



The year 2019 was the 100th anniversary of Hokkaido University, School of Medicine.

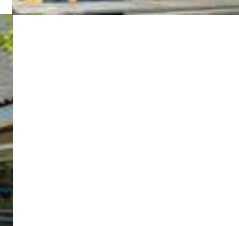
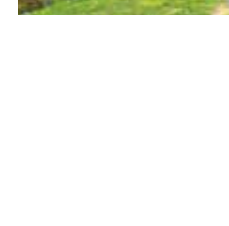
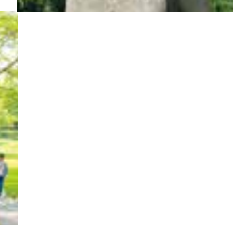
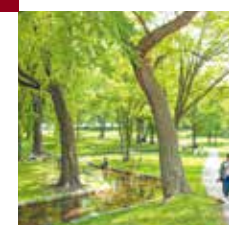
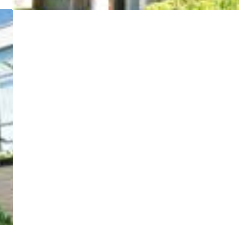
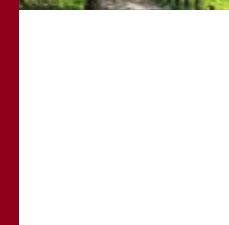
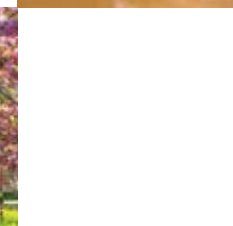
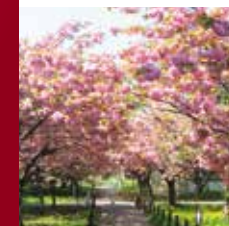
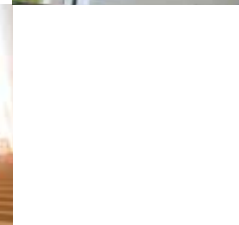
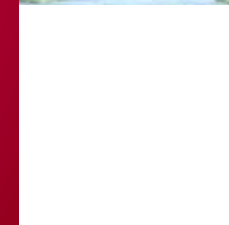


HOKKAIDO UNIVERSITY

Graduate School of Medicine

Guidebook of the Master's Program

2020



HOKKAIDO UNIVERSITY Graduate School of Medicine Guidebook of the Master's Program 2020

U R L <https://www.med.hokudai.ac.jp/en/>

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2020.7.21

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Philosophy and Objectives / Admissions Policy

■Philosophy

The Graduate School of Medicine, Hokkaido University leads the world with cutting-edge research in medical science, and aims to equip the next generation of medical researchers and medical professionals with a strong sense of ethics and a well-rounded character to contribute to the health and welfare of humanity.

■Educational and Research Objectives

To help students develop advanced levels of knowledge and research skills in the fields of medical and life sciences and gain profound insights that will help them meet the needs of society. To promote world-leading research in the school in its role as part of a major Japanese university and to advance knowledge frontiers for the prosperity of humanity.

■Admissions Policy (Expectations of Students)

We are looking for

- Students who are eager to engage in the research tailored to clarify life phenomena, to overcome diseases, and to improve human health standards
- Students who have intellectual curiosity, show the ability to analyze things logically, persevere as a team, and have competence to work as international leaders in each medical field

Message from the Dean for the Master's Program 2020

The Master's Program of the Hokkaido University Graduate School of Medicine aims to promote the integration of knowledge from different fields and nurture researchers and highly specialized professionals with creativity and comprehensive viewpoints. To this end, the Graduate School of Medicine provides students who have studied academic fields other than medical science with the latest knowledge and skills in medical science and social medicine.

The Graduate School of Medicine has a wealth of outstanding researchers engaged in internationally recognized projects in various fields of medical science. In basic medicine, a host of innovative studies are being conducted in the fields of anatomy, physiology and pathology, including cutting-edge research regarding the brain, cancer and immunity. In social medicine, unique research is underway to solve a variety of issues, especially emerging infections, from medical perspectives. Furthermore, our Public Health Course allows students to earn an internationally recognized Master of Public Health (MPH) degree. In addition, Public Health Course (One-Year Course) is available for doctors, dentists, pharmacists and other professionals with practical experience in order to expeditiously provide society with personnel capable of dealing with local issues in Hokkaido, such as the aging population and depopulation. In clinical medicine, research aimed at overcoming intractable diseases is underway to gain insights into their causes, to develop cutting-edge diagnostic and therapeutic apparatus through the application of the theories and techniques of physics and engineering, and to develop novel therapies using humanized animal models and highly functional novel materials. Our research accomplishments have received both international and domestic acclaim, allowing the Graduate School of Medicine to play a central role in large-scale national research projects.

As you study medical science and social medicine through cutting-edge medical research, you will be required to meet social expectations by proactively working on the creation of knowledge and addressing social issues with high ethical standards as members of the scientific community. We at the Hokkaido University Graduate School of Medicine have plenty to offer to meet your expectations. It is our earnest hope that you will make your life here truly satisfying and successful.

April 2020

M. Yoshioka

YOSHIOKA Mitsuhiro, M.D., Ph.D.
Dean, Graduate School of Medicine, Hokkaido University

Students are accepted in the following departments.

(As of July 1, 2020)

Departments

【Division of Medical Science】

Physiological Science	Biochemistry	●Molecular Biology ●Medical Chemistry
	Anatomy	●Anatomy and Embryology ●Histology and Cytology
	Physiology	●Cell Physiology ●Systems Neuroscience
	Pharmacology	●Neuropharmacology ●Cellular and Molecular Pharmacology
Pathological Science	Pathology	●Pathology ●Cancer Pathology ●Diagnostic Pathology
	Microbiology and Immunology	●Immunology ●Microbiology and Infectious Diseases
Social Medicine	Social Medicine	●Hygiene** ●Public Health ●Forensic Medicine ●Health Care Policy** ●Biostatistics ●Medical Education and General Medicine ●Regulatory Science ●Translational Research Management ●Patient Safety ●Pharmaceuticals and Medical Devices Regulatory Science*
Internal Medicine	Internal Medicine	●Respiratory Medicine ●Rheumatology, Endocrinology and Nephrology ●Gastroenterology and Hepatology ●Cardiovascular Medicine ●Medical Oncology ●Hematology ●Health Care Medicine** ●Clinical Cancer Genomics
	Radiology	●Therapeutic Radiology ●Diagnostic Imaging ●Comprehensive Radiological Science*
Surgery	Surgery	●Gastroenterological Surgery I ●Gastroenterological Surgery II ●Renal and Genitourinary Surgery ●Cardiovascular and Thoracic Surgery ●Breast Surgery
	Anesthesiology and Critical Care Medicine	●Anesthesia and Perioperative Medicine ●Acute and Critical Care Medicine
Specialized Medicine	Reconstructive Surgery and Rehabilitation Medicine	●Orthopedic Surgery ●Plastic and Reconstructive Surgery ●Rehabilitation Medicine** ●Sports Medicine
	Reproductive and Developmental Medicine	●Pediatrics ●Obstetrics and Gynecology
	Sensory Organ Medicine	●Dermatology ●Otolaryngology - Head and Neck Surgery ●Ophthalmology
	Neurological Disorder	●Psychiatry ●Neurosurgery ●Neurology
Interdisciplinary Medicine	Medical Biology	●Neurobiology
	Immunology	●Immunobiology ●Functional Immunology ●Molecular Psychoimmunology
	Pathological Oncology	●Cancer Biology** ●RNA Biofunction** ●Stem Cell Biology ●Biomedical Oncology

* Collaborative Laboratory Established by Collaboration among Universities (No student enrollments)

** There will be no new enrollments for the 2021 academic year.

Course Outline

The Master's Program provides well integrated education, offering courses which may be chosen depending on the goals of individual students to meet social needs.

Medical Science Course

This course aims to produce specialists with a wide range of knowledge who will play active roles in medicine and life science.

In addition to required core subjects, students learn basic medical science research methods that provide the knowledge and skills required for medical research through experiential learning, as well as they study and practice oral and written research presentation skills. Basic general medicine and basic medical research are offered to facilitate the development of specialists with the necessary broadly based knowledge that is expected.

Public Health Course

Public Health Course aims to develop human resources who are capable of playing active roles in addressing the challenges of public health with broad knowledge and high skills for the maintenance and improvement of the entire society and people's health, life and security.

At this course, fundamental five disciplines (Epidemiology, Biostatistics, Social and Behavioral Sciences, Health Services Administration and Environmental Health Sciences), which comply with accreditation criteria of the Council on Education for Public Health in the United States, are provided as required subjects. Furthermore, by taking the elective subjects which would suit one's own interest, students acquire the ability required for experts.

Two-Year Course

This course is intended for medical doctors (i.e. licensed physicians), dentists, pharmacist and other professionals with certain amount of practical experience, and aims to train, in one year, highly specialized professionals who play active roles in medical and public health fields.

One-Year Course

This course enables completion of the course, which is practically the same as Two Year Course, in one year. Students should pass the qualifying review and examination of the research achievements of specific assignment to complete.

Admission to Master's Programs

Please consult the guidelines for applicants for the graduate school for further information.

About the Entrance Examination

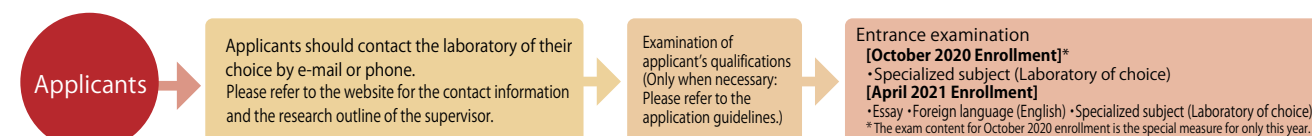
So far, entrance examination for April enrollment has been held twice in one academic year.
For April 2021 enrollment, entrance examination will be held once.

● **Number of students to be admitted** Medical Science: 20

● **Qualifications for applicants** Applicants should have a bachelor's degree (for Public Health Course <One-Year Course>, work experience of two years or more as physicians, dentists, or pharmacists is required)
*For Public Health Course <One-Year Course>, we will not recruit applicants for October 2020 enrollment

● **Application Period** [October 2020 Enrollment] Tuesday, 7 July 2020 to Monday, 13 July 2020
[April 2021 Enrollment] Tuesday, 1 December 2020 to Monday, 7 December 2020
Office hours: 9:00 AM to 5:00 PM (Japan Standard Time)
Send the application documents to Students Affairs Office by post using express registered mail.
Application documents must reach our Student Affairs Office within the application period.

Overview of admissions



● **Examination schedule** [October 2020 Enrollment] Tuesday, 18 August 2020
[April 2021 Enrollment] Tuesday, 19 January 2021
Even though announced this way, there is a possibility that the graduate school must subsequently revise the examination procedure or postpone/cancel the examination(s) as a measure against COVID-19.

Fees

● **Examination fee***: 30,000 yen ● **Admission fee***: 282,000 yen ● **Tuition**: 535,800 yen (per year)

Note: Admission and tuition fees may be changed at any time.

*Government-financed international students (persons receiving MEXT Scholarship grants) are exempted from this fee but must include a statement to this effect when submitting the application.

Long-Term Study Program

(NOT eligible for Public Health Course <One-Year Course>)

Under the Long-Term Study Program, students who are employed or who have other compelling reasons can complete the Master's Programs in up to 4 years with tuition roughly equivalent to the 2-year tuition by applying for pre-enrollment approval of a plan to complete the Master's Program in a longer period than the standard 2-years.

Master's degree requirements

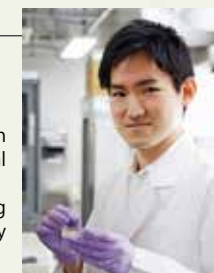
1. Students are required to pass a qualifying review and examination of a Master's thesis or the research achievements of specific assignments (only for the One-Year Public Health Course), and 2. acquire at least 30 credits in the field(s) of the major.

Messages from Students of the Master's Program

To turn the unknown into the known

2nd-year Master's Student
Medical Science Course, Department of Microbiology and Infectious Diseases
ARIMURA Koki

I became interested in microbiology through the lectures and graduation research at the Department of Health Sciences, and decided to apply to continue my study in this laboratory. Now, I'm studying about identifying renal diseases by hantavirus infections.
In Sri Lanka, to the south of India, the high incidence of Chronic kidney disease of the unexplained (CKDu) is a big problem, especially among male farmers. About half of CKDu patients have antibodies to the hantavirus. This is why I'm studying whether hantavirus infection is a cause of CKDu.
I believe that my research results will lead to future research, and I wish to make new discoveries through what I learn.



Toward new goals

2nd-year Master's Student
Public Health Course (Two-Year Course), Department of Public Health
KASHIWAKURA Yoko
Working as a Nurse

The reason that I entered the graduate school was that "I wanted to learn about public health to improve the physical and mental health of people" and "I want to get to know people of different nationalities and backgrounds to increase my knowledge and gain experience." In addition, I thought seriously about my future and decided to continue to study while working. Currently, I am learning about "epidemiological research" from teachers and seniors, and I am participating in a variety of seminars and in the "Environmental Chemicals and Human Health" satellite course in Korea, broadening my knowledge. I have an exciting and fulfilling student life doing things that I would not have been able to do without going to graduate school, and I will be using this experience in my research and future life.



Message from a Graduate of the Public Health Course (One-Year Course)

Learn rather than get used to it

Public Health Course (One-Year Course), Department of Hygiene
(Master's degree completed in March 2020)
YAZAKI Hiroshi
Working as a Physician

I am currently working at a home-care clinic as a physician. Through a variety of experiences both in Japan and abroad, I became interested in Public Health issues. All the school days pass so fast with classes after work in the first half and intense meetings with the supervisor in the latter half. Though I belong to the Department of Hygiene, which is highly reputed for mathematical modelling of infectious diseases, my research topic was "Ambulance transport of patients with mild afflictions in Hokkaido, Japan". It seems to have nothing to do with mathematical models, but I conducted an epidemiological research study with statistical analysis. Whatever the topic, I learn methods to analyze facts, which it is worth investing my time in.



Information on the Honor and Scholarship

Honor

● The Graduate School of Medicine, Hokkaido University

Best Paper Award

Selected applicants receive a certificate and 100,000 yen.

Takakuwa Eimatsu Scholarship

Every year, 3 or 4 outstanding young researchers (including graduate students) are awarded this scholarship (80,000-100,000 yen per awardee as a one-time grant).

Scholarship

● The Graduate School of Medicine, Hokkaido University

Otowa Hiroji
Scholarship Fund

Both Japanese and non-Japanese students are eligible. Every year, up to 10 Japanese students and 10 non-Japanese students receive this scholarship (150,000 yen per awardee as a one-time grant). Selection is based on both academic and personal excellence.

● Hokkaido University

Nitobe College for
Graduate Students

The Honors Program offers a scholarship to selected students. Successful applicants will be selected based on a comprehensive assessment that includes the academic achievement in the Foundation Program and their motivation for applying as described in the application form.

● Other Scholarships

Hokkaido University has a range of scholarships available for both prospective and current students.

Scholarships for
Prospective Students

Several competitive scholarships of differing amounts are available for students wishing to study at Hokkaido University. Please see the sections below for the scholarships you can apply for prior to leaving your home country.
• Japanese Government Scholarships (MEXT)
• Hokkaido University Scholarships
• Other Scholarships

Scholarships for
Current Students

There are various scholarships available to self-supported international students, and either applied for through the University, or directly.

Check the website for details: [Hokkaido Univ. Scholarships](#) [Search](#)

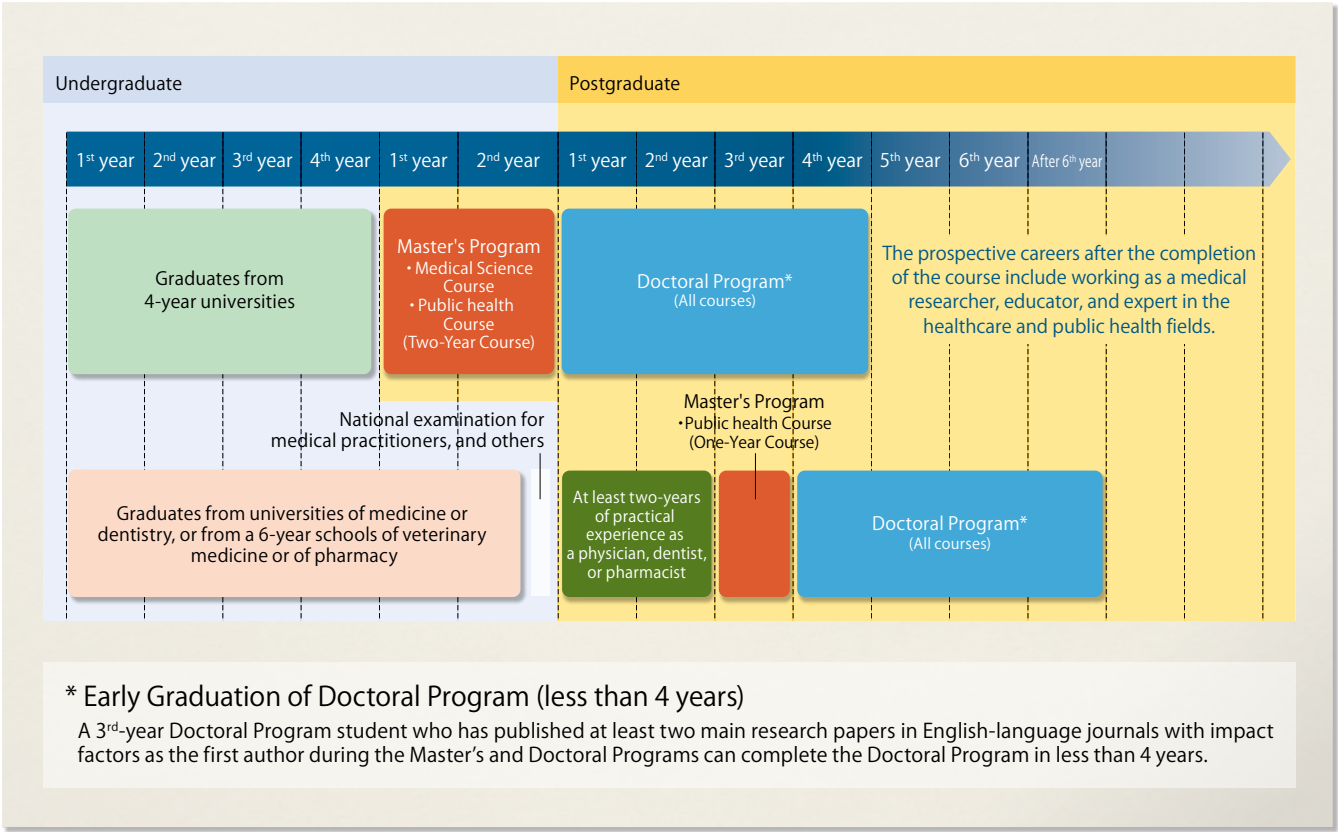
Teaching Assistant (TA) Program

As part of the university education, the TA program was introduced to train able faculty members and specialists with experience in education. In the 2019 fiscal year, 15 persons were employed, and they earned about 90,000 yen per person.

After completing the Master's Program, students can decide whether to enroll for the Doctoral Program, toward becoming highly skilled researchers or finding employment as medical professionals in society.

Pursuing a doctorate

It is desirable that students who have completed their Master's Programs pursue a doctorate, because they are still growing as students and researchers. Examination/admission fees are not required from students who continue their studies and research as doctoral students.



Message from a Graduate of the Master's Program

Where possibility becomes reality

Master's degree completed in March 2018
3rd-year Doctoral Student
Basic Medicine Course, Department of Immunobiology
Nanumi Han
[Republic of Korea]

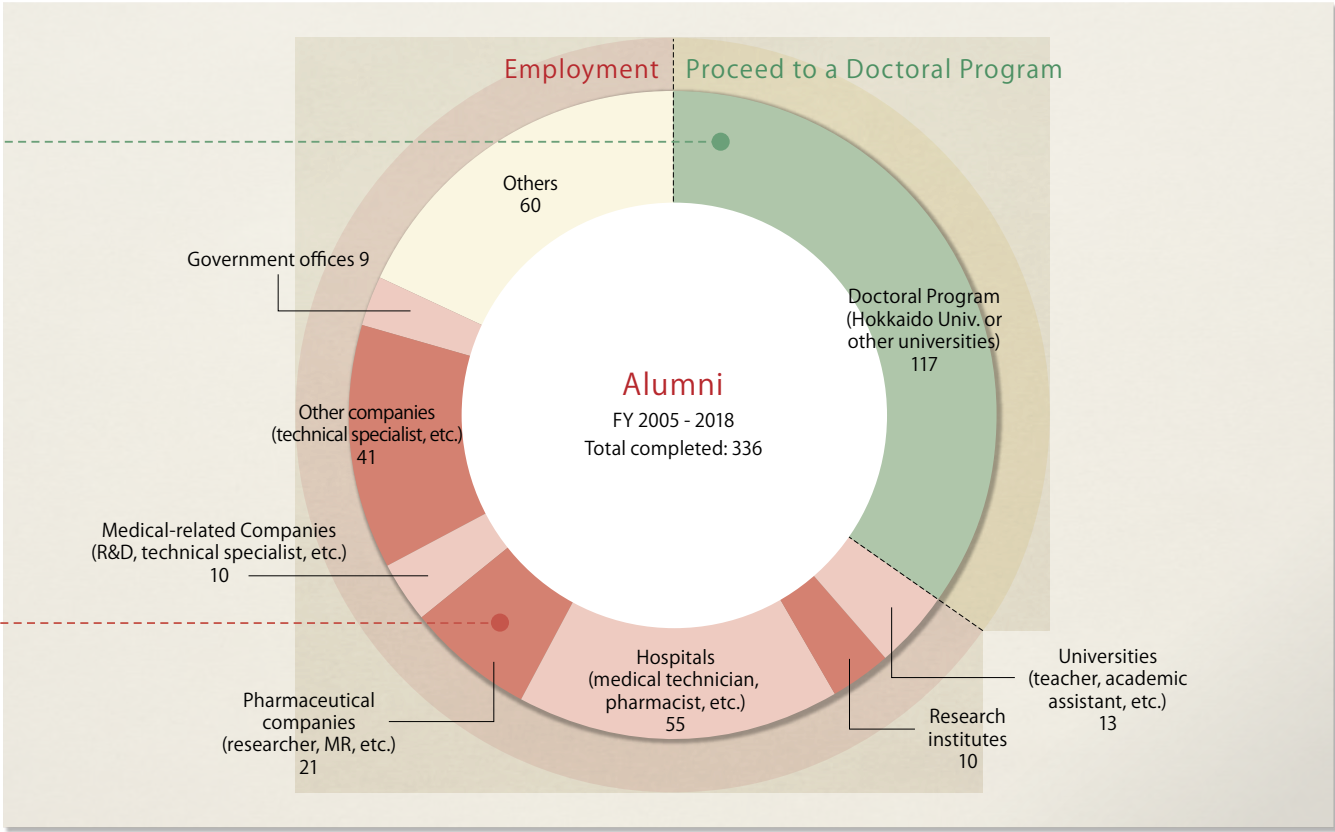


I had the opportunity to study in the immunology field when I was an undergraduate student, and I thought it was very attractive research. So I decided to continue study in the Department of Immunology of Hokkaido University Graduate School of Medicine for a master's degree. During the master's course, I studied the role of a novel cytokine IL-34 in malignant melanomas. The study, understanding of tumors and developing new therapeutic possibilities, was interesting. I felt a sense of accomplishment when the results of my study became published articles or presentations at conferences. This is the reason why I decided to further my education and get a doctoral degree. Currently, I am continuing research to elucidate the mechanism of IL-34 expression in cancer and develop therapeutic methods related to that. I want to acquire expertise related to research and contribute to the world as a specialist in this field. Daily experiments are not always going well but I think, even failed experiments are also worthwhile when I discover something new or get good results from the experiments. And I think the working environment is highly desirable with the surroundings here because professors and laboratory staff are positive and they help the research through discussion. I would certainly recommend the graduate course to those who want to know their own potential.

Finding employment

Faculty members of the Graduate School of Medicine help students find employment.

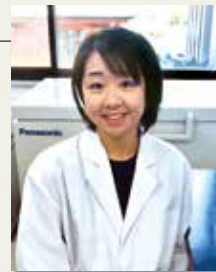
	Positions	Businesses
Employment options for specialists	• At medical institutions • In government and other public organizations	• At business organizations • Life science research • Medical/health administration • Development of medical equipment/drugs/food safety technologies



Message from a Graduate of the Master's Program

Two years at the Graduate School of Medicine in Hokkaido University

Master's degree completed in March 2020
NAKANO Shiho
Working at the Taisho Pharmaceutical Co., Ltd.

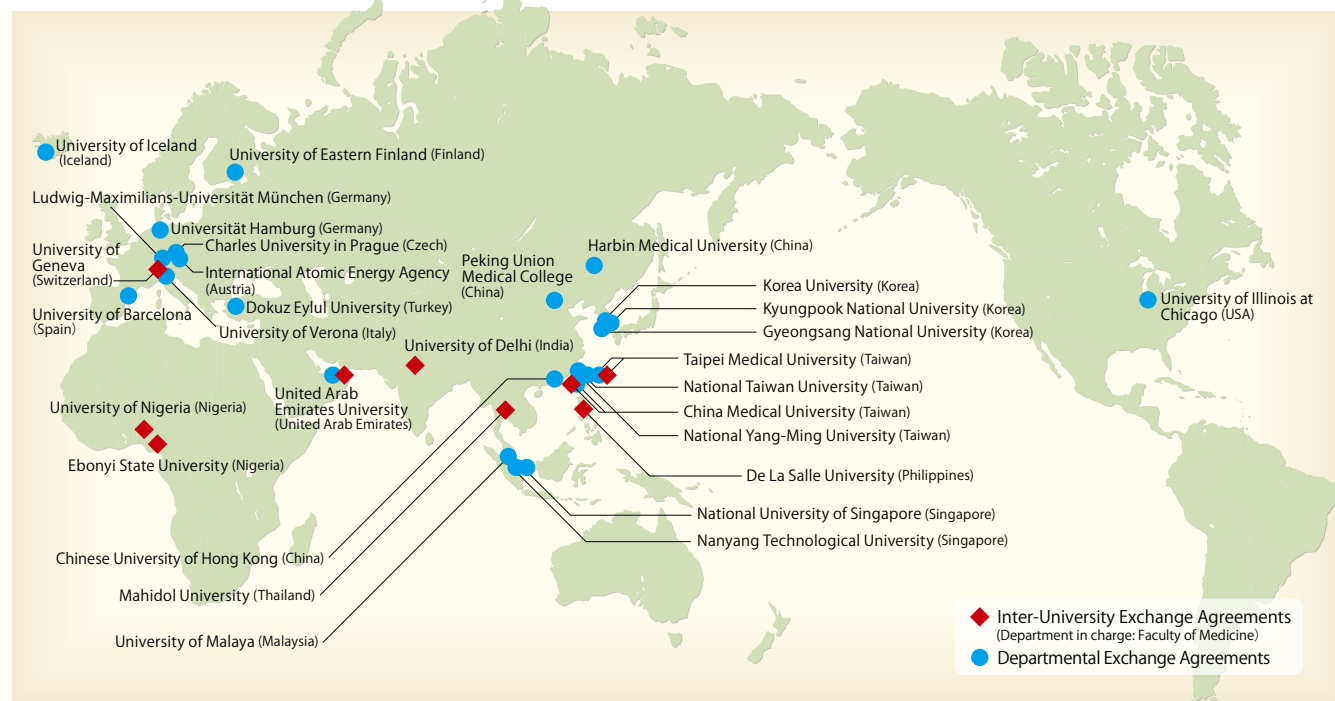


After studying molecular biology at the Department of Chemistry, Faculty of Science, Hokkaido University, I went on to a master's program at the Graduate School of Medicine, hoping to do research on cancer. In the laboratory, we conducted research on "cancer vaccine therapy," which is a cancer treatment method that uses immune cells. Since I had many opportunities to interact with people who have clinical experience, I was able to work on basic research while becoming aware of clinical applications, and I was able to conduct the research with motivation. In addition, at the seminar hosted by the Institute for Genetic Medicine (IGM), which is a collaborative research body, we were able to broaden our horizons in contact with cutting-edge research in various fields, and gaining hints for advancing the research. I am certain that the two years of the master's program at the Graduate School of Medicine at Hokkaido University will be a fulfilling time for anyone.

International Exchanges

The Graduate School of Medicine is promoting international collaborations through exchanges of researchers and joint research projects. Currently, we have concluded international exchange agreements with 30 universities outside Japan (as of April 2020).

As an international exchanges project, we have established an international exchange fund to provide assistance and aid to be able to invite and accept non-Japanese researchers, dispatch and train young researchers, and provide scholarships and aid to international students.



Number of International Students in the Graduate School of Medicine

(As of April 1, 2020)

● Distribution by Country/Region

Area	Country/Region	Number
Asia 42 students (90%)	China	37
	Korea	2
	Malaysia	1
	Taiwan	1
	Vietnam	1
North America 1 (2%)	U.S.A.	1
Middle East 1 (2%)	Islamic Republic of Afghanistan	1
Africa 3 (6%)	Egypt	3
TOTAL		47
International Students (Other visa status)		3

● International Student Numbers by Graduate Program

() : number of female students included

Graduate	
Master's Program	Doctoral Program
7 (3)	40 (26)

● Methods of Financial Support

() : number of female students included

	Graduate
Japanese government	8 (5)
Self-Supported	36 (22)
Foreign government	3 (2)
TOTAL	47 (29)
International Students (Other visa status)	3 (2)
GRAND TOTAL (All International Students)	50 (31)

Center for Medical Education and International Relations International Relations Division

International Relations Division Supports International Students

As of April 2020, 47 international students from 8 countries study at the Graduate School of Medicine. Staff members of the International Relations Division are responsible for creating a comfortable environment for international students, and provide academic and personal support.



International Relations Division

Our mission is to increase the presence of the Faculty of Medicine on the international scene. We promote partnerships with institutes and faculties overseas, share the latest technologies and knowledge, and provide students with quality education that meets the needs of diverse and global society.



Agreement concluded with Korea University (Korea)

We also strive to nurture responsible global citizens and leaders for the future. We host seminars and events designed to help students acquire practical knowledge in medicine and research, as well as manners and communication skills useful in the global society.



Events to interact with international students

Visit the website for further information. [URL https://edu.med.hokudai.ac.jp/international-relations/](https://edu.med.hokudai.ac.jp/international-relations/)

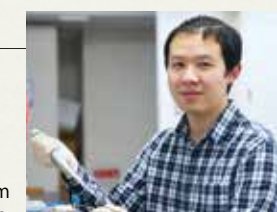
Message from an International Master's Student

Exploring the secrets of cells

2nd-year Master's Student
Medical Science Course, Department of Stem Cell Biology
Zhang Lifu
[People's Republic of China]

Can you imagine that everyone has evolved from one small cell? Stem cells are the source of all cells. Stem cells have a unique differentiation potential. With the increasing recognition of the functions of stem cells, wounds that are hard to heal at present may also become possible to repair. Starting from my studies in biology, I am very interested in cells, especially stem cells. After introduction of former students, I have come to the laboratory as I wish to do further study.

My current research topic is about the relationship and influence of the intracellular anti-cancer gene Ecrg4 on Alzheimer's disease. I think this research is very meaningful. Because with the passage of time, all people will grow old one day. So it is very important to fight against the diseases brought by aging. I hope to contribute to the fight against Alzheimer's disease. Through the careful guidance of the teachers in the laboratory, I learned a lot of things that I have not known about before. It's a pleasure to come to our school and study in our laboratory.

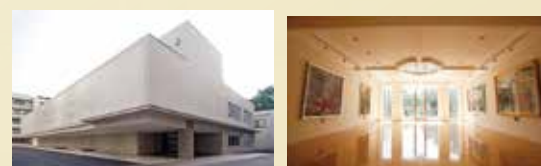


●Administration Building



The triangular decorative gable over the entrance continues the history of the building of the school of medicine from the Taisho Era. The main entrance of the Graduate School of Medicine is also the entrance to the Frate hall. The Student Affairs Office is located along the right-hand corridor on the 1st floor.

●The Alumni Hall "Frate"



Constructed for the 90th anniversary of the establishment of the Hokkaido University School of Medicine and completed in 2010, "Frate", which is used for academic lecture meetings, conferences, ceremonies and other gatherings, is a multifaceted facility that includes a hall accommodating up to 280 people, a special conference room and a large training room.

●School of Medicine Centennial Hall



Constructed as part of the 100th anniversary commemorative project of the School of Medicine, and completed in 2019, this hall is used for many purposes such as lectures, conferences, and alumni events.

●Clinical Medicine Lecture Building



Located between the Graduate School of Medicine and the University Hospital, this building is accessible from both buildings. The 2-story building has 2 medium-sized lecture halls on the first floor and a large lecture hall, where mandatory lectures are mainly given, on the second floor. This building is also used for academic lecture meetings and various ceremonies.

●Medical and Dental Research Building



Undergraduate and graduate students are educated here. This building has the latest facilities and equipment, and a variety of practical training and research activities are conducted here.

●Interprofessional Education and Research Building



The building provides an environment for interprofessional education in which students and staff from different health professions (including medicine, dentistry, pharmacy and nursing) learn together. It houses the Clinical Simulation Center, the Medical Innovation Center and other facilities.

●Library, School of Medicine



The library has about 160,000 medical books and journals. The reading room and the stacks on the first floor are open from 9 a.m. to 10 p.m. on weekdays. A study room and a computer room are on the second floor, and 2 lecture rooms for undergraduates are on the third floor.
<Hours>
Monday through Friday: 9:00-22:00
*9:00-17:00 (long term vacations)

●Cafeteria



There are 70 dishes on the menu, and there is seating for 120 people. The cafeteria also has a shop that sells stationery, food, white gowns and lab coats.
<Hours>
Monday through Friday: 11:00-15:00
(for the shop: 10:00-15:00)
Saturday, Sunday, and Holidays: Closed



Access

J R	S u b w a y	New Chitose Airport to JR Sapporo Station
●JR Sapporo Station: 20-min. walk	●Kita 12-jo Sta. (Namboku Line): 10-min. walk	
	●Kita 18-jo Sta. (Namboku Line): 10-min. walk	
	●Kita 13-jo Higashi Sta. (Tōhō Line): 15-min. walk	
B u s		● 40 min. by JR
●Hokudai Byouin Mae (in front of Hokkaido University Hospital): 3-min. walk		● 80 min. by bus
Take a bus, number 01, 03, or 04 of the Tonden line of Chuo Bus Co. at the Kitaguchi bus depot of JR Sapporo Station		