

外 国 人 留 学 生

大学院医学系研究科（博士課程）

学 生 募 集 要 項

平成29年10月入学

平成30年 4月入学

旭 川 医 科 大 学

PROSPECTUS FOR FOREIGN STUDENTS

ASAHIKAWA MEDICAL UNIVERSITY

GRADUATE SCHOOL OF MEDICAL RESEARCH

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ADDENDA: Application Form

Admission Card

Reference from Academic Adviser

Request Form for Application Document Examination

I PROSPECTUS FOR FOREIGN STUDENTS - GRADUATE SCHOOL, 2017-2018

In addition to regular admissions to the graduate school, the University has a special selection procedure for foreign students.

1 Quota

Enrollment: OCTOBER, 2017	Enrollment: APRIL, 2018
A few	A few

Examinations and Time of Enrollment

The graduate school accepts graduate students in October and April. As indicated by the following table, those planning to enroll in October have to take the August Exam. Those planning to enroll in April have to take the February Exam.

Examination	Enrollment
August Exam	October, 2017
February Exam	April, 2018

2 Eligibility

Foreign students must satisfy one of the following conditions:

- 1) Those who have completed or are expected to complete a university degree in medicine, dentistry, pharmaceutical sciences (where the minimum duration of study is six years; the same shall apply hereafter) or veterinary sciences.
- 2) Those who have completed or are expected to complete 18 years of overseas curricular education (ending with a degree in medicine, dentistry, pharmaceutical sciences, or veterinary sciences).
- 3) Those who have completed or are expected to complete 18 years of overseas curricular education (ending with a degree in medicine, dentistry, pharmaceutical sciences, or veterinary sciences) by way of a distance education program while residing in Japan.
- 4) Those who have completed or are expected to complete a foreign country's university degree at an educational institution in Japan (limited to those who have completed (or are expected to complete) 18 years of the said foreign country's curricular education, ending with a degree in medicine, dentistry, pharmaceutical sciences, or veterinary sciences) which is designated in the said foreign country's education system and specifically designated in Japan by the Minister of Education, Culture, Sports, Science and Technology.
- 5) Those who have received or are expected to receive a bachelor's degree or its equivalent by completing courses in medicine, dentistry, pharmaceutical sciences, or veterinary sciences where the minimum duration of study is five years offered by overseas universities and similar institutions (limited to educational facilities evaluated by the government of the local country or relevant organizations on the basis of their research and educational activities, or other equivalent facilities designated by the Minister of Education, Culture, Sports, Science and Technology). Completing the degree by way of a distance education program while residing in Japan and at educational institutions designated in the said foreign country's education system as in (4) above is also acceptable.
- 6) Those designated by the Minister of Education, Culture, Sports, Science, and Technology.

- 7) Those who are acknowledged by our graduate school to have acquired predetermined credits at a superior grade, having been registered with universities for four years or more with courses in medicine, dentistry, or veterinary sciences, or having completed 16 years of schooling in a country outside Japan (ending with a degree in medicine, dentistry, or veterinary sciences).
- 8) Those with the age of 24 or above in March, 2018 (as of September, 2017) whom our graduate university, through a review of individual qualifications for admission, acknowledges to have academic ability equivalent to or greater than those who have graduated with a degree in medicine, dentistry, pharmaceutical sciences, or veterinary sciences.

In addition to the above conditions, foreign students must have been engaged in academic research at the University for a period of time before their application in order to demonstrate adequate ability. This period of time is to be determined by their academic adviser. If an applicant has already attained the equivalent academic achievement from another university or institute in Japan, this condition can be waived.

NOTE: Those who qualify under (5) above are requested to contact Admission Affairs ((2) in Section 3) for information about their application documents as soon as possible prior to the deadline of the application period.

Those who apply under condition (6), (7) or (8) may require prequalification (see “Pre-assessment for Applicants’ Qualifications” in Section 5 on page 6). Please contact Admission Affairs ((2) in Section 3) by the following dates.

August Exam	Thursday, June 29, 2017
February Exam	Thursday, November 16, 2017

3 When and Where to Apply

- 1) Application Period:

August Exam	From July 31, 2017 to August 9, 2017
February Exam	From January 4, 2018 to January 11, 2018

Monday to Friday, 9 a.m. - 5 p.m. (Work Days Only)

- Late applications will not be accepted.

- 2) Application Address: The Admission Affairs Section, Asahikawa Medical University,
2-1-1-1, Midorigaoka Higashi, Asahikawa, Hokkaido 078-8510
Phone 0166-68-2214 (Direct Number)

4 Application Procedure

Applicants are requested to submit the following documents:

- 1) Application Form (Use the supplied form.)
- 2) Admission Card (Use the supplied form.)
- 3) Letter of recommendation from an academic adviser in the University (Use the supplied form.)
- 4) Certificate of Graduation or of Anticipated Graduation (Foreign students presently enrolled in the University can submit the Certificate of Graduation used when they originally registered.)
- 5) Academic Records (Foreign students presently enrolled in the University can present the academic records submitted for their original registration.)
- 6) A photocopy of both sides of the applicant’s resident card.
(If the resident card has not been issued yet, a photocopy of the photo page of the applicant's current passport showing his/her full name, nationality, and date of birth.)
- 7) Entrance Examination Fee of 30,000 yen (Japanese government (Monbukagakusho) scholarship students are exempt from this fee). Once paid, the examination fee will not be refunded for any reason.

- 8) Two passport sized photographs taken without hat and within three months prior to application.
- 9) Those who qualify under (5) in Section 2 are requested to submit the official certificate of graduation or of anticipated graduation and the document showing the universities they graduated from have been evaluated on the basis of their research and educational activities by the government of the local country and relevant organizations.

5 Pre-assessment for Applicants' Qualifications

Those who require Pre-assessment for Qualifications have to contact the Admission Affairs ((2) in Section 3) before submitting the application documents for Pre-assessment for Qualifications.

(1) Application Documents for Pre-assessment:

- a. Pre-assessment for Applicants' Qualifications Form and Record of Research Achievements Application Form
- b. Certificate of Graduation or of Anticipated Graduation (Foreign students presently enrolled in the University can submit the Certificate of Graduation used when they originally registered.)
- c. Academic Records (Foreign students presently enrolled in the University can present academic records submitted when they originally registered.)
- d. Study Period Certificate (This is applicable to those who have research experience. The certificate should be issued by the principal or supervisor of the university, institution, or company concerning the applicant's research subjects and research period.)
- e. A Letter of Recommendation (If applicants have research experience, the letter should be written by those familiar with their research.)
- f. Research Project and Research Plan (Less than 2000 Japanese characters or less than 700 English words)
(This is only applicable to those who apply under condition (4) in Section 2 "Eligibility.")

(2) Application Period:

August Exam	From July 3, 2017 to July 7, 2017
February Exam	From November 21, 2017 to November 28, 2017

Monday to Friday, 9 a.m. - 5 p.m. (Work Days Only)

- Late applications will not be accepted.

(3) Notification of the Pre-assessment Results

Applicants will be notified of the pre-assessment application results. Those who qualified for applying to the graduate school must submit all the application documents listed in Section 4 "Application Procedure" except for those already submitted in the pre-assessment process.

6 Selection Method

The University conducts a comprehensive selection procedure through language tests and an interview.

Applicants who reside in a foreign country and are recognized as having achieved a high level of academic performance and expertise can be exempt from the academic achievement tests and interview. (Applicants will be notified of the results before the examination date.)

Details

Date	Subjects	Time	Place
August Exam Thursday, August 24, 2017	Appointed Time	9:20	Asahikawa Medical University
	Directions	9:20-9:30	
February Exam Thursday, February 15, 2018	English	9:30-10:30	
	Japanese	10:40-11:40	
	Interview	13:00-	

NOTE: Applicants are allowed to use dictionaries in the examination. However, electronic dictionaries are not allowed. Nor are specialized dictionaries such as medical and terminological dictionaries.

7 Exemption from Academic Achievement Tests and an Interview

Foreign residents eligible for applying to the Graduate School may be exempt from written academic tests and an interview after an assessment of their application documents. Those who want to get the exemption must contact the Admission Affairs ((2) in Section 3 “When and Where to apply”) in advance and submit the documents listed in Section 5 “Pre-Assessment of Applicants’ Qualifications” (1) during the period designated in (2).

(1) Required Documents

Those who want to get the exemption from written academic achievement tests must submit the application documents listed in Section 4 “Application Procedure” and the following documents:

- a. Request form of Application Document Examination (Use the supplied form)
- b. Copy of representative works.
- c. Short essay (It is assumed that the academic adviser appointed the theme) written in English (less than 1000 words)

(2) Application Period:

August Exam	From July 3, 2017 to July 7, 2017
February Exam	From November 21, 2017 to November 28, 2017

Monday to Friday, 9 a.m. - 5 p.m. (Work Days Only)

• Late applications will not be accepted.

(3) Notification of the Pre-assessment Results

Applicants will be notified of the pre-assessment application results.

8 Announcement of Successful Applicants

The University will notify successful applicants by the following dates.

August Exam	Thursday, September 14, 2017
February Exam	Thursday, March 8, 2018

9 Enrollment Dates and Deadlines

August Exam	From September 15, 2017 to September 22, 2017
February Exam	From March 12, 2018 to March 14, 2018

10 Admission Fee and Tuition Fees

Admission Fee; 282,000 yen (fixed amount)

Tuition Fees; 267,900 yen per semester (538,800 yen per year) (fixed amount)

NOTE: (Japanese government (Monbukagakusho) scholarship students are exempt from all fees).

The admission and tuition fees are currently fixed. If the fees change in the future, additional fees will be applied from the time of the amendment. Students who are exempt from the payment of admission or tuition fees will be notified about the procedure. Once paid, the admission fee will not be refunded for any reason.

II GRADUATE SCHOOL INFORMATION

1 Organization and Structure

The Ph.D. in Medicine at the Graduate School of Asahikawa Medical University is one major offering 2 separate curricula: a research course and a clinical research course. While graduate students belong to one course to acquire the necessary specialized knowledge, each course allows for interdisciplinary areas of research.

Graduate Course	Major	Course	Division
Graduate School of Medicine (Ph.D.)	Medicine	Research Course	Oncology / Hematology
			Social / Environmental Medicine
			Immunology / Infectious Diseases
			Esthematology / Musculoskeletal Medicine
			Endocrinology / Metabolism
			Neurology / Psychiatry
			Cardiology / Pneumology
			Gastroenterology
			Molecular Physiology / Pharmacology
			Reproductive / Developmental / Regenerative Medicine
		Clinical Research Course	Clinical Oncology / Hematology
			Environmental / Social Medicine
			Clinical Immunology / Infectious Diseases
			Esthematology / Musculoskeletal Medicine
			Clinical Endocrinology / Metabolic Diseases
			Clinical Neurology / Psychiatry
			Clinical Cardiology / Pneumology
			Clinical Gastroenterology
			Clinical Pharmacology / Molecular Physiology
			Clinical Reproductive / Developmental / Regenerative Medicine

2 Curriculum

- (1) The basic concept behind the curriculum is to set up a both a research and a clinical research course within the one specialty of medicine. After gaining fundamental knowledge of medical research ethics and methodology, the needs of society can be met with diverse medical research.
- (2) The curriculum is organized so that there is interaction between both courses, making it possible to change course half-way through the degree.
- (3) The research course aims to provide researchers with the fundamental life science knowledge required for the advancement of basic research, as well as a foundation in basic medical practice. Each division also offers special seminars, practice, experiments and laboratory training, as well as special training in writing research papers in order to implement leading-edge medical research.
- (4) The clinical research course aims to provide researchers with knowledge of clinical immunology, biostatistics, clinical research ethics, and methodology etc. necessary for the promotion of clinical research. As well as providing a foundation in basic medical practice, each clinical division also offers special seminars, training in writing research papers, practice, experiments and laboratory training in order to implement clinical research in a variety of fields. This course takes into consideration training for the planning and implementation of clinical research and clinical trials as well as training in the acquisition of diagnostic and therapeutic techniques with a view to producing accredited medical specialists in their respective field.

3 Professors in Charge of Each Course

(1) Research Course

The research course is a course to train researchers aspiring to carry out leading-edge research. This course is both multidisciplinary and interdisciplinary allowing graduate students to obtain the specialized knowledge they need.

Division	Name of Professor in Charge	Major fields of study
Oncology / Hematology	Takanobu TANIGUCHI	○Research on oncogenic mechanisms including protein phosphorylation reaction in cancer cells
	Yuji NISHIKAWA	○Pathophysiology of chronic liver disease and hepatocellular carcinoma ○Molecular and cellular mechanisms of hepatocyte differentiation and proliferation
	Hiroya KOBAYASHI	○Histopathology and molecular pathology of human tumors
	Nobutaka WAKAMIYA	○Basic research on development of vaccines against tumors
	Toshikatsu OKUMURA	○Study of collectins in tumor biology
	Hiroshi AZUMA	○PPAR and Cancer ○Gene analysis of chronic myeloproliferative disease ○Minimal residual disease assay of childhood hematological malignancy
	Hiroyuki FURUKAWA	○Studies of gastroenterological oncology
	Hiroshi ITO	○Effect of chemotherapy on bone and soft tissue tumors
	Hidehiro KAKIZAKI	○Mechanism of multi-drug resistance of cancer cells ○Basic study on hormonal treatment for prostate cancer
	Yasuaki HARABUCHI	○Cytokine network in renal cell carcinoma ○Molecular oncological and EB virological analyses of head and neck cancer and malignant lymphoma
Kazuo SENGOKU	○Molecular biology of the mechanisms of metastasis in gynecologic cancer	
Koji TAKAHASHI	○To have the ability to clarify the pathophysiological change of organs or tissues induced by radiation or radioactive material	
Satoshi FUJII	○Pathobiology of Thrombosis and New Diagnostic Procedures	

Division	Name of Professor in Charge	Major fields of study
Social / Environmental Medicine	Nobutaka WAKAMIYA Takahiko YOSHIDA	<ul style="list-style-type: none"> ○Food chemistry and health science ○Researching on the correlations between environmental factors and human health from the aspect of preventive medicine, then contributing to health promotion
	Yasuaki SAIJO	<ul style="list-style-type: none"> ○Epidemiological studies of cardiovascular diseases prevention ○Epidemiological studies of indoor air, sick house syndrome and sick building syndrome ○Clinical epidemiology (cross-sectional study, case-control study, patient cohort, diagnosis test) ○Health effects of overwork, occupational stress and social inequity ○Improvement of regional medicine ○Social and environmental factors and children's health in a birth cohort
	Yasuhito SAKO	<ul style="list-style-type: none"> ○Epidemiological studies on cestode zoonoses, mainly echinococcosis and cysticercosis, in Asia
	Keiko SHIMIZU	<ul style="list-style-type: none"> ○Forensic toxicology (development and/or protection mechanism of chemical substance toxicity) ○Forensic genetics (DNA polymorphism for individual identification and paternity tests) ○Forensic pathology (identification of molecular mechanism by experimental pathology)
	Naoyuki HASEBE	<ul style="list-style-type: none"> ○Influence of poor life-style from early childhood on health impairment
	Shigeru CHIBA	<ul style="list-style-type: none"> ○Preventive medicine for atherosclerosis ○Social medicine and environmental medicine research on neuropsychiatric disorders
	Hiroyuki HIROKAWA	<ul style="list-style-type: none"> ○Optimum allocation of medical resources ○Development of Information Infrastructure for Medical Research ○Protection of Personal Information and Information Security in Medicine
	Kaoru TAKAKUSAKI	<ul style="list-style-type: none"> ○Research on reconstructing adaptive function using neuroengineering approaches ○Service neuroscience based on emotional evaluation ○Personality examinations in individuals with diabetes mellitus
	Masaharu TAKAHASHI	
Immunology / Infectious Diseases	Hiroya KOBAYASHI	<ul style="list-style-type: none"> ○Analysis of mechanisms of allergic rhinitis
	Nobutaka WAKAMIYA	<ul style="list-style-type: none"> ○Analysis of basic mechanisms of autoimmunity
	Yasuhito SAKO	<ul style="list-style-type: none"> ○Collectin study in innate immunity ○Food chemistry in innate immunity
	Yuichi MAKINO	<ul style="list-style-type: none"> ○Immunological and molecular biological studies on the host-parasite interactions in echinococcosis and cysticercosis
	Toshikatsu OKUMURA Hiroshi Azuma	<ul style="list-style-type: none"> ○Molecular mechanisms of the pathogenesis in connective tissue diseases ○Mechanism of post-infectious IBS
	Akemi YAMAMOTO Yasuaki HARABUCHI	<ul style="list-style-type: none"> ○Establishment of diagnosis and treatment for congenital cytomegalovirus infection ○Innate immunity of the skin ○Analysis for mucosal immuno-barrier system of upper respiratory tract (middle ear, nasal and paranasal sinus, tonsil)
Esthematology / Musculoskeletal Medicine	Makoto KASHIWAYANAGI	<ul style="list-style-type: none"> ○Odor reception mechanism and chemical communication, olfactory systems as a model for regenerative medicine
	Hiroshi ITO	<ul style="list-style-type: none"> ○Condition physiology of nervous system of spinal cord
	Motofumi KAWAI	<ul style="list-style-type: none"> ○Biomechanics of joint
	Yasuaki HARABUCHI	<ul style="list-style-type: none"> ○Development of the instrument for structural and functional evaluation in chorioretinal diseases
	Hiroyuki HIROKAWA	<ul style="list-style-type: none"> ○Physiological analysis of swallowing and respiratory function of upper respiratory tract (nasal sinus and larynx) ○Pathologic analysis of retinal vein occlusion
	Takashi SAKAMOTO	<ul style="list-style-type: none"> ○Analysis of electroretinogram in vitreoretinal disorders
	Kaoru TAKAKUSAKI	<ul style="list-style-type: none"> ○Analysis of neural mechanism of voluntary movement disorder ○Analysis of neural mechanism of speech and swallowing disorders ○Research on reconstruction of motor function using sensory signals ○Research on neuronal mechanisms of postural control

Division	Name of Professor in Charge	Major fields of study
Endocrinology / Metabolism	Tsuyoshi WATANABE	○Experimental endocrinology on the regulation of the hypothalamic-pituitary-gonadal axis
	Akira TAKAI	○Molecular biological research on the structure and function of protein phosphatases
	Hiroshi SUZUKI	○Cellular calcium homeostasis and diseases caused by its defect
	Yuichi MAKINO	○The pathophysiology of diabetes mellitus and its complications
	Hiroshi AZUMA	○Molecular mechanisms of adrenal and gonadal disorders and sexual differentiation and development
	Akemi YAMAMOTO	○Regulation of epidermal keratinization
	Motofumi KAWAI	○Desquamation of epidermal keratinocyte
Neurology / Psychiatry	Kazuo SENGOKU	○Regulation of epidermal cell proliferation
	Hiroshi FUNAKOSHI	○Development of the instrument for measuring the retinal and choroidal circulation
	Shigetaka YOSHIDA	○Molecular biology of the signal transduction mechanisms in pituitary organogenesis
	Naoyuki HASEBE	○Molecular biology of oogenesis and early follicular development
	Shigeru CHIBA	○Metabolic Analyses using the Knockout Mouse
	Hiroshi AZUMA	○Neuroanatomy and neuropathology with animal models
	Hidehiro KAKIZAKI	○Functional analysis of extracellular proteases
	Kyousuke KAMADA	○Mechanism of progression in atherosclerosis
	Yoshikazu TASAKI	○Sleep disorders, epilepsy, electroencephalography, neuropsychopharmacology
	Takashi SAKAMOTO	○Genetic engineering of Cdk5 gene in mice to elucidate the molecular mechanism of brain development
Cardiology / Pneumology	Kaoru TAKAKUSAKI	○Neural mechanism of lower urinary tract function
	Hiroshi FUNAKOSHI	○Basic study on bladder sensation
	Masaharu TAKAHASHI	○Pathophysiology of bladder outlet obstruction
	Fumitaka USHIKUBI	○Functional neuroimaging for neurosurgery
	Naoyuki HASEBE	○Visualization of functional dynamics of semantic responses by ECoG and EEG
	Hiroshi AZUMA	○Surgical simulation with virtual reality by infinite element method
Cardiology / Pneumology	Satoshi FUJITA	○Neural circuit acting on extrapyramidal system
	Yoshinobu OHSAKI	○Analysis of neural mechanism of voluntary movement
	Yuichiro KAWAMURA	○Analysis of neural mechanism of laryngeal movement
		○Fundamental researches on motor control in general
		○Neurobiological research on sleep function
		○Research on integrative mechanisms of somatic and autonomic function
	○Application of Regenerative Medicine for Neural Diseases	
	○Analyses of the Molecular Linkage between Tryptophan Metabolism and Emotional Modulation	
	○Functional brain imaging studies in attention-deficit hyperactivity disorder	
	○Roles of prostanoids in cardiovascular diseases	
	○Heat shock protein: protective mechanism of cardiovascular system	
	○Biomolecular role of oxidative stress in arteriosclerotic cardiovascular disease	
	○Molecular mechanism for cardiovascular regeneration	
	○Diagnosis and therapy of respiratory disease	
	○Pharmacokinetics of pulmonary vasodilators in pediatric patients with pulmonary hypertension	
	○Development of small cardio-pulmonary bypass circuit for infants	
	○Respiratory distress and cytokines during DIC	
	○Lung cancer biology	
	○Control of infectious diseases	
	○Investigation of the electrical propagation of myocardial excitation on arrhythmia	
	○Investigation of the arrhythmogenicity with autonomic dysfunction	
	○Cellular electrophysiological approach to ion channelopathy	

Division	Name of Professor in Charge	Major fields of study
Gastroenterology	Fumitaka USHIKUBI Yuichi MAKINO Toshikatsu OKUMURA Hiroyuki FURUKAWA	<ul style="list-style-type: none"> ○Roles of prostanoids in gastrointestinal diseases ○The mechanisms of pathogenesis and disease progress in pancreatic cancer and nonalcoholic steatohepatitis ○Brain-gut interaction ○Mechanism of fatty liver disease ○Inhibition of GI cancers by anti-diabetic drugs ○Studies of inflammatory disease in GI tract and its pathophysiology ○Studies of liver regeneration ○Studies of transplantation immunology ○Studies of organ preservation
Molecular Physiology / Pharmacology	Tsuyoshi WATANABE Akira TAKAI Makoto KASHIWAYANAGI Takanobu TANIGUCHI Hiroshi SUZUKI Fumitaka USHIKUBI Naoyuki HASEBE Akemi YAMAMOTO Motofumi KAWAI Takayuki KUNISAWA Yoshikazu TASAKI Hiroshi FUNAKOSHI	<ul style="list-style-type: none"> ○Molecular and cellular basis for the secretory granule biogenesis in neuroendocrine cells ○Electrophysiological and molecular biological research on ion channels involved in signal transduction ○Manipulation of brain function by intranasally administered drugs ○Research for regulation of protein kinase in diseases ○Molecular mechanism of P-type ATPases and genetic diseases caused by their defect ○Roles of prostanoids in the body ○Role of stem cells/progenitor cells in cardiovascular regeneration ○Cardioprotective mechanism of repair of oxidative DNA basic damage ○Molecular mechanism of healing, "IYASHI" of the cardiovascular system ○Molecular mechanism of refractory arrhythmias ○Basic study of molecular targeting therapy of lung cancer ○Gene regulation of keratinization process ○Calcium-dependent regulation of epidermis ○Development of novel treatment of ocular disease by improvement of ocular circulation ○Pharmacokinetics of anesthetics ○Pharmacokinetic study ○Mechanism of neuroprotection by novel antiparkinsonian drugs ○Mechanism of pharmacokinetic variability of drugs ○Regenerative Factors: Their Therapeutic Applications on Various Pathological Conditions and Analysis on Working Mechanisms
Reproductive / Developmental / Regenerative Medicine	Nobutaka WAKAMIYA Hiroshi AZUMA Kazuo SENGOKU Masanori TAKEKAWA Yoshio MAKITA Hiroshi FUNAKOSHI Hiroyuki TATENO	<ul style="list-style-type: none"> ○Collectin study in body construction ○Study on onset mechanisms of intrauterine growth retardation by molecular biological technique ○Investigation of causes of neonatal diseases by molecular biological technique ○Isolation and functional analysis of the gene in spermatogenesis ○The study of bone tissue regeneration by mesenchymal stem cell ○Genetic analysis of multiple congenital anomalies and mental retardation syndromes using next-generation sequencer ○Regenerative Medicine and its Therapeutic Applications ○Study on the causal mechanisms of chromosome aberrations in mammalian gametes and embryos

(2) Clinical Research Course

The clinical research course, is a course designed to produce outstanding clinicians with high moral judgment and superior diagnostic and therapeutic techniques who are able to both carry out excellent clinical research and possess the ability to implement clinical trials. This course is both multidisciplinary and interdisciplinary allowing graduate students to obtain the specialized knowledge they need.

Division	Name of Professor in Charge	Major fields of study
Clinical Oncology / Hematology	Toshikatsu OKUMURA Hiroshi AZUMA	<ul style="list-style-type: none"> ○PPAR and Cancer ○Study of salvage therapy for pediatric refractory malignant tumors ○Study of reduced intensity stem cell transplantation for pediatric recurrent hematological malignancy ○Study of late onset disorder after chemotherapy and hematological stem cell transplantation for pediatric malignancy ○Study of hematological stem cell transplantation for pediatric non-malignant disease
	Hiroyuki FURUKAWA Hiroshi ITO Hidehiro KAKIZAKI	<ul style="list-style-type: none"> ○Clinical studies of GI tract and HPB cancer ○Biomechanics of total hip arthroplasty ○New tumor marker in urological cancer ○Targeted therapy for renal cell carcinoma
	Yasuaki HARABUCHI	<ul style="list-style-type: none"> ○Molecular oncological and EB virological analyses of head and neck cancer and malignant lymphoma
	Kazuo SENGOKU Koji TAKAHASHI	<ul style="list-style-type: none"> ○Clinical study of the mechanisms of metastasis in gynecologic cancer ○To understand the fundamentals of imageology and to have an ability to clarify the pathophysiological change of organs or tissues in oncological and hematological diseases
	Kyousuke KAMADA	<ul style="list-style-type: none"> ○Tumor resection by administration of 5-ALA and using fluorescent imaging
	Naoyuki MIYOKAWA Hidehiro TAKEI	<ul style="list-style-type: none"> ○Diagnostic pathology, tumor pathology. ○Diagnostic pathology, Brain oncologic pathology
Environmental / Social Medicine	Naoyuki HASEBE	<ul style="list-style-type: none"> ○Interventional study: life-style modification from early childhood ○Prevention of atherosclerosis progression: clinical study ○Epidemiologic study of chronic obstructive lung disease
	Shigeru CHIBA Satoshi HIRATA	<ul style="list-style-type: none"> ○Social medicine and environmental medicine research ○Research of medical instrumentation management & safety Management
	Hiroyuki HIROKAWA	<ul style="list-style-type: none"> ○Clinical economics, management strategy, management planning of health care facilities, a study of telemedicine
Clinical Immunology / Infectious Diseases	Yuichi MAKINO	<ul style="list-style-type: none"> ○Development of novel therapeutic strategies for connective tissue diseases
	Toshikatsu OKUMURA Hiroshi AZUMA	<ul style="list-style-type: none"> ○Mechanism of post-infectious IBS ○Establishment of diagnosis for congenital infection by preserved umbilical cords
	Akemi YAMAMOTO Yasuaki HARABUCHI	<ul style="list-style-type: none"> ○Clinical immunological research of skin disorders ○Analysis of mucosal immuno-barrier system of upper respiratory tract (middle ear, nasal and paranasal sinus, tonsil)
	Satoshi FUJII	<ul style="list-style-type: none"> ○Inflammatory Mechanism of Atherosclerosis
Esthematology / Musculoskeletal Medicine	Hiroshi ITO	<ul style="list-style-type: none"> ○Development of new artificial joint ○Repair and regeneration of articular cartilage -Immune study of mesenchymal stem cell for cartilage repair-
	Motofumi KAWAI Yasuaki HARABUCHI	<ul style="list-style-type: none"> ○Structural and functional evaluation in chorioretinal diseases ○Physiological analysis of swallowing and respiratory function of upper respiratory tract (nasal sinus and larynx)
	Tetsuo OTA Hiroyuki HIROKAWA	<ul style="list-style-type: none"> ○Clinical studies of postural control ○Diagnosis and therapy of vitreoretinal disorders

Division	Name of Professor in Charge	Major fields of study
Clinical Endocrinology / Metabolic Diseases	Yuichi MAKINO Hiroshi AZUMA	<ul style="list-style-type: none"> ○Novel strategies for diabetes and its complications ○Epidemiologic and molecular basis of cretinism ○Molecular basis of growth disorders ○Psychosocial research on congenital adrenal hyperplasia ○Clinical analyses of keratinization disorders ○Evaluation of retinal circulation in patients with diabetes mellitus ○Clinical endocrinology of oogenesis and early follicular development
	Akemi YAMAMOTO Motofumi KAWAI Kazuo SENGOKU	
Clinical Neurology / Psychiatry	Naoyuki HASEBE	<ul style="list-style-type: none"> ○Stroke: management and prevention ○Customized and personalized medicine for Parkinson disease ○Sleep disorders, epilepsy, psychogeriatrics, neuropsychopharmacology ○Pathophysiology of impaired bladder sensation in diabetes ○Bladder hypersensation in overactive bladder ○Bladder dysfunction in benign prostatic hyperplasia ○To understand the fundamentals of imageology and to have an ability to clarify the pathophysiological change of organs or tissues in neurological and psychiatric diseases ○Analysis of CBF by administration of ICG ○Intraoperative neurophysiology and real-time neuronavigation ○Clinical studies of brain plasticity using brain machine interface technology ○Pathology of Neurodegenerative disease
	Shigeru CHIBA Hidehiro KAKIZAKI	
	Koji TAKAHASHI	
	Kyousuke KAMADA	
	Tetsuo OTA	
	Hidehiro TAKEI	
Clinical Cardiology / Pneumology	Naoyuki HASEBE	<ul style="list-style-type: none"> ○Therapeutic heating, "IYASHI": translational research ○Oxidative stress: involvement in cardiovascular disease ○Therapeutic approach for cardiovascular regenerative medicine ○Therapeutic strategy against refractory arrhythmias ○Clinical study of respiratory diseases
	Hiroshi AZUMA	<ul style="list-style-type: none"> ○Pharmacokinetics of pulmonary vasodilators in pediatric patients with pulmonary hypertension ○Pathophysiology and genetics of vein graft degeneration ○Development of prevention strategy for vein graft intimal hyperplasia ○Development of treatment strategy for ischemic ulcer ○Pathologic change of muscle in ischemic leg and it's recovery after revascularization ○Pathophysiology and genetics of aortic aneurysm ○New indications of pediatric endoscopic surgery ○Surgical problems in low-birth-weight neonates:History and update ○Cerebral protection in aortic arch surgery ○Cerebral perfusion under extracorporeal life support ○Minimal invasive cardiac surgery:Update ○To understand the fundamentals of imageology and to have an ability to clarify the pathophysiological change of organs or tissues in circulatory and respiratory diseases ○Hemodynamic monitoring ○Respiratory distress following onset of aortic dissection ○Does transport of vital signs and video image improve cardio-pulmonary resuscitation rate? ○Development of new therapy based on lung cancer biology ○Treatment of pulmonary infectious diseases ○New technology relating to endoscopic diagnosis ○Noninvasive electrocardiographic risk stratification study for refractory arrhythmias ○Cardiac Magnetic Resonance Imaging in patients with refractory arrhythmias ○Epidemiology of lifestyle disorder in youth ○Three-dimensional approach to the substrate of arrhythmias ○Clinical investigation of the effect of non-pharmacological antiarrhythmic therapy on autonomic nervous function
	Nobuyoshi AZUMA	
	Hiroyuki KAMIYA	
	Koji TAKAHASHI	
	Takayuki KUNISAWA Satoshi FUJITA	
	Yoshinobu OHSAKI	
	Nobuyuki SATO	
	Yuichiro KAWAMURA	

Division	Name of Professor in Charge	Major fields of study
Clinical Gastroenterology	Yuichi MAKINO Toshikatsu OKUMURA Hiroyuki FURUKAWA Koji TAKAHASHI	<ul style="list-style-type: none"> ○Development of new treatment for pancreatic cancer and nonalcoholic steatohepatitis ○Mechanism of functional GI disorders ○Mechanism of fatty liver disease ○Inhibition of GI cancers by anti-diabetic drugs ○Clinical studies of inflammatory disease in GI tract and HPB area ○Clinical studies of outcome in organ transplantation ○To understand the fundamentals of imageology and to have an ability to clarify the pathophysiological change of organs or tissues in gastrointestinal diseases
Clinical Pharmacology / Molecular Physiology	Naoyuki HASEBE Akemi YAMAMOTO Motofumi KAWAI Satoshi FUJII Yoshikazu TASAKI	<ul style="list-style-type: none"> ○Clinical pharmacology: novel therapeutic approach to heart failure ○Management of oxidative stress in cardiovascular disease ○Healing effect "IYASHI" of the circulatory system: its therapeutic implication ○Chronic kidney disease and cardio-renal syndrome ○Clinical study of lung cancer treatment ○Multiple sclerosis and its therapeutic procedure ○Clinical pharmacology of keratinization process ○Development of novel treatment for ocular disease by improvement of ocular circulation ○Development of Testing System Using microRNA ○Pharmokinetic/pharmacodynamic study in relation to pharmacological and toxicological effects of drugs ○Discovery of novel anti-parkinsonian drugs ○Pharmokinetics/pharmacodynamics/pharmacogenomics of anti-cancer drugs
Clinical Reproductive / Developmental / Regenerative Medicine	Hiroshi AZUMA Kazuo SENGOKU Masanori TAKEKAWA Yoshio MAKITA	<ul style="list-style-type: none"> ○Molecular based epidemiology of neonatal diabetes mellitus ○Clinical study of the mechanisms of human fertilization ○Cryopreservation and in vitro maturation of human ovarian tissues ○Clinical study of male factor infertility ○The clinical study of the bone regeneration in jaw bone defect ○The clinical study of the bone regeneration after the radiation Therapy ○Tailor made therapeutic strategy based on individual genetic analysis

4 Special Teaching Methods

The Ph.D program at Asahikawa Medical University comes under section 14 (Special Teaching Methods) of the Graduate School Establishment Criteria and allows currently employed applicants to attend lectures while continuing with their day job. Courses may be taken in the evening.

5 Degree Conferred

- (1) Ph.D. (Medicine) - Equivalent to a Doctor of Philosophy.
- (2) A Ph.D. is granted to graduate students enrolled in the University for at least a 4 year period (standard period), who have obtained 32 credits or more. After undergoing the necessary research guidance, they should have submitted their thesis and passed the final examination.

However, should the graduate student have excellent academic performance, they may be permitted to graduate after a 3 year period.

6 Long-Term Completion Program

The University has established a program that allows graduate students to complete the Ph.D course in longer terms (5 or 6 years) than the standard term (4 years) if they apply and are approved by screening.

Approved students, who are called "long-term students," shall pay the same total amount of tuition fee as those in the standard completion terms. Those who wish to apply for the program should consult, after the announcement of successful applicants, with the Student Affairs Section, within the period defined in the enrollment information.

7 Fee Deferment and Waiver

(1) Admission Fee Deferment and Waiver

We have the system of admission fee deferment and waiver available for those who have genuine difficulty in paying the admission fee due to special circumstances/financial reasons. By screening, the system offers admission fee deferment or waiver exempting the entire or half of the amount.

(2) Tuition Fee Deferment and Waiver

We have the system of tuition fee deferment and waiver available for those who have genuine difficulty in paying the tuition fee due to special circumstances/financial reasons. By screening, the system offers tuition fee deferment or waiver exempting the entire or half of the amount of the semester.

8 Scholarship

- (1) The University has instituted its own scholarship and the scholarship, which amounts to the half of the tuition fee, is granted to all the eligible students on application. Below is the summary of the scholarship:

Eligible Applicants	<ul style="list-style-type: none">• Doctorate students (officially registered on May 1st in the first semester and November 1st in the second semester)• Those who have applied for tuition fee waiver in the semester in which they wish to receive the scholarship• Those whose income is less than that of the amount specified by the Japan Student Services Organization Scholarship Type II
Ineligible Applicants	<ul style="list-style-type: none">• Those who are exempted from the entire tuition fee or half of the amount• Those on a leave of absence• Those having been reprimanded• Those who are approved to be long-term students
Granted Amount	<ul style="list-style-type: none">• Half of the tuition fee in the semester
Term	<ul style="list-style-type: none">• 4 years (the standard term to complete the Ph.D. course)

- (2) The University has a scholarship system to promote learning. If students are successful in their application the following sum will be awarded:

250,000 yen / year

Recruitment of scholars from 2017 onwards is undecided.

9 Correspondence to:

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Midorigaoka Higashi 2-1-1-1,
Asahikawa, Hokkaido, 078-8510
Phone 0166-68-2209
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<問い合わせ先>

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