.ac.jp Department of Neurochemistry and Environmental HealthSciences	1 Neurotoxic mechanism of environmental chemicals and its evaluation 2 -related neurotoxic chemicals 3 Metabolism, toxicity and human prediction of chemicals including pharmaceuticals 4 Neurotoxicity and metabolism of designer drugs
TAHARA Hidetoshi TEL 082-257-5290 FAX 082-257-5294 E-mail toshi@hiroshima-u.ac.jp Department of Cellular and Molecular Biology	1 Molecular mechanism of cellular senescence and cancer 2 G-tail Development of anti-cancer drug targeting telomere G-tail 3 G-tail Risk assessment of age-related disease using telomere G-tail 4 Cellular immortalization using telomerase 5 RNA Biomarker using circulating microRNA 6 RNA Nucleic acid biomedicine for cancer treatments 7 RNA Molecular mechanism of microRNA regulation in aging and cancer 8 Extracellular vesicles including exosome in aging and cancer
KAMIYA Hiroyuki TEL 082-257-5300 FAX 082-257-5334 E-mail hirokam@hiroshima-u.ac.jp Department of Nucleic Acids Biochemistry	1 DNA Mutagenesis by DNA damage 2 DNA DNA Functions of DNA repair 3 Gene correction (genome editing) for gene therapy 4 iPS Mutations and genome stability in iPS cells
To be decided Department of Clinical Pharmacotherapy	
To be decided Department of Frontier Science for Pharmacotherapy	
OZAWA Koichiro TEL 082-257-5332 FAX 082-257-5332 E-mail ozawak@hiroshima-u.ac.jp Department of Pharmacotherapy 2025 3 Retirement at the end of March 2025 YANASE Yuhki （Associate professor） E-mail yyanase@hiroshima-u.ac.jp	1 Clinical pharmaceutical researches that support the proper use of pharmaceutical products 2 Elucidation of the mechanisms of stress responses and drug targets 3 The research of clinical drug assessment 4 The development of new methods to assess drug efficacy and drug monitoring 5 The research about functions and disease therapy of the store operated calcium channel

KURODA Teruo TEL 082-257-5655 FAX 082-257-5655 E-mail tkuroda@hiroshima-u.ac.jp Department of Microbiology	1 Screening of seed compounds which has antimicrobial activity and Identification of its action target 2 Study of antiseptic resistance mechanism 3 Study of emergence of multidrug resistant bacteria 4 Study of tolerance for Na+ in marine bacteria 5 Structural study of microbial useful enzymes for the industrial application and target proteins for the drug development 6 Functional analysis of antibiotic biosynthetic genes from actinomycetes and its application for the production of useful compounds
MATSUNAMI Katsuyoshi TEL 082-257-8553 FAX 082-257-8553 E-mail matunami@hiroshima-u.ac.jp Department of Pharmacognosy	1 Phytochemical study of anti-Leishmania compounds 2 Natural products chemistry of marine organisms 3 Analysis of chemical structure by spectroscopic techniques
MORIOKA Norimitsu TEL 082-257-5310 FAX 082-257-5314 E-mail mnori@hiroshima-u.ac.jp Department of Pharmacology	1 The mechanisms of induction and maintenance of chronic pain 2 The mechanisms of induction of mood disorders 3 The role of glial cells in induction
UCHIDA Yasuo TEL 082-257-5315 E-mail yuchida@hiroshima-u.ac.jp Department of Pharmaceutics and Therapeutics	1 The study using human brain tissue to clarify molecular mechanisms of brain disorders 2 Drug transport study for human central nervous system (CNS) barrier and drug delivery to the brain 3 Elucidation of pathological molecular mechanisms of CNS barrier using next generation quantitative proteomics 4 Development of novel proteomics techniques and big data analysis 5 Disease biomarker study using highly sensitive and precise quantitative proteomics
MATSUO Hiroaki TEL 082-257-5570 FAX 082-257-5598 E-mail hmatsuo@hiroshima-u.ac.jp Department of Pharmaceutical Services	1 Clinical pharmacokinetics and administration planning of drugs 2 Drug interactions 3 Drug informatics for proper use of pharmaceutical products 4 Drug allergy 5 Influence of drug intake on development of food allergy

Program of Radiation Biology and Medicine

Professor	Contents of education and research
YOSHINAGA Shinji TEL 082-257-5852 FAX 082-256-7106 E-mail syoshinaga@hiroshima-u.ac.jp Department of Environmetrics and Biometrics	1 Evaluation of health effects of ionizing radiation based on the epidemiological data of atomic bomb survivors 2 Evaluation of health effects of protracted and fractionated exposures to ionizing radiation by epidemiological approaches 3 Development and application of statistical methods for evaluation of health effects of ionizing radiation
YASUDA Hiroshi TEL 082-257-5872 FAX 082-257-5873 E-mail hyasuda@hiroshima-u.ac.jp Department of Radiation Biophysics	1 Assessments of radiation doses and risks reflecting the physiological characteristics of individuals 2 Identification of radiation doses and radiation-induced health effects attributing to atomic bombs, nuclear tests and nuclear accidents 3 Radiological protection studies relevant to expansion of our living field such as human space exploration and air travel 4 Education and research for response to nuclear emergency and restoration from combined disaster 5 Research and development for dosimetry and health risk estimates related to radiation medicine 6 , IAEA, WHO, ICRP Contribution to the activities of international organizations (IAEA, WHO, ICRP, etc.) as an expert
KAWAKAMI Hideshi TEL 082-257-5846 FAX 082-257-5850 E-mail hkawakam@hiroshima-u.ac.jp Department of Molecular Epidemiology 2025 3 Retirement at the end of March 2025 KUME Kodai Associate professor E-mail kumek@hiroshima-u.ac.jp	1 Study of causative genes, model animals and the mechanism of amyotrophic lateral sclerosis 2 The causative factors of neurological disorders 3 Epidemiology of Radiation Disorders
WATANABE Tomonobu TEL 082-257-5938 E-mail twatanabe@hiroshima-u.ac.jp Department of Stem Cell Biology	In this course, we aim to elucidate (1) the mechanism by which individual differences in resistance to radioactive disorders occur, and (2) the relationship between the undifferentiated maintenance function of stem cells and radiation exposure, in combination with development of advanced microscopy. We accept students from science and engineering as well as biology and medicine.
TASHIRO Satoshi TEL 082-257-5817 FAX 082-256-7104 E-mail ktashiro@hiroshima-u.ac.jp Department of Cellular Biology 2027 3 Retirement at the end of March 2027 Associate professor E-mail jysun@hiroshima-u.ac.jp	1 Function of nuclear domains in human cells 2 Dynamic organization of DNA damage response in cell nucleus 3 Development of the biological dosimetry system based on the higher order nuclear architecture 4 Study of the mechanism of chromosome translocations

KAMINUMA Osamu
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FAX 082-257-1556
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Department of Disease Model

Clarification of cellular and molecular mechanisms and development of novel diagnostic and therapeutic methods for allergic and immunological diseases by using innovative somatic cell nuclear transfer and genetic modification technologies.

MATSUURA Shinya
TEL 082-257-5809
FAX 082-256-7101
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Department of Genetics and Cell Biology
2026 3
Retirement at the end of March 2026

ASANO Takaki
Associate professor
E-mail tasano02@hiroshima-u.ac.jp

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HIGASHI Yukihito TEL 082-257-5831 FAX 082-257-5831 E-mail yhigashi@hiroshima-u.ac.jp Department of Regenerative Medicine 2027 3 Retirement at the end of March 2027 MARUHASHI Tatuya Associate professor E-mail maru0512@hiroshima-u.ac.jp	1 Mechanisms of Cardiovascular disease 2 Role of endothelial cells in atherosclerosis 3 Development of methods for assessment of endothelial function 4 Development of regenerative therapy for cardiovascular disease 5 Development of regenerative therapy for radiation injury 6 Effects of low-intensity radiation on cardiovascular system
NODA Asao TEL 082-261-3131 FAX 082-263-7279 E-mail asnoda@rerf.jp Department of Analysis of radiation-induced mutations Radiation Effects Research Foundation	1 Analysis of genetic effects of radiation 2 Mechanistic studies of radiation-induced mutation 3 Development of model systems for detecting mutant cells 4 Ionizing radiation and aging
UCHIMURA Arikuni TEL 082- FAX 082- E-mail Department of Analysis of radiation-induced mutations Radiation Effects Research Foundation	
KUSUNOKI Yoichiro TEL 082-261-3243 FAX 082-261-3170 E-mail ykusunok@rerf.or.jp Department of Functions of Biological Defense Genome Radiation Effects Research Foundation	1 Structure and function of the cells of the immune system 2 Rolls of immune cells and molecules in biological defense 3 Aging and immunity 4 Assessments of radiation effects on the hematolymphoid system 5 Cytometry research in radiobiology
HAYASHI Tomonori TEL 082-261-3169 FAX 082-261-3170 E-mail tomo@rerf.or.jp Department of Functions of Biological Defense Genome Radiation Effects Research Foundation	1 Genome study on disease development 2 / Logic and methods for molecular epidemiology/genome research 3 Study on effects of environmental and host factors on immunity and inflammation 4 Molecular epidemiological study of radiation-associated diseases
TSURUYAMA Tatsuaki TEL 082- FAX 082- E-mail Department of Pathology and Biological responses Radiation Effects Research Foundation	

SAKATA Ritsu TEL 082- FAX 082- E-mail Department of Epidemiology of radiation health effects Radiation Effects Research Foundation	
SUGIYAMA Hiromi TEL 082- FAX 082- E-mail Department of Epidemiology of radiation health effects Radiation Effects Research Foundation	
TSUJI Hiroshi TEL 043-206-3306 E-mail tsuji.hiroshi@qst.go.jp Department of Charged Particle Therapy Research Molecular Imaging and Theranostics National Institutes for Quantum and Radiological Science and Technology	1 Clinical research of heavy ion radiotherapy 2 Clinical application of scanning irradiation 3 Database for clinical analysis