Research Environment

[Faculty Members]

Scientific leaders specialized in medicine, veterinary medicine, pharmacology, science, agriculture, and informatics from Faculty of Veterinary Medicine, Research Center for Zoonosis Control, and Faculty of Medicine will jointly supervise student's PhD study.

- Faculty of Veterinary Medicine: Laboratory of Microbiology, Laboratory of Infectious Diseases, Laboratory of Parasitology, Laboratory of Public Health, Laboratory of Veterinary Hydiene
- Research Center for Zoonosis Control: Division of Global Epidemiology, Division of Molecular Pathobiology, Division of Bioresources,
 Division of Collaboration and Education, Division of Bioinformatics, Division of Infection and Immunity, Unit of Risk Analysis and
 Management, Laboratory for Biologics Development, Unit of International Cooperation, Hokudai Center for Zoonosis Control in Zambia (HUCZCZ)
- Faculty of Medicine: Laboratory of Microbiology and Infectious Diseases







Faculty of Veterinary Medicine

Research Center for Zoonosis Contr

Faculty of Medicine

[Research Facilities]

Biosafety level 3 experiment rooms (one of the largest in Japan) State-of-the-art scientific equipment for infectious disease research

[Globalized Education]

Students can access the international collaborating research community consisting of scientists from more than 30 countries, enabling them to explore the chance for internships and joint work.

International Collaboration Network

Institutions in more than 30 countries.

Overseas Center

Hokudai Centre for Zoonosis Control in Zambia Global Institution for Collaborative Research and Education

- University of Melbourne
- University College Dublin
- •King Abdullah University of Science and Technology

Designation from International Organization

WHO Collaborating Centre for Zoonoses

OIE Reference Laboratories for Avian Influenza

[Expected Career Path]

- · International Organizations
 World Health Organization (WHO), World Organisation for Animal Health (OIE), Food and Agriculture Organization
 of the United Nations (FAO),etc
- · Institutions of higher education Universities (inside/outside Japan)
- Industry

Pharmaceutical companies, food and beverage companies, private research institutes, etc.

· Public Research Institute

Ministry of Health, Labour and Welfare, Ministry of Agriculture, Forestry and Fisheries, National Institute for Infectious Diseases, National Institute of Animal Health, Food Safety Commission of Japan, Japan International Cooperation Agency, National Institute of Advanced Industrial Science and Technology, local governments, etc.

[Contact]

General Affairs Section of Graduate School of Veterinary Medicine, Hokkaido University

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Graduate School of Infectious Diseases

Hokkaido University

4-Year PhD Program

[12 Students Each Year] Division of Infectious Diseases

Established from April 2017



Introduction

Recent outbreaks of infectious diseases, such as influenza, Ebola virus disease, and Zika virus disease, are demonstrating the urgent need to develop experts who can take leadership for the control of zoonoses in global society.

Basic and applied research on the ecology of microorganisms, host response to infections, development of prevention, diagnosis and treatment methods, and problem solving with global policy are prerequisite to developing practical and effective strategies to control infectious diseases in humans and animals.

Hokkaido University has established the basis of the international collaboration center for zoonosis control under the 21st Century COE Program and the Global COE Program. The Program for Leading Graduate Schools established a graduate school program for fostering global leaders in veterinary science. To further strengthen international and interdisciplinary education, the Graduate School of Veterinary Medicine will be reorganized to the Graduate School of Veterinary Medicine and the Graduate School of Infectious Diseases.

The Graduate School of Infectious Diseases brings together scientific leaders specialized in medicine, veterinary medicine, pharmacology, science, agriculture, and informatics. Collaborating with an international research community with representatives from more than 30 countries, the faculty members educate new generations of global leaders who can take leadership for the control of zoonoses.



Educate new generations of infectious disease leaders who can contribute to global health solutions.

Mission

Year

The Graduate School of Infectious Diseases educates new generations of leaders who have broad vision, innovative ideas, and the decision-making ability required to make scientific solutions for the worldwide problems of infectious diseases.

Applicant Qualifications

Those who have graduated from a six-year program in Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Science; those who have a master's degree; and those who are judged to have academic ability equal to or greater than a person satisfying the condition mentioned above.

Admission Policy

Applicants for admission are expected to possess the following qualities/abilities

- A desire to contribute to scientific research associated with infectious disease and its control
- Deep understanding of the concept of One Health (human, animal and environmental health)

Year 3 - 4

- Practical ability to work in fields where infection occurs in addition to research in the laboratory
- The willingness and ability to collaborate as part of an international team



Curriculum of Graduate School of Infectious Diseases (all in English)

Year 2

Subjects on Fundamental Veterinary Science and Infectious Diseases

Students learn the scientific basis of infectious diseases and veterinary medicine, including biostatistics, information science, immunology, parasitology, veterinary public health, microbiology veterinary hygiene, as well as practice on analytical

Research Ethics Seminar

Students learn research ethics and regulations and guidelines for the care and use of animals involved in

Academic English

Students take courses of academic English to obtain practical communication skills needed to be effective on the global scene. All the course works and special lectures are given in English.



academic and career counseling

Students are required to design their own research plan and improve scientific

Students report their research progress to supervisors and research advisers.

skills including those in information gathering and biological experiments.

Advanced and Comprehensive Studies on Zoonosis Control

Students acquire essential knowledge and skills that are required to propose countermeasures for zoonosis. The topics include, among others, causative agents of zoonosis and diseases caused by the pathogens.

Core Subjects on Infectious Diseases I

Students acquire expert knowledge and skills on pathogen genomics, zoonosis control, and biological defense.

Core Subjects on Infectious Diseases IIA

Students acquire knowledge and concepts about risk analysis, One Health, and mathematical biology, which are necessary for the implementation of infectious disease control.

Core Subjects on Infectious Diseases IIB

Students acquire knowledge about pathology, transboundary diseases, and pharmaceutical for the implementation of infectious disease control in animals.

Internships Abroad A

Field study in Hokudai Centre for

Zoonosis Control in Zambia

Students acquire job experience on infectious disease control to develop a career plan at the international level through occupational training at international organizations such as the World Health Organization (WHO) and international sections of government organizations and companies.

Internships Abroad B

and develop their career plans at the international

international organizations such as World

level through field study and occupational training at

Research on Infectious Diseases IIA

Fraining in WHO Western Pacific Regio

Students are required to carry out their own research along the line of their research plan under the guidance of supervisors. Students compile their studies for a doctoral thesis in the field of infectious diseases.

The 3rd

Research on Infectious Diseases IIB

Students are required to carry out their own research along the line of their research plan under the guidance of supervisors. Students compile their studies for a doctoral thesis in the field of

QE

Ph.D. in Veterinary Medicine/ZCE

Ph.D. Degree

Infectious Diseases

or Ph.D. Degree in

Veterinary Medicine

Ph.D. Degree in

will be awarded

depending on the

research area of

student's thesis.

Ph.D.

in Infectious

Diseases/ZCE

[Zoonosis Control Expert Program]

A Zoonosis Control Expert (ZCE) is a certificate given to an expert who is regarded as having the ability to take leadership in developing and implementing the control strategy of zoonosis.

Infectious Diseases

Infectious Diseases I

Research on

Advanced Seminar on Participation in seminars held by the student's laboratory to learn the latest information and the trends in the research field. Introducing papers related to the research field at a seminar, and learning how to present topics and discuss them.