



Application Guidelines for International Students

(Ph.D. Program for 2018 Enrollment)

■ Dates for Entrance Examination

October 17, 2017 and February 20, 2018

for the Enrollment in April 2018

Kurume University Graduate School of Medicine

<http://www.kurume-u.ac.jp/site/gmed>

Table of Contents

■ Graduate School of Medicine, Doctoral Program

1. Admissions Policy for Doctoral Program -----	1
2. Enrollment Capacity and Research Areas -----	2
3. Academic Course of Study -----	2
4. Evening and Weekend Classes -----	3
5. Specialized Trainings in Research and Education at the Graduate School -----	3
6. Doctoral Degree -----	4
7. Kurume University Research Assistant System -----	4
8. Award for Outstanding Dissertation -----	5

■ Screening and Admission Procedure for Enrollment in 2018, Doctoral Program

1. Intake: Doctoral Program of 2018 -----	6
2. Eligibility for International Students -----	6
3. Prescreening Process -----	7
4. Formal Application Procedure -----	8
5. Application Submission -----	10
6. Screening Method (International Applicants) -----	11
7. Result Announcement -----	12
8. Enrollment Procedure -----	12
9. Scholarship and Tuition Reduction -----	13

■ List of Research Fields, Departments and Professors ----- 14

1. Admissions Policy for Doctoral Program

The Graduate School of Medicine strives to educate students to become independent investigators to conduct innovative research, to gain interdisciplinary medical and scientific knowledge for engaging in highly specialized and cutting-edge medical work, and to cultivate international perspective and high levels of ethical standards and humanity. We thus are looking forward to welcoming applicants who meet the following criteria.

- Applicants who are willing with a strong global mindset to work as a professional in clinical settings or to play an active role in the field of medical education and research.
- Applicants who should have or are expected to have completed a master's degree in the field of medical sciences or social welfare, or who have considerable research experiences in medical institutions, universities, government agencies, or enterprises.
- Alternatively, foreign students are welcomed if certain conditions are met. We are also looking forward to welcoming working adult students who are preferably engaged in medical and health care or services, including residents under clinical training, if they have strong motivation to work toward balancing work and study while pursuing an advanced degree.

※The admission policy describes the eligibility criteria with ability and aptitude required for prospective students.

■Our Philosophy

Based on the School Education Act, the Kurume University Graduate School aims to teach, research and explore the depths of the theories and application of academics, and commits ourselves for the contribution of the progress of culture and society at large.

Stated in the Article 1, Chapter 1 of the Kurume University Graduate School under Objectives

■Educational Objectives

Kurume University Graduate School of Medicine promotes pioneering academic research in the fields of medicine and medical science and train researchers and professionals to acquire wide range of perspectives, advanced expertise and cultural awareness to contribute both in the regional community and the world.

The doctoral course of the Graduate School strives to develop human resources in specialized fields in clinical medicine and medical sciences who are capable of promoting academic research with independent-mind, specialized knowledge in medicine, international perspective and rich cultural and human nature, all of which are indispensable for engaging in highly specialized medical work.

Stated in the Article 1, Chapter 1 of the Kurume University Graduate School of Medicine Regulations under "Educational Purposes and Goals".

2. Enrollment Capacity and Research Areas

Graduate School of Medicine, Doctoral Program (Ph.D.)

Degree offered	Students Intake	Standard period of completion	Enrollment Term
Doctor of Philosophy in Medical Science	35	4 years	April 2018
Doctor of Philosophy in Medical Biostatistics			
Doctor of Philosophy in Nursing			

3. Academic Course of Study

Students must obtain 30 credits or more, including the subjects specified below, under the instruction of supervising professor within the prescribed period. Acquisition of unit credits is conducted by examination or submission of reports on practical training and experiments.

Department	Major Subjects	Dissertation	Common Subjects
Physiological System Pathological System Social Medicine System Individually Optimized Therapeutics System	20 or more credits (including 8 credits of lecture and 12 credits of practical training)	5 credits	6 credits or more

Department	Course	Requirements (common)	Requirements for electives	Dissertation	Common Subjects
Individually Optimized Therapeutics System Advanced Cancer Therapy Malignant Tumor Specialist Training Unit	Chemical Medicine Therapy, Specialist Training Course	12 credits	*L: 8 credits *PT: 12 credits	5 credits	6 credits or more
	Radiotherapy, Specialist Training Course	4 credits	L: 4 credits PT: 16 credits		
	Palliative Care, Specialist Training Course	4 credits	L: 8 credits PT: 16 credits		
	Rare Cancer Therapy, Specialist Training Course**	12 credits	L: 8 credits PT: 12 credits		

* L: lecture, PT: practical training

** The curriculum may be revised in FY2018.

※ Students who receive research guidance that spans two areas of research are able to share the credits in major subjects. If you wish to allocate specialized subjects, 9 units of "Dissertation" will be required.

4. Evening and Weekend Classes

Responding to the growing needs from professionals and working adults, the Graduate School of Medicine has started offering classes in the evening to provide learning opportunities and support acquiring advanced research capabilities in medical knowledge and technology for the betterment of society. Classes and research guidance schedule are set in the evening to meet the needs from medical practitioners, doctors working at hospitals, and researchers in the medical related fields.

【Schedule】

Responding to the needs and working mode of students, classes may be offered during the sixth period (18:00-19:30) and the seventh period (19:40-21:10). Classes may be offered on Saturdays, Sundays and during summer holidays.

※ Evening and night classes can be taken by all students enrolled in the program. However, please consult with your employer and supervisor before making arrangements.

5. Specialized Trainings in Research and Education at the Graduate School

The followings are new educational programs developed in the doctoral course at the Graduate School of Medicine in recent years.

1. Career Development Program for Chief Clinical Researchers

Medical doctors and nurses undertake clinical trials at university hospitals, but their knowledge on clinical trials have not always been sufficient to fully engage and respond to the emerging demands on site. We have developed an educational system that alien with the Principle Investigator Training System by the National Institute of Health in the United States. This course is conducted by specialists and leading scholars/practitioners from both inside and outside of Japan regarding new drugs, drug discovery, pharmacology, clinical pharmacology, toxicology, regulation / ethics, clinical development, biostatistics, medical economics, related laws, marketing, pharmacovigilance, and acquisition and application of intellectual property rights.

2. Development of Advanced and Field Specific Research Methodology Program

“Advanced and field specific research methodology program” was established in April 2007 and it mainly provides trainings and lectures on physiology and cross-cutting experiments using special equipment to enhance basic education and learning opportunities for wide range of experimental methods.

3. Establishment of Department of Biostatistics in Social Medicine

In Japan, biotechnological researchers are lacking quantitatively and qualitatively in the medical research and

drug development research fields. This problem has been recognized widely in the academic research, and various efforts are needed to raise international competitiveness in industry. Kurume University Graduate School of Medicine has established the Department of Biostatistics since April 2005 to provide a bio-statistical research program that meets the international standard and strives to educate talented researchers and practitioners.

4. Development of Malignant Oncology Specialist Training Program for Advanced Individually Optimized Therapeutics System

The Kurume University has developed the program for cancer treatment with the Advanced Individually Optimized Therapeutics System to provide essential research and medical care in response to the increasing needs of the society. Development of cancer specialists have been awaited eagerly as deaths caused by cancer have accounted for 31.1% of all deaths in Japan in recent years.

The Graduate School of Medicine devotes its resources in promoting new research that specializes in learning both the latest basic oncology and clinical oncology in a doctoral program. Students enrolled in the malignant oncologist specialist course in the doctoral program, established in 2007, are able to engage in clinical practices in solid tumor and hematologic malignancy and gain qualification for a cancer medication therapy specialist (specialist doctor accredited by the Japanese Society of Medical Oncology). Furthermore, Radiation Therapy Specialist Training Course was established in 2008, and the Palliative Care Specialist Training Course was added in 2009 in the program where students are able to choose their concentration under "Malignant Oncologist Training Unit".

6. Doctoral Degree

Doctoral degree is awarded to students who have obtained the required credits (30 credits or more) at the Graduate School for 4 years or more, published his/her thesis work in a journal, and succeeded thesis defense evaluated by oral presentation and final examination. If students show excellent track records in research and complete the prescribed requirements for the course, the enrollment period may be shortened to 3 years.

7. Kurume University Research Assistant System

Under the Research Assistant System, students enrolled in the Graduate School of Medicine are able to take part in the research projects conducted at the University as "Research Assistants" upon completing the prescribed screening procedure. Compensation is determined by each academic research project.

8. Award for Outstanding Dissertation

Award for Outstanding Dissertation is bestowed upon recent graduates with Doctoral degree from the University who demonstrated excellent research and long-term commitment in the research in the field of medicine.

Admission Procedure for the Enrollment in 2018

Kurume University Graduate School of Medicine, Doctoral Program

1. Intake: Doctoral Program of 2018

Concentration of Research Area	Research Subjects	Intake per year
Physiological System	<ul style="list-style-type: none"> • Anatomy (Clinical Gross Anatomy) • Anatomy (Microscopic Anatomy and Histology) • Physiology (Brain Function) • Physiology (Integrated Automatic Function) • Medical Biochemistry • Pharmacology • Molecular Life Science 	4
Pathological System	<ul style="list-style-type: none"> • Pathology • Infectious Medicine (Microbiology) • Infectious Medicine (Eukaryotic Microbiology) • Infectious Diseases • Immunology 	3
Social Medicine System	<ul style="list-style-type: none"> • Environmental Medicine • Public Health • Health and Sports Science • Forensic Medicine and Human Genetics • Biostatistics • Nursing 	8
Individually Optimized Therapeutics System	<ul style="list-style-type: none"> • Advanced Cancer Therapy • Advanced Medicine for Cardiovascular Diseases • Higher Brain Disorder • Skin Cell Biology • Advanced Therapeutic Study of Other Disorders • Special Training Course: Advanced Cancer Therapy Malignant Tumor Specialist Training Unit (Chemical Medicine Therapy Course, Radiotherapy Course, Palliative Care Course, and Rare Cancer Therapy Course) 	20
Total		35

2. Eligibility for International Students (Application Category “C”)

International applicants (Application category “C”) MUST fulfill at least one of the following requirements. Please indicate under which category (1 through 5) the applicant is applying to on the Application Form 1.

- 1) Foreign/international applicants who graduated or expected to graduate from a university under the Article 83 of the School Education Act of Japan by March 2018, and his/her final degree is in medicine, dentistry, veterinary medicine or pharmaceutical science with a 6-years of study.

- 2) Applicants who have completed 18 years of education within overseas educational institutions (the final course having been medicine, dentistry, pharmaceutical sciences or veterinary medicine), or are expected to complete those courses by March 2018.
- 3) Applicants who have been awarded Master's degree or completed courses towards Master's degree at graduate school in Japan, or those who are acknowledged to have academic ability equal to or higher than degree in medicine, dentistry, veterinary medicine or a 6-year pharmaceutical science.
- 4) Applicants who have completed 16 years of education within overseas educational institutions and engaged in educational or research work at university or research institutions (government agency or companies) for at least two years prior to applying. Assessment will be conducted by the Graduate School of Medicine whether the applicant has acquired abilities equivalent or superior to the graduates of medicine, dentistry, or veterinary medicine course, or a 6-year pharmaceutical science.
- 5) Applicants over 24 years of age by March 31, 2018 and by the prescreening results that have shown that they have academic abilities equivalent or superior to the graduates from medicine, dentistry, or veterinary medicine course, or a 6-year pharmaceutical science.

【NOTE】

- For those applicants applying under “General Admission (Application Category “A”) or Professionals (Application Category “B”) should refer to the Application Guidelines in Japanese 「平成 30 年度 学生募集要項 (博士課程)」 or contact Academic Affairs Division at the Graduate School of Medicine for further instruction.
- Those who have graduated or are scheduled to graduate from a university other than degree in medical science or dental school cannot major in the Individually Optimized Therapeutics System in principle.

3. Prescreening Process

International Applicants (Category “C”) who fall in the category 3), 4) or 5) in the above section **【2. Eligibility for International Students (Application Category=C)】** of the doctoral program must submit the followings for “prescreening” before submission of their formal application:

1. The Application Form (Form 6)
2. A list of previous research achievements (Form 7)
3. University Graduation Certificate(s) of all universities and technical school
4. Academic transcripts of all universities
5. Graduation Certificate / Certificate of Scheduled Graduation from Master's program, if applicable
6. Academic transcripts of graduate program(s), if applicable
7. Certificate of research activities which indicates more than 2 years of research experience, if applicable

■ Submission Period for Prescreening Applications

Kurume University Graduate School of Medicine performs entrance examinations twice a year. The submission periods of each examination are listed below. All required documents must arrive at the Graduate School of Medicine before the last day of the submission period indicated below (not the postmarked date).

Enrollment Term	Submission Period for “Prescreening Application”
Spring (April) 2018	August 21, 2017 (Mon) – August 25, 2017 (Fri)
	December 18, 2017 (Mon) – December 22, 2017 (Fri)

■ Consultation with Prospective Supervisor(s)

Please make sure that you contact the prospective supervisor(s) well in advance and discuss the research project and guidelines with the supervisor(s) before finalizing the prescreening application to the Graduate School of Medicine.

■ Format and Procedure of Submitting Prescreening Application

Please convert all required documents in PDF format and send them to the below e-mail address during the submission period.

Graduate School of Medicine, Kurume University
Admissions Office, Academic Affairs Section
E-mail: igaku-kyomu@kurume-u.ac.jp

■ Result of Prescreening Application

Result of the Prescreening Application will be notified by a postal mail to the applicant’s mailing address. Only the successful applicants are allowed to submit their formal application to the Graduate School of Medicine in later date. Details are described below in the section “4. Formal Application Procedure”.

4. Formal Application Procedure

Applicants must prepare the application documents indicated below and submit them to the Graduate School of Medicine before the deadline. Please make sure that you consult with your prospective advisor(s) about curriculum and research prospects prior to submitting the formal application.

- Applicants must submit either original certificates or certified documents.
- Any documents written in languages other than English or Japanese, must be accompanied with official translation(s) with the translator’s name, address, contact information and signature or official seal.
- Kurume University will not return any of the submitted certificates in any circumstances.
- Acceptance to the University will be revoked if any false information or forgeries are found in the submitted documents, even after enrollment.

1. Application Form	Form 1
2. Personal Statement	Form 2 (personal statement in the maximum of 250 words in English or 500 characters in Japanese)
3. Academic Transcripts	Original transcripts issued from the educational institutions, all undergraduate and graduate level studies you have attended. Please submit Japanese or English translations if the document is issued in a language other than Japanese or English.
4. Two Identical Photographs (4 cm x 5 cm)	<ul style="list-style-type: none"> • Submit two identical photographs taken within three months, showing a front view above chest level. No cap or hat is allowed. • The photograph size must be 5 cm high by 4 cm wide (1.96 in x 1.57 in). • Please affix one directly to the application form (Form 1) and another to the Applicant's ID Card for examination (Form 3).
5. University Graduation Certificate(s)	Original copy issued directly from universities and graduate schools. Please submit Japanese or English translations if the document is issued in a language other than Japanese or English.
6. Applicant's ID Card for Examination	Form 3
7. Application Fee	¥30,000 Applicants residing in Japan at the time of submitting formal application should refer to the Application Guidelines in Japanese 「平成 30 年度 学生募集要項 (博士課程)」 and the pay the Application Fee using the designated form (Form 4) prior to taking the Examination. International applicants residing outside of Japan should pay the admission fee in Japanese Yen on the day of the Examination at the University. The Admission Fee will not be refunded under any circumstances.
8. Documents Providing English Proficiency *Original ONLY *Required from all applicants whose native language is not English	<p>Please submit the ORIGINAL results from one of the English language proficiency exams listed on page 11 “Requirement for Language Proficiency”.</p> <p>【Exemption】 The following applicants are exempt from having to provide documents for English proficiency:</p> <ul style="list-style-type: none"> • Applicants who can be certified with official certificate indicating their graduation or scheduled graduation from a bachelor's course offered in English • Applicants who can be certified with official certificate indicating their education exclusively in English for at least six years of their formal education. • Applicant whose nationality is English-speaking country e.g. Australia, Canada, Ireland, New Zealand, Singapore, the United Kingdom and the United States.
9. Copy of Passport	Applicants are required to submit a copy of their valid passport, showing their photo, name, nationality, gender, date of birth, passport number and date of expiration. If you already have a valid Japanese visa, please submit a photocopy of your visa as well.

10. Copy of Resident Card (both sides)	Submission of a copy of Residence Card (front and back) is required for all international applicants residing in Japan.
11. Letter of Agreement of Examination (Only for Admission Category “B – professionals”)	Applicants applying under the Category “B – professionals” are required to submit the Form 5 upon receiving agreement by the supervisor at the current institution/company.
12. Copy of official certificate and license	Applicants who have acquired pharmacist license and/or physician's license are required to submit a copy of those licenses.
13. Certification of Scholarship received from organizations other than Kurume University	Applicants who are due to accept scholarship offered by organizations other than Kurume University after their admission are required to submit proof of the scholarship award.
14. Official certificate or registration record for name change	Please obtain an official certificate or registration record at the municipality if your name has changed due to changes in marital status or family circumstances.
15. Resident Status Questionnaire (required for all International Applicants)	Please contact Admissions Office before Prescreening to obtain the form. The form includes information of applicant, guarantor’s information, Japanese language proficiency, and history of previous entries to Japan. Please attach a Japanese translation of the form.
16. Letter of Paying Expenses (required for all International Applicants)	Please contact Admissions Office before Prescreening to obtain the form.

5. Application Submission

Please send all application documents directly to Kurume University Graduate School of Medicine.

(1) Application Period

Kurume University Graduate School of Medicine performs entrance examinations twice a year. The submission periods of each examination are listed below.

Enrollment Term	Submission Period
Spring (April) 2018	September 19, 2017 (Tue) – September 29, 2017 (Fri)
	January 15, 2018 (Mon) – January 26, 2018 (Fri)

(2) Contact Information

Graduate School of Medicine, Kurume University
Admissions Office, Academic Affairs Section
67 Asahi-machi, Kurume, Fukuoka
830-0011 Japan

Tel: +81 942-31-7528

E-mail: igaku-kyomu@kurume-u.ac.jp

HP: <http://www.kurume-u.ac.jp/site/gmed/>

6. Screening Method for International Applicants

(1) All applicants are evaluated based on an interview, a written test in English and all submitted documents.

(2) Screening Date: Examination

Enrollment Term	Date of Examination
Spring (April) 2018	October 17, 2017 (Tue)
	February 20, 2017 (Tue)

(3) Examination Subjects, Schedule and Venue

Applicants are required to be present at the venue by 10:30 am (Japan time) of the examination date described above.

Examination Subjects	Schedule	Venue
Written Exam (essay in English)	11:00-12:00	Room 1505, 5 th Floor, Academic Building 1 (Kyoiku 1 goukan), Kurume University School of Medicine
Interview	13:00-	Your faculty advisor will decide the details (time and venue) of the interview and notify applicants before the interview

(4) Examination admission ticket will be issued on the day of the examination at the venue. The receipt of application fee payment confirms that you have completed the application process.

(5) Request for changing major will not be accepted once the application is submitted.

[Exemption of the English Examination]

Applicants whose native language or language of instruction at university or graduate school is not English must submit a copy of one of the following English proficiency examinations: the official score report of TOEFL, TOEIC score report, IELTS score report or result from EIKEN (Practical English Proficiency Test) to be exempt from the English Examination. The official test scores are valid for 4 years for the admission at the Kurume University Graduate School of Medicine, and requires a minimum TOEFL score of PBT 580 / iBT 85, TOEIC score of 800, IELTS score of 6.0 or Pre-1 level of EIKEN to be exempt from the English Examination.

International applicants who do not meet the above conditions are required to take the English Examination which is different from Japanese applicants. Details will be provided upon successful completion of the prescreening process.

International applicants with fluency in Japanese language are requested to consult with Application Guidelines in Japanese 「平成 30 年度 学生募集要項 (博士課程)」 or contact Academic Affairs Division at the Graduate School of Medicine for further instruction.

7. Result Announcement

Result will be sent out by a postal mail to the address provided on the application form. Results are also posted on the website (<http://www.kurume-u.ac.jp/site/gmed/>) or check the posted list at the Kurume University on the date and the time described below. Enrollment procedures and necessary documents will be mailed to the successful applicants with the notice of acceptance.

Enrollment Term	Announcement Schedule
Spring 2018	November 10, 2017 (Fri) at 10:00 am
	March 16, 2018 (Fri) at 10:00 am

8. Enrollment Procedure

(1) Deadline for Payment of Admission Fee and Document Submission

Please submit all necessary documents and complete payment by the deadline. The deadline will not be extended under any circumstances.

Enrollment Term	Deadline
Spring 2018	November 24, 2017 (Fri)
	March 23, 2018 (Fri)

(2) Admission Fee and Partial Tuition Fee

Admission Fee	JPY 250,000
Tuition fee (※annual)	JPY 240,000 per semester (※JPY 480,000)
Facilities fee (※annual)	JPY 60,000 per semester (※JPY 120,000)

※When accepted applicants decline enrollment after going through admission procedures, one-term tuition and facilities fees paid for the first academic year (excluding admission fee) will be refunded. Please submit the letter of request directly to admission office by the deadline (March 23, 2018 at 5 pm, Japan time).

9. Scholarship and Tuition Reduction

Kurume University Scholarship

After enrolling at the Graduate School of Medicine, students will have an opportunity to apply for Kurume University Scholarship. This loan scholarship award is 120,000 JPY per month to cover your living expenses.

Tuition Reduction for International Students

The Graduate School of Medicine also provides tuition reduction for selected international students. It covers full or 50% of your tuition.

Personal Information Policy

Kurume University will manage the personal information of application in compliance with relevant laws and regulations concerning the protection of personal information during admission process. The University strives for proper handling of personal information and take necessary measures for safety management.

Personal information provided in the application and admission procedure is used for the necessary work for the entrance examination, acceptance announcement, procedural works for enrollment, student and faculty relations, and support for student life upon employment.

Personal information acquired by our university will not be disclosed or provided to a third party without consent.

Division, Department and Research Fields

Subject & Course	Department & Professor	Research Fields
Anatomy (Clinical Gross Anatomy)	Koh-ichi Yamaki, M.D., Ph.D. Division of Gross and Clinical Anatomy, Department of Anatomy, Kurume University School of Medicine	<ul style="list-style-type: none"> Gross-anatomical research Morphology of the heart and blood vessels Anatomy of the musculoskeletal system (emphasis on the lower limb) Clinical and anatomical research Construction of the abdominal vascular system
Anatomy (Microscopic Anatomy and Histology)	Kei-ichiro Nakamura, M.D., Ph.D. Division of Microscopic and Developmental Anatomy, Department of Anatomy, Kurume University School of Medicine	Functional Microscopic Anatomy: <ul style="list-style-type: none"> Reevaluation of the connective tissues: its morphological characteristics and biomedical significance including stem cell biology. The shape and spatial characteristics of interstitial cells in the connective tissue with special reference to the intercellular communication (network formation). The structure, dynamics and their functional significance of mitochondria and other organelles.
Physiology (Brain Function)	Eiichiro Tanaka, M.D., Ph.D. Department of Physiology, Kurume University School of Medicine	<ul style="list-style-type: none"> Synaptic transmission and chemical receptivity in central nervous system Mechanisms underlying neuronal death produced by ischemia or hypoxia Mechanisms underlying the development of schizophrenia
Physiology (Integrated Automatic Function)	Makoto Takano MD, Ph.D. Department of Physiology, Kurume University School of Medicine	<ul style="list-style-type: none"> Molecular & cellular physiology of cardiac pacemaker cells & arrhythmia (remodeling of HCN channel expression) Molecular & cellular neuroscience of neurons expressing pacemaker HCN channels (optogenetics, slice patch clamp, behavior analysis) Structure-function relationship of ion channels (Kir channels)
Medical Biochemistry	Ken Yamamoto, M.D., Ph.D. Department of Medical Biochemistry, Kurume University School of Medicine	<ul style="list-style-type: none"> Elucidation of genetic and epigenetic etiology of common diseases, including metabolic diseases, cancer and autoimmune diseases. Identification of genes involved in the Mendelian disorders. Genomics for the lipid absorption systems.
	Yuichiro Higashimoto, Ph.D. Department of Chemistry, Kurume University School of Medicine,	<ul style="list-style-type: none"> Post-translational modifications of proteins Screening and biological applications of aptamers Mass spectrometry-based medical proteomics
Pharmacology	Akinori Nishi, M.D., Ph.D. Department of Pharmacology, Kurume University School of Medicine	<ul style="list-style-type: none"> Dopaminergic signaling mediated through protein phosphorylation Degeneration and regeneration of dopaminergic neurons Regulatory mechanisms of neurotransmitter release evaluated with <i>in vivo</i> microdialysis Neurochemical and behavioral aspects of drug addiction
Molecular Life Science	Masayasu Kojima, M.D., Ph.D. Professor of Molecular Genetics, Institute of Life Science, Kurume University	<ul style="list-style-type: none"> Search for novel peptide hormones Molecular biology of peptide hormones Physiological functions of peptide hormones Regulatory mechanism of appetite and food intake
	Naotada Ishihara, Ph.D. Department of Protein Biochemistry, Institute of Life Science, Kurume University	<ul style="list-style-type: none"> Biochemistry and cell biology of intracellular organelles. Molecular mechanism and physiological roles of mitochondrial membrane fusion and fission.
	Shigeaki Saitoh, Ph.D. Division of Cell Biology, Institute of Life Science, Kurume University	<ul style="list-style-type: none"> Molecular mechanisms controlling cellular growth and division in response to changes in the nutritional conditions. Molecular mechanisms ensuring accurate chromosome segregation during mitotic cell division.

Pathology	Hirohisa Yano, M.D., Ph.D. Department of Pathology, Kurume University School of Medicine,	<ul style="list-style-type: none"> • Primary culture of liver cancer cells • Molecular pathology of liver cancer (e.g., identification of histogenesis, cancer stem cell, and tissue biomarkers of liver cancer) • Experimental pathology of liver cancer (e.g., development of new molecular targeted therapy of liver cancer using new and unique drug delivery system)
	Koichi Ohshima, M.D., Ph.D. Department of Pathology, Kurume University School of Medicine,	<ul style="list-style-type: none"> • Hematopathological diagnosis of malignant lymphoma • Molecular pathology of malignant lymphoma (Immunostaining and genetical analysis)
	Yasuo Sugita, M.D., Ph.D. Department of Pathology, Kurume University School of Medicine	<ul style="list-style-type: none"> • Ultrastructural study of CNS tumors • Pathology of gliomas and primary CNS lymphomas • Pathology of demyelinating diseases • Pathology of amyloid angiopathy
	Osamu Nakashima, M.D., Ph.D. Department of Clinical Laboratory Medicine, Kurume University Hospital	<ul style="list-style-type: none"> • Clinical pathology of liver tumor and tumor-like conditions • Pathomorphological study of hepatocellular carcinoma (HCC)
Infectious Medicine (Microbiology)	Koichi Kuwano, M.D., Ph.D. Department of Infectious Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Host-microbe interactions • Bacterial infection • Anti-microbial agents
Infectious Diseases	Hiroshi Watanabe, M.D., Ph.D. Department of Infection Control and Prevention, Kurume University School of Medicine	<ul style="list-style-type: none"> • Infectious diseases of humans • Prevention of nosocomial infections • Tropical medicine • Travel medicine
Infectious Medicine (Eukaryotic Microbiology)	Masahiro Inoue, M.D., Ph.D. Department of Infectious Medicine, Division of Eukaryotic Microbiology, Kurume University School of Medicine	<ul style="list-style-type: none"> • Development of molecular targeting drugs for eliminating <i>Trypanosoma brucei</i>, a causative agent of Nagana disease and sleeping sickness in animal and human, respectively • Drug screening utilizing unique features of the molecular chaperone of <i>T. brucei</i> <ol style="list-style-type: none"> 1) Biology of <i>T. brucei</i> 14-3-3 (Tb14-3-3) 2) Characterization of <i>T. brucei</i> 14-3-3 associated kinase 1 (AKB1)
Immunology	Atsushi Mizoguchi, M.D., Ph.D. Department of Immunology, Kurume University School of Medicine	<ul style="list-style-type: none"> • Intestinal immunology • Development of novel therapeutic strategies for IBD • Regenerative immunology • Tissue-specific immunology
Environmental Medicine	Tatsuya Ishitake, M.D., Ph.D. Department of Environmental Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Occupational Medicine <ol style="list-style-type: none"> 1) Prevention and health management of hand-arm vibration disease 2) Health effects on hyperbaric environment (diving) 3) Health management for medical and welfare workers • Environmental Medicine <ol style="list-style-type: none"> 1) Indoor air pollution and sick building syndrome 2) Health effects due to electromagnetic wave • Community Health <ol style="list-style-type: none"> 1) Application study of Health Impact Assessment (HIA)

Public Health	Yoko Ishihara Ph.D. Department of Public Health, Kurume University School of Medicine	The aim of the studies in this field is to contribute the health promotion, preventive medicine and disease treatment through the experimental and field study to clarify the factors associated with various diseases. <ul style="list-style-type: none"> • Research on the mechanisms of biological response to factors associating with diseases. • Research on the association of aging, lifestyle and health status. • Research on the processes of medical decision making. • Research on the relationships between social factors and health status. • Research on the factors affecting the development and worsening of chronic diseases.
Health and Sports Science	Noriko Yoshida, M.D., Ph.D. Department of Sports Medicine and Science Studies, Faculty of Human Health, Kurume University	<ul style="list-style-type: none"> • Influences of life style modification for biological function and disease prevention (ex. the effects of physical activity and nutrition on oxidative stress) • Sports medicine
Forensic Medicine and Human Genetics	Yoshiro Koda, M.D., Ph.D. Department of Forensic Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Genetic polymorphisms of genes involved in Morphogenesis • Development of methods for detection of haptoglobin gene deletion and these clinical application • Genetic polymorphisms of genes under natural selection
Biostatistics	Tatsuyuki Kakuma, Ph.D., The Biostatistics Center, Graduate School of Medicine, Kurume University	<ul style="list-style-type: none"> • Statistical methods in clinical research • Educational methods in biostatistics for biostatistics, medical and paramedical graduate students • Statistical consultations for medical and life science researches • Statistical methods for medical service big data
Nursing	Mutsuko Mihashi, R.N, Ph.D. Department of Adult Nursing, Kurume University School of Nursing	<ul style="list-style-type: none"> • Health issues and caring of patients with infection and opportunistic infection and their families • Health issues and caring of patients with infection in local coordination • Issues and caring in public health and health crisis in disasters
	Hiroki Inutsuka, Ph.D. Kurume University School of Nursing	<ul style="list-style-type: none"> • Theoretical analysis of reliability and validity of assessment. • Study on Statistics and assessment method of OSCE.
	Yoko Nakashima, R.N. Ph.D., Gerontological Nursing, Kurume University School of Nursing,	<ul style="list-style-type: none"> • Study for early intervention and support system of dementia • Study for the elderly support by multi-occupational collaboration; team medical approach • Study for gerontological nursing, gerontological nursing education and management
	Kazuki Masumori, RN, Ph.D., Kurume University School of Nursing	<ul style="list-style-type: none"> • Child health nursing • Nursing for the families of children with illness • Education on child health nursing
	Mitsuyoshi Ayabe M.D., Ph.D. Kurume University School of Nursing	<ul style="list-style-type: none"> • Pathology of the neurological intractable disease • Nursing administration and policies
	Yoriko Hara, R.N., Ph.D. Department of Adult Nursing, Kurume University School of Nursing	<ul style="list-style-type: none"> • QOL development for cancer patients and families • Scale development for QOL measurement in Diabetic patients and families • Research on regional cooperation care-system

<p>Individually Optimized Therapeutics System</p> <p>Innovative Cancer Therapeutics</p>	<p>Akira Yamada, Ph.D. Research Center for Innovative Cancer Therapy</p>	<ul style="list-style-type: none"> • Molecular mechanisms of cancer immunity • Development of peptide vaccines for cancer treatment • Finding of new molecular targets for cancer immunotherapy using next generation sequencing technology
	<p>Masanori Noguchi, M.D., Ph.D. Clinical Research Division of Research Center for Innovative Cancer Therapy, Kurume</p>	<ul style="list-style-type: none"> • Basic research for cancer immunotherapy • Development of cancer vaccine • Clinical trials for cancer vaccine
	<p>Hirohisa Yano, M.D., Ph.D. Department of Pathology, Kurume University School of Medicine,</p>	<ul style="list-style-type: none"> • Primary culture of liver cancer cells • Molecular pathology of liver cancer (e.g., identification of histogenesis, cancer stem cell, and tissue biomarkers of liver cancer) • Experimental pathology of liver cancer (e.g., development of new molecular targeted therapy of liver cancer using new and unique drug delivery system)
	<p>Koichi Ohshima, M.D., Ph.D. Department of Pathology, Kurume University School of Medicine,</p>	<ul style="list-style-type: none"> • Hematopathological diagnosis of malignant lymphoma • Molecular pathology of malignant lymphoma (Immunostaining and genetical analysis)
	<p>Koji Nagafuji, MD., Ph.D. Division of Hematology & Oncology, Department of Medicine, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Analysis of growth mechanism of hematopoietic tumor cells. • Investigation of blood coagulation and platelet abnormality related to thrombosis development
	<p>Takuji Torimura, MD., Ph.D. Division of Gastroenterology, Department of Medicine, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Pathophysiology and treatment of viral hepatitis • Mechanism of hepatocarcinogenesis, diagnostic imaging and treatment • Regeneration of hepatocyte.
	<p>Hironori Koga, M.D., Ph.D. Division of Gastroenterology, Department of Medicine, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Cancer stem cells of liver and pancreatic cancers • Wnt signaling pathway • Pathogenesis and treatment of hepatitis virus-associated liver diseases • Liver regeneration • Pathology of cancers of digestive organs
	<p>Ryoko Kuromatsu, M.D., Ph.D. Division of Gastroenterology, Department of Medicine, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Basic and clinical ultrasonography of abdomen • Early diagnosis and treatment of liver cancer
	<p>Yoshito Akagi, M.D., Ph.D. Division of Gastroenterological surgery, Department of Surgery, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Gastroenterological surgery • Oncologic surgery • Intensive care • Chemotherapy
	<p>Kimio Ushijima, M.D., Ph.D. Department of Obstetrics and Gynecology, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Research for diagnosis, pathophysiology, multimodal treatment of gynecologic cancer
<p>Tsukasa Igawa, M.D., Ph.D. Department of Urology, Kurume University School of Medicine,</p>	<ul style="list-style-type: none"> • Urologic oncology • Multidisciplinary / minimally invasive treatment for urological tumors 	

<p>Individually Optimized Therapeutics System</p> <p>Advanced Cancer Therapy - Malignant Tumor Specialist Training Unit</p>	<p>Specialist Training Course for Chemical Medicine Therapy</p>	<p>Yoshito Akagi, M.D., Ph.D. Division of Gastroenterological surgery, Department of Surgery, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Chemotherapy • Molecular target therapy • Immunotherapy • Pathologic and physiologic treatment • Intensive care
	<p>Specialist Training Course for Radiotherapy</p>	<p>Etsuyo Ogo, M.D., Ph.D. Department of Radiology & Radiation therapy center, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Basic learning for radiation therapy • Up-to-date knowledge of radiation therapy technique • Clinical application of radiation therapy
	<p>Specialist Training Course for Palliative Care</p>	<p>Naohisa Uchimura, M.D., Ph.D. Department of Neuropsychiatry Kurume University School of Medicine,</p>	<ul style="list-style-type: none"> • Clinical sleep science • Clinical psychopharmacology
		<p>Tetsushi Fukushige, M.D., Ph.D. Palliative Care Center, Kurume University Hospital</p>	<ul style="list-style-type: none"> • Clinical research of the palliative medicine
	<p>Special Training Course for Rare Cancer Therapy</p>	<p>Yoshito Akagi, M.D., Ph.D. Division of Gastroenterological Surgery, Department of Surgery, Kurume University School</p>	<ul style="list-style-type: none"> • Epidemiology of rare cancers • Diagnosis of rare cancers • Therapy of rare cancers
<p>Individually Optimized Therapeutics System</p> <p>Advanced Medicine for Cardiovascular Diseases</p>	<p>Yoshihiro Fukumoto, M.D., Ph.D. Division of Cardiovascular Medicine, Department of Internal Medicine, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Pathogenesis and therapy of atherosclerosis, heart failure, arrhythmia, aortic diseases, and pulmonary hypertension • Angiogenesis • Epidemiology in cardiovascular diseases 	
	<p>Hiroyuki Tanaka, M.D., Ph.D. Department of Surgery, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Cardiovascular surgery (Pathophysiology and treatment for congenital, acquired heart disease, aortic and peripheral vascular disease.) • Pathophysiology of intimal hyperplasia and restenosis after vascular injury 	
	<p>Sho-ichi Yamagishi, M.D., Ph.D. Department of Pathophysiology and Therapeutics of Diabetic Vascular Complications, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Molecular mechanisms of aging • Development of therapeutics of diabetic complications • Development of inhibitors of AGEs 	
	<p>Takafumi Ueno, M.D., Ph.D. Cardiovascular Center, Kurume University Hospital</p>	<ul style="list-style-type: none"> • Pathophysiology and treatment of coronary artery disease • Invasive therapy of coronary and peripheral arteries • Physiology of coronary circulation • Regenerative medicine 	

<p>Individually Optimized Therapeutics System</p> <p>Advanced Medicine for Cardiovascular Diseases</p>	<p>Hidetoshi Akashi, M.D., Ph.D. Department of Surgery, Kurume University School of Medicine,</p>	<ul style="list-style-type: none"> • Vascular surgery (aortic surgery and peripheral vascular surgery) • Cerebral protection • Vasculogenesis and angiogenesis
	<p>Hisashi Adachi, M.D., Ph.D. Department of Community Medicine, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Follow-up study for the seven countries study • Performing epidemiological survey in Tanushimaru Town • Continuing epidemiological study in Tanushimaru Town • Performing epidemiological survey in Uku Town • Continuing epidemiological study in Uku Town
	<p>Hiroki Aoki, M.D., Ph.D. MBA, Cardiovascular Research Institute, Kurume University</p>	<ul style="list-style-type: none"> • Signal transduction in cardiovascular diseases • Molecular pathogenesis of aortic diseases
	<p>Hisashi Kai, M.D., Ph.D. Department of Cardiology, Kurume University Medical Center</p>	<ul style="list-style-type: none"> • Cardiac biology • Vascular biology • Clinical cardiology • Clinical and experimental high blood pressure medicine • Medical safety and management
	<p>Kenji Suda, M.D., Ph.D., FJCC Department of Pediatrics and Child Health, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Pathophysiology of congenital heart disease and Kawasaki Disease • State of the art medical and surgical treatments of congenital heart disease and Kawasaki Disease
	<p>Hidehiro Matsuoka, M.D., Ph.D. Center for Health Check-ups, Kurume University Hospital</p>	<ul style="list-style-type: none"> • Cardiovascular regulation • Hypertension
<p>Individually Optimized Therapeutics System</p> <p>Higher Brain Disorders</p>	<p>Yushiro Yamashita, M.D., Ph.D. Department of Pediatrics and Child Health, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Pediatric Neurology/Neurodevelopmental Disorders: ADHD, ASD, Rett syndrome • Behavioral treatment for children with ADHD: Summer Treatment Program
	<p>Naohisa Uchimura, M.D., Ph.D. Department of Neuropsychiatry, Kurume University School of Medicine,</p>	<ul style="list-style-type: none"> • Clinical sleep science • Clinical psychopharmacology
	<p>Motohiro Morioka, M.D., Ph.D. Department of Neurosurgery Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Molecular mechanism of ischemic injury for central nervous system • Neurogenesis • Vasculogenesis of CNS
	<p>Masaru Hirohata, M.D., Ph.D. Department of Neurosurgery, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Basic study and clinical investigation of cerebral vascular disease
	<p>Takayuki Taniwaki, M.D., Ph.D. Department of Neurology, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Functional magnetic resonance imaging in parkinsonism • Functional neuroimaging of dyspnea
<p>Individually Optimized Therapeutics System</p> <p>Skin Cell Biology</p>	<p>Takekuni Nakama, M.D., Ph.D. Department of Dermatology, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Eosinophils associated skin disease

Individually Optimized Therapeutics System	Tomoaki Hoshino, M.D., Ph.D., Division of Respiriology, Neurology, and Rheumatology, Department of Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Respiratory systems • Lung cancers
Advanced Therapeutic Study of Other Disorders	Hiroaki Ida, M.D., Ph.D. Division of Respiriology, Neurology, and Rheumatology, Department of Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Analysis of pathogenesis of autoinflammatory syndrome using iPS cells
	Takayuki Taniwaki, M.D., Ph.D. Division of Respiriology, Neurology, and Rheumatology, Department of Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Functional magnetic resonance imaging in parkinsonism • Functional neuroimaging of dyspnea
	Tomotaka Kawayama, M.D., Ph.D., Division of Respiriology, Neurology and Rheumatology, Department of Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Diagnosis and evaluation of airway inflammation • Diagnosis and evaluation of airway hyperresponsiveness • Identification of mechanisms of asthma and COPD and development of new medications for patients with asthma and COPD
	Koji Nagafuji, M.D., Ph.D. Division of Hematology & Oncology, Department of Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Analysis of growth mechanism of hematopoietic tumor cells • Investigation of blood coagulation and platelet abnormality related to thrombosis development
	Takuji Torimura, M.D., Ph.D. Division of Gastroenterology, Department of Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Pathophysiology and treatment of viral hepatitis. • Mechanism of hepatocarcinogenesis, diagnostic imaging and treatment of hepatocellular carcinoma. • Hepatic regeneration
	Keiichi Mitsuyama, M.D., Ph.D. Division of Gastroenterology, Department of Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Elucidation of pathophysiology of inflammatory bowel disease • Development of biomarker and new treatment of inflammatory bowel disease • Molecular imaging to detect inflammatory bowel disease and its malignant transformation
	Hironori Koga, M.D., Ph.D. Division of Gastroenterology, Department of Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Cancer stem cells of liver and pancreatic cancers • Wnt signaling pathway • Pathogenesis and treatment of hepatitis virus-associated liver diseases • Liver regeneration • Pathology of cancers of digestive organs
	Ryoko Kuromatsu, M.D., Ph.D. Division of Gastroenterology, Department of Medicine, Kurume University School of Medicine,	<ul style="list-style-type: none"> • Basic and clinical ultrasonography of abdomen • Early diagnosis and treatment of liver cancer
	Osamu Tsuruta, M.D., Ph.D. Digestive Disease Center and GI Endoscopy, Kurume University School of Medicine,	<ul style="list-style-type: none"> • Endoscopic diagnosis and treatment of early colorectal carcinoma • Research on development and progression of colorectal carcinoma
	Masatoshi Nomura, M.D., Ph.D. Division of Endocrinology and Metabolism, Department of Internal Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Development of innovative treatment for type 2 diabetes based on its pathophysiology • Elucidation of molecular mechanism of sarcopenia for establishment of the preventive medicine

<p>Individually Optimized Therapeutics System</p> <p>Advanced Therapeutic Study of Other Disorders</p>	<p>Yuji Hiromatsu, M.D., Ph.D. Department of Endocrinology and Metabolism, Kurume University Medical Center</p>	<ul style="list-style-type: none"> • Study on the pathogenesis of Graves' disease, Hashimoto's thyroiditis and thyroid-associated ophthalmopathy • Guidelines for the diagnosis and management of thyroid-associated ophthalmopathy
	<p>Kei Fukami, M.D., Ph.D. Division of Nephrology, Department of Medicine, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Clarification of the mechanism and novel therapeutic strategy for the development of AKI, CKD, and the complications of dialysis • The most advanced research for renal regeneration
	<p>Yasutoshi Koga, M.D., Ph.D. Department of Pediatrics and Child Health, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Pediatrics • Inherited metabolic disease • Muscle disease • Molecular biology • Clinical genetics • Mitochondrial disease • Development of therapeutic drugs • Clinical trial • Muscular dystrophy • Congenital myopathy
	<p>Toshi Abe, M.D., Ph.D. Department of Radiology, Kurume University School of Medicine,</p>	<ul style="list-style-type: none"> • Diagnostic radiology (e.g., neuroradiology) • Interventional radiology (e.g., neuro, head and neck, spine) • 3D imaging analysis (e.g., 3D printing and 3D model)
	<p>Kiminori Fujimoto, M.D., Ph.D. Department of Radiology, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Diagnostic Radiology (imaging interpretation of chest radiography, CT, MRI, and FDG-PET) • Lung and mediastinal diseases (e.g., neoplasms, diffuse lung diseases) • Abdominal diseases (e.g., hepatic neoplasms, diffuse liver diseases)
	<p>Etsuyo Ogo, M.D., Ph.D. Department of Radiology & Radiation Therapy Center, Kurume University School of Medicine,</p>	<ul style="list-style-type: none"> • Basic learning for radiation therapy • Up-to-date knowledge of radiation therapy technique • Clinical application of radiation therapy
	<p>Masafumi Uchida, MD, Ph.D. Department of Radiology, Kurume University School of Medicine, Kurume Medical Center</p>	<ul style="list-style-type: none"> • Basic theory and clinical application images of US, CT, and MRI
	<p>Yoshito Akagi, M.D., Ph.D. Division of Gastroenterological surgery, Department of Surgery, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Surgical treatment for digestive disease
	<p>Koji Okuda, M.D., Ph.D. Department of Surgery, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Surgical oncology • Surgical management for hepato-biliary pancreatic disease. • Innovation of biliary and pancreatic treatment • Gastroenterology for advanced aged patients • Multidisciplinary treatment
	<p>Yutaka Ogata, M.D., Ph.D. Department of Surgery, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Surgical gastroenterology clinical oncology • Endoscopic surgery • Oncology and molecular biology
<p>Shinzo Takamori, M.D., Ph.D. Postgraduate Clinical Education Center, Kurume University School of medicine</p>	<ul style="list-style-type: none"> • Objectives and evaluation of postgraduate training • General thoracic surgery • Management of perioperative period for chest surgery 	

<p>Individually Optimized Therapeutics System</p> <p>Advanced Therapeutic Study of Other Disorders</p>	<p>Minoru Yagi, M.D., Ph.D. Department of Pediatric Surgery, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Pediatric surgery (digestive tracts, hepato-biliary-pancreatic organs, respiratory organs, urogenital organs) • Neonatal surgery • Pediatric endoscopic surgery • Pediatric surgical oncology • Pediatric surgical metabolism and nutrition • Pediatric neurogastroenterology (Gastrointestinal motility) • Kampo medicine (Japanese traditional medicine)
	<p>Naoto Shiba, M.D., Ph.D. Department of Orthopedics & Rehabilitation, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Osteonecrosis • Bone and soft part tumor • Knee ligament injury • Natural history of the herniated disk, aging of the intervertebral disk • Rehabilitation and biomechanics of the musculoskeletal system • Functional electric stimulation • Prevention of disuse atrophy of musculoskeletal system • Development of device to prevent musculoskeletal atrophy in space
	<p>Masahiro Shirahama, M.D., Ph.D. Department of Orthopedics & Traumatology, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Fracture • Bone infection • Bone reconstruction, limb lengthening, and limb function reconstruction • Pediatric orthopedics • Fracture treatment in osteoporosis
	<p>Okawa Takahiro, M.D., Ph.D. Orthopedic and Joint Surgery Center, Kurume University Medical Center</p>	<ul style="list-style-type: none"> • Joint preserving methods and joint arthroplastic procedures for arthritis
	<p>Ryoji Yamakawa, M.D., Ph.D. Department of Ophthalmology, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Vitreoretinal surgery, glaucoma surgery • Cell biology of retinal pigment epithelium • Research for glaucoma
	<p>Yu Monden, M.D., Ph.D. Department of Ophthalmology, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Corneal transplantation • Amniotic membrane transplantation • Anterior segment ocular diseases
	<p>Kimio Ushijima, M.D., Ph.D. Department of Obstetrics and Gynecology, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Minimally invasive treatment for gynecologic cancers
	<p>Tsukasa Igawa, M.D., Ph.D. Department of Urology, Kurume University School of Medicine</p>	<ul style="list-style-type: none"> • Urologic oncology (e.g. prostate cancer, kidney cancer, urothelial cancer) • Urologic endocrinology (e.g. adrenal disease) • Basic and clinical research of urolithiasis
	<p>Hirohito Umeno, M.D., Ph.D. Department of Otolaryngology- Head and Neck Surgery, Kurume University School of Medicine,</p>	<ul style="list-style-type: none"> • Basic and clinical medicine of phonosurgery, dysphagia and laryngology • Basic and clinical medicine of head and neck tumor

Individually Optimized Therapeutics System	Kazuo Ushijima, M.D., Ph.D. Department of Anesthesiology, Kurume University School of Medicine	<ul style="list-style-type: none"> • Application of protein transduction for cerebral resuscitation
	Tetsushi Fukushige, MD., Ph.D. Palliative Care Center, Kurume University Hospital	<ul style="list-style-type: none"> • Clinical research of the palliative medicine
Advanced Therapeutic Study of Other Disorders	Kensuke Kiyokawa, M.D., Ph.D. Department of Plastic and Reconstructive Surgery and Maxillofacial Surgery, Kurume University School of Medicine,	<ul style="list-style-type: none"> • Cranio-maxillo-facial surgery • Head and neck, skull base reconstruction • Tissue transplantation • Regenerative medicine
	Hideaki Rikimaru, M.D., Ph.D. Department of Plastic and Reconstructive Surgery and Maxillofacial Surgery	<ul style="list-style-type: none"> • Aesthetic surgery • Cranio-maxillofacial surgery • Regenerative medicine • Antiaging medicine
	Osamu Takasu, M.D., Ph. D. Department of Emergency and Critical Care Medicine, Kurume University School of Medicine	<ul style="list-style-type: none"> • Aggressive insult and biological response • Mechanisms of the development of organ dysfunction in critically ill patients • Pathophysiology of sepsis • Organ dysfunction induced by severe sepsis
	Norio Yamashita, M.D., Ph.D. Department of Emergency Medicine, Kurume University School of Medicine,	<ul style="list-style-type: none"> • Disaster medicine • Traumatology • Prehospital care
	Jingo Kusukawa, D.D.S., Ph.D. Dental and Oral Medical Center, Kurume University School of Medicine	<ul style="list-style-type: none"> • Oral implantology • Diagnosis and treatment of jaw deformities • Oral tissue regeneration • Clinico-pathological study on oral tumors