

Academic Year 2024  
Hokkaido University

Graduate School  
of Veterinary  
Medicine

Graduate School  
of Infectious  
Diseases

Doctoral Program  
Application Guidelines 2024  
(The application period has changed.)

Entrance Examination for International Students

## Preface

Hokkaido University was founded in 1876 as Sapporo Agricultural College, the first higher educational institution for agricultural sciences in Japan. The university consists of twelve undergraduate schools, twenty graduate schools, and twenty-seven research institutes and centers, with 4,000 faculty members, and administrative and technical members, 11,000 undergraduate students, 6,000 graduate students as well as 2,000 international students from 100 countries (all approximate numbers for personnel and students).

### **Special Training Program for “Fostering Leading Researchers to Develop Global Bioresource Platform”**

Hokkaido University’s Graduate School of Veterinary Medicine and Graduate School of Infectious Diseases (both established in April 2017) have offered a curriculum encompassing two expert training courses (i.e., the Special Course for Zoonosis Control Experts and the Special Course for Chemical Hazard Control Experts) in their areas of excellence. The aim is to nurture researchers in veterinary science with broad outlooks and extensive knowledge and skills both in their own fields of expertise and elsewhere.

The novel coronavirus has reminded us that infectious diseases can easily cross national borders in the age of globalization. Biobanking plays critical roles in the diagnosis and development of treatments for a variety of diseases, especially in the outbreak of novel infectious disease. In the event of disease outbreak, however, the biobanks of individual countries may not be able to cope with the situation, and it is therefore quite important to collaborate with the biobanks of neighboring countries and international organizations to share information and samples. In order to cultivate the scientific and collaborative skills required for the scientists who will participate in the international biobank network, Hokkaido University’s Graduate School of Veterinary Medicine and Graduate School of Infectious Diseases will implement a new educational program with a collaboration training course.

In this program, Hokkaido University’s Graduate School of Veterinary Medicine and Graduate School of Infectious Diseases will foster veterinary science researchers who can promote the construction of pathogen databases and the banking of various biological and environmental samples, which will be useful for disease prevention and countermeasures against unknown infectious and non-infectious diseases. Those who complete the program are expected to play central roles in the formation of an international bioresource platform.

**Reorganizing the current Graduate School of Veterinary Medicine into the new Graduate School of Veterinary Medicine and the Graduate School of Infectious Diseases in April 2017**

The health of humans, the health of animals and the health of the environment together form a single “health circle”. Protecting this circle is key to ensuring a sustainable community.

A variety of emergent and re-emergent infectious diseases, which are major factors challenging the health circle, now threaten the world. Against this backdrop, it is becoming more and more important to train experts who can conduct research from various perspectives and take appropriate measures in collaboration with the international community. In clinical, fundamental and environmental veterinary medicine fields, it is required at home and abroad to further advance, diversify and technicalize graduate education/research and train individuals who can demonstrate international leadership in order to deal with social change, the development of science and technology, and environmental destruction and deepen the health cycle of humans, animals and the environment.

To tackle these challenges, we reorganized the former Graduate School of Veterinary Medicine into the new Graduate School of Veterinary Medicine and the Graduate School of Infectious Diseases in academic 2017 to provide even more advanced and deepened education. With an interdisciplinary and international education/research environment using a collaborative research network that connects more than 30 countries around the world, the Graduate School of Infectious Diseases provides graduate education aimed at producing experts who can combat infectious diseases. Education and research supervision are provided by researchers of the academic staff of the International Institute for Zoonosis Control (The re-organization was implemented in April 2021) who are specialized in veterinary medicine, medicine, pharmaceutical science, natural science and information science, as well as teaching staff of infectious disease-related laboratories at the Faculty of Veterinary Medicine and the Faculty of Medicine.

The new Graduate School of Veterinary Medicine focuses on veterinary science/care education based on the three pillars of animal life science, clinical veterinary medicine and environmental/applied veterinary science, and advances and sharpens education and research that are worthy enough to both lead the world and develop experts in these fields. We establish the Clinical Medicine-Emphasizing Program to train leaders in specialized clinical fields. Education and research supervision are provided by teaching staff of the Faculty of Veterinary Medicine who are not connected to infectious disease-related laboratories.

In addition, we offer a curriculum encompassing two expert training courses (i.e., the Special Course for Zoonosis Control Experts and the Special Course for Chemical Hazard Control Experts) in their areas of excellence. The aim is to nurture researchers in veterinary science with broad outlooks and extensive knowledge and skills both in their own fields of expertise and elsewhere. Leveraging the global networks developed by the faculties of the two schools, the program is also designed to foster the development of international research leaders capable of contributing to the One Health initiative by helping students gain practical experience outside Japan via overseas field studies, internships, joint research with overseas institutions and other programs.

The Graduate School of Veterinary Medicine and the Graduate School of Infectious Diseases welcome students who have the motivation and enthusiasm to learn and overcome global issues related to the health of humans, animals and the environment.

< Graduate School of Veterinary Medicine > \*Please refer to: <https://www.vetmed.hokudai.ac.jp/en/>

#### (1) Educational Aims

The educational principles of the Graduate School of Veterinary Medicine aim to develop scientific researchers/veterinary practitioners with a wide range of accomplishments, high ethical standards and an abundance of sensitivity; experts who will become responsible for the health and well-being of animals, humans and the environment – with outstanding creativity and international awareness – by acquiring specialized and advanced knowledge and skills, through the study and research of veterinary medicine and veterinary sciences. Based on these principles, the educational aims of the Graduate School

of Veterinary Medicine are to nurture human resources and provided domestic and overseas societies with 1) personnel to develop the world's veterinary medicine, veterinary healthcare and life sciences in various occupational fields such as veterinary medicine, life science, environmental conservation and the like, 2) human resources to lead conservation of the environment/ecosystem and regional veterinary healthcare in a variety of fields, such as the agriculture and livestock industries as well as medicine/food-related industries, and 3) pioneers to lead research and education in next generation veterinary medicine and veterinary sciences.

## (2) Admission Policy

Linking animal, human, and environmental health is an important common global issue in the 21st century. At the Graduate School of Veterinary Medicine, according to the above educational principles and educational aims, the learning objectives are successful participation in various fields related to veterinary healthcare, veterinary medicine and life science at home and abroad, and the acquisition of – and ability to display – leadership skills. In order to fulfil these objectives, the Graduate School of Veterinary Medicine seeks students and members of society from both home and abroad, with the following necessary qualities.

- 1) Sufficient basic academic skills to study in the specialist field of veterinary medicine, and the high moral outlook and sense of ethics required of a scientist/veterinary professional.
- 2) Strong motive/interest and high level of awareness to carry out scientific research, and the willingness and passion to clarify issues and solve problems.
- 3) A wide perspective and grasp of veterinary medicine-related matters, as well as the consciousness and outlook to serve both domestic and overseas societies through the health and well-being of animals, humans and the environment.
- 4) The ability to communicate, as well as the enthusiasm and willingness to cooperate, all of which are vital in order to proceed with research and study.

< Graduate School of Infectious Diseases > \*Please refer to: <https://www.infectdis.hokudai.ac.jp/en/>

## (1) Educational Aims

As was seen in the Ebola hemorrhagic fever outbreak cases, the threat of the emerging and re-emerging infectious diseases to the human society and economy has been increasing. Accordingly, the demand of the training for the specialists who deal with the infectious disease research works and its control is raising. To fulfil the social demand, Graduate School of Infectious Diseases pursues the mission to develop the human resources who has the wide knowledge of infectious diseases, flexible imagination and comprehensive decision making ability to contribute the development of the infectious disease research and education field as well as infectious disease control around the world with practical ability and leadership.

## (2) 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)
- 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

## 1. Feature of the graduate schools

1-1. Almost all the lectures, research works and thesis writing will be conducted in English. As an optional,

Japanese-language training is also provided for students for their adaptation of Japanese society and better understanding for Japanese culture especially on their unique disciplines.

- 1-2. Students will be expected to write a thesis based on their own research results conducted during the course and to submit this thesis to multiple examiners (one principal supervisor and three or more adjunct supervisors) on Graduate School of Veterinary Medicine/Graduate School of Infectious Diseases, Hokkaido University for evaluation. Doctoral degree equivalent Ph. D. (Veterinary Medicine)/Ph. D. (Infectious Diseases) will be awarded if he/she has completed their course works with satisfactory academic performance and essential requirements. Submitted thesis will be evaluated its contents and quality by the examiners through their inspection and oral defense by applicants before approval. Submission of a doctoral thesis is allowed only after the student has published two scientific papers as a first author in peer-reviewed international scientific journals in fields of interests.
- 1-3. Students must finish their thesis within four years starting from April 2024.
- 1-4. All students in the graduate schools participate the WISE program, adopted as Doctoral Program for World-leading Innovative & Smart Education by MEXT (Ministry of Education, Culture, Sports, Science and Technology) in 2018. Please check below.

Hokkaido University was adopted as WISE Program (Doctoral Program for World-leading Innovative & Smart Education) by MEXT in 2018. In this program, we promote advanced researches using excellent research and human resources and outstanding experiences on infectious diseases, chemical hazard, and animal and life sciences for contributing One Health. Additionally, PhD course students will gain a variety of experiences of international collaborative research with reliable counterparts, cooperative activity with international organization such as WHO, OIE, and JICA, and/or development research in collaboration with public institution and company. This program aims at fostering professional/expert (superior PhD) who will be able to tackle and resolve problems related to One Health, with a definite idea for disease control and prevention, a holistic viewpoint, a well-balanced international sense, and a comprehensive competence for decision-making and problem-solving. We seek PhD candidates who have sympathy for the aim of this program and will positively involve in various activities of WISE program. Those who participate the WISE program will have opportunity to obtain various financial support such as scholarship, research grant, traveling expenses for internship, overseas collaborative research, and presentation at international conferences etc.

\*Please refer to: <https://onehealth.vetmed.hokudai.ac.jp/en/>.

## **2. Study Areas for Application**

- 2-1. Study area: Applications to all fields of interests in veterinary science and infectious diseases provided by Graduate School of Veterinary Medicine/Graduate School of Infectious Diseases, Hokkaido University will be received.
- 2-2. Supervisors: Sufficient communication with expected supervisors and his/her endorsement will be essential before submitting this application. Since the application has a dedicated procedure for entrance, all of applicants are required to find a supervisor in respective field of study, and consult with him/her through available manors. For detailed information of fields of research projects provided

and respective supervisor, refer to the list of professors on the below.

### 3. Number of Students for each selection

<u>Selection</u>	<u>Graduate School of Veterinary Medicine</u>	<u>Graduate School of Infectious Diseases</u>	<u>Student Capacity</u>
<u>Special Selection Quota for International Students(WISE Program Scholarship)</u>	A select few applicants will be accepted		<u>16 for Graduate School of Veterinary Medicine</u>
<u>Selection Quota for International Students (Self-Financed)</u>	<u>Not limited</u>		<u>12 for Graduate School of</u>
<u>Other (General Selection etc.)</u>			<u>Infectious Diseases</u>

A few students will be selected as candidates for the World Leading Innovative and Smart Education (WISE) Program Scholarship. The WISE Scholarship will be awarded for a period of four years (From April 2024 to March 2028) and no extensions will be made.

Note: All students in the graduate schools participate the WISE program regardless of type of Scholarship and Selection, adopted as Doctoral Program for World-leading Innovative & Smart Education by MEXT in 2018.

### 4. Scholarships

#### 4-1.The World Leading Innovative and Smart Education (WISE) Program Scholarship (Special Selection Quota for International Students)

This scholarship is provided by the WISE program.

(1) Number of Recipients: **A select few applicants will be accepted**

(2) Fees

Examination fee, Enrollment Fee and Tuition Fee: Exempted

(3) Scholarship payments

Stipend for Doctoral Course Student:150,000 Yen/month (yearly revision will be made) for four years will be awarded from April 2024 to March 2028. Extension of study period or staying down the course will not be allowed.

\*Scholarship will not be paid if a student is privately absent from the Graduate School of Veterinary Medicine/Graduate School of Infectious Diseases long enough not to be able to show up for regular summons, or if proceeding of his/her studies are not satisfactory in the course/research works.

(4) Website: <https://onehealth.vetmed.hokudai.ac.jp/en/>

#### 4-2. Self-Financed (Selection Quota for International Students)

(1) Number of Recipients: Not limited (please refer to the table above)

(2) Fees

Examination fee: 30,000 Yen

Enrollment Fee: 282,000 Yen (scheduled)

Tuition Fee: Tuition for the first semester: 267,900 yen (535,800 yen per year) (scheduled)

If the tuition is revised while you are enrolled in the doctoral program, then the new tuition will be effective as of the time of that revision.

(3) Scholarship payments

None.

Applicants can prepare a scholarship by yourself as needed in advance, for example.

#### **4-3. Scholarships after enrollment**

Even after the enrollment, there are chances to be a scholarship (other than the WISE program scholarship mentioned above) holder.

For further details, please ask your expected supervisor.

### **5. Qualification Requirements**

Some parts of the Qualification Requirements differ depending on your scholarship which you apply for in this entrance examination application as below.

Applicants who already had or expect to have a scholarship for the doctoral course in advance can also apply for the Selection Quota for International Students (Self-Financed)

\* If you have any questions about the applicant qualifications, contact the Academic Affairs Section, Administration Office for Veterinary Medicine as early as possible.

Selection	Special Selection Quota for International Students	Selection Quota for International Students (Self-Financed)
Scholarship	The WISE Program Scholarship	None
5-1 Educational Background (Common in all selections below)	(1) Those who have graduated or are expected to graduate from a six-year program in Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Sciences in Japan by March 31, 2024. (2) Those who have completed or are expected to complete 18 years of formal education overseas (with a final program in Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Sciences) by March 31, 2024. (3) Those who have completed or are expected to complete 18 years of formal education provided by an overseas educational institution by way of distance study program (with a final program in Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Sciences) while residing in Japan by March 31, 2024. (4) Those who have completed or are expected to complete a study program at an educational institution in Japan by March 31, 2024, that is recognized as equivalent to a university in a foreign country (limited to individuals who have completed 18 years of education with a final program in Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Sciences) and that is designated by the Minister of Education, Culture, Sports, Science, and Technology. (5) Those who have completed or are expected to complete a five-year or more program of Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Sciences of a university in a foreign country or an overseas educational institution (including those who have completed or are expected to complete a study program provided by an overseas educational institution by way of distance study program while residing in Japan, and those who have completed or are expected to complete a study program at a designated educational institution as provided for in the preceding item, that is recognized as equivalent to a university in a foreign country) and have been awarded or are expected to be awarded a Bachelor's degree or a degree equivalent by March 31, 2024. (6) Those designated by the Minister of Education, Culture, Sports, Science and Technology.	

	<p>i) Those who have graduated from a university (other than programs in Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Sciences).</p> <p>ii) Those who have completed 16 years of formal education overseas.</p> <p>(7) Those who fall under any of the following categories, and are judged by the Graduate School to have earned credits required for the completion in the School of Veterinary Medicine, Hokkaido University or something equivalent with excellent academic performance.</p> <p>(a) Those who have been enrolled for four or more years in a six-year program of Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Sciences in Japan by March 31, 2024.</p> <p>(b) Those who have been completed or are expected to complete 16 years of school education overseas (with a final program in Veterinary Medicine, Medicine Dentistry or Pharmaceutical Sciences), by March 31, 2024.</p> <p>(c) Those who have completed or are expected to complete 16 years of formal education provided by an overseas educational institution by way of distance study program (with a final program in Veterinary Medicine, Medicine Dentistry or Pharmaceutical Sciences) while residing in Japan March 31, 2024.</p> <p>(d) Those who have completed or are expected to complete a 16-year study program at an educational institution in Japan that is recognized as equivalent to a university in a foreign country (with a final program in Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Sciences) and that is designated by the Minister of Education, Culture, Sports, Science, and Technology by March 31, 2024.</p> <p>(8) According to individual qualification examination by the Graduate School, those who are judged to have academic ability equal to or greater than a person completing a 6-year program in a Veterinary Medicine, Medicine, Dentistry or Pharmaceutical Sciences, and who will be 24 years of age or older by March 31, 2024.</p>
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Selection	Special Selection Quota for International Students	Selection Quota for International Students (Self-Financed)
Scholarship	The WISE Program Scholarship	None
5-2 Nationality	Non-Japanese citizens, residing outside Japan in principle.	Same as on the left.
5-3 Age	Less than 40 years of age at the time of enrollment.	Same as in the 5-1.
5-4 Health conditions	Applicant must be physically and mentally healthy enough to pursue study at university.	Same as on the left.
5-6 Remarks	<p>(1) Military personnel and civilian employees in the armed forces are ineligible for admission if they remain on active duty.</p> <p>(2) Those who fail to arrive within the required time period will be subject to cancellation of their admission.</p> <p>(3) Those applicants who fail to complete 18 years of education in their respective countries are ineligible for admission in principal.</p>	None

#### 5-7. Submittal of documents

All correspondence related to this application must be received by the Committee below by September 22, 2023. The application documents shall be submitted by the registered airmail, courier service or other services that provide tracking and delivery confirmation options (DHL, FedEx, EMS, etc.)

To: The Committee for International Exchange  
Graduate School of Veterinary Medicine, Hokkaido University  
Kita-18 Nishi-9, Kita-ku, Sapporo, Hokkaido 060-0818, Japan  
Tel:+81-11-706-5175  
Fax:+81-11-706-5190



## 5-8. Information

Please contact the following section, if having any questions.

To: Academic Affairs Section, Administration office of Veterinary Medicine,  
Hokkaido University  
Kita-18, Nishi-9, Kita-ku, Sapporo 060-0818, Japan  
E-mail: [kyomu@vetmed.hokudai.ac.jp](mailto:kyomu@vetmed.hokudai.ac.jp)  
Fax: +81-11-706-5190

## **6. Application Procedure for the program**

### **6-1. Essential process before application**

- (1) Prior to submission of official application, applicants should contact to an expected supervisor in the field of interest and have interview by any substantial mean. Research proposal should be well planned through sufficient communication with respective expected supervisor. Single-handed applications may not be accepted.
- (2) After the application being received, submitted documents may not be returned.
- (3) The procedure is illustrated in the flow chart.
- (4) Applicants who intend to apply for a scholarship other than listed above.

You need to do the procedure by yourself.

Examples of scholarships

<b>Scholarships</b>	<b>How to know the application</b>
CSC Program (Scholarship Program supported by China Scholarship Council)	Please refer to the website of CSC.
Hokkaido University President's Fellowship	Only applicable for students of our partner university Ask an International Office of your university.
MEXT Scholarship Embassy Recommendation	Please refer to the website of Japanese embassy in your country
JICA Innovative Asia Program	Ask your expected supervisor in our graduate school
Egyptian Government Scholarship	Please ask the responsible institution in Egyptian government

### **6-2. Documentation required for submission**

All the following documents must be submitted by the designated deadline.

To avoid any damages to the documents, please do not use staples.

- (1) Checklist
- (2) Form A: Application Form
- (3) Form B: Curriculum vitae
- (4) All past official academic transcripts [The originals]
- (5) Certified photocopy of Bachelor's and/or Master's degree certificate, or original copy of graduation certificate letter from the university

\*Those who graduated or will graduate from a university in China (excluding Taiwan, Hong Kong and Macau) must submit the following documents in addition to a Certificate of (Expected) Graduation.

Graduates:

a. Online Verification Report of Higher Education Qualification Certificate (教育部学历证书电子注册备案表)

b. Graduation Diploma (毕业证书) and Degree Diploma (学位证书)

Expected Graduates:

a. Online Verification Report of Student Record (教育部学籍在线验证报告)

Obtain documents “a” above by requesting it at “中国高等教育学历证书查询”:

<http://www.chsi.com.cn/xlcx/bgys.jsp>.

Also be sure that there are 15 or more days left until the expiration date of the online verification at the time of its submission.

(6) Form C: Documents for the applicant qualification screening (if applicable)

(7) Form D: Research plan

(8) Form E: Career plan after graduation from the Graduate School

(9) Form F: Evaluation report from the expected supervisor

(10) Form G: Report on scientific and academic activities

(11) Two letters of recommendation

Letter 1: Letter to the President of Hokkaido University by the Dean or Head of the institution/employing body.

Letter 2: Letter to the President of Hokkaido University from the applicant's supervising professor, other teaching staff, or a supervisor in the employing body who has knowledge of applicant. Information about the applicant's educational excellence with the details (e.g. GPA, ranking in his/her university, received awards) should be included.

(12) Form H: Short essay of approximately 1,200 words

(13) Form I: English proficiency

\*In principle, all applicants of all examination categories are required to submit a score from an external English tests, together with the other application forms for Entrance Examination. A minimum TOEFL iBT score of 55 or an equivalent score from other English tests (within 2 years before the date of the Entrance Examination) is required for application.

Therefore, all potential applicants for Graduate School of Veterinary Medicine • Infectious Diseases are advised to plan obtaining a score of external English tests well in advance.

(14) Photocopy of passport or Certificate of citizenship or proof of residence in the applicant's home country

(15) Three photographs taken within the last six months (two 30mm × 25mm and one 40mm × 30mm)  
(for App form, Student Card and Application for Certificate of Eligibility)

(16) Form J: Medical certificate officially issued by medical professionals in the format

(17) Summary of Bachelor's and/or Master's thesis, consisting of less than 2,000 words

## **REMARKS**

(1) The above documents should be type-written in English and of uniform size based on the A4 format. If the original document is written in another language, an original of Japanese or English official

translation with official seal must be attached.

- (2) Applications will not be received if any of the above documents are incomplete, incorrect or lacking supporting evidence. They will not be considered if they arrive after the deadline.
- (3) All documents will not be returned once submitted.

### **6-3. Payment of the Examination Fee**

Examination Fee: 30,000 Yen

Examination fee payment must be completed through the online-system

(<https://e-apply.jp/e/hokudai-vetmed/>) during the following period: Oct 25, 2023 – Oct 30, 2023.

For applicants for the WISE Program Scholarship, the payment of the examination fee can be deferred. The applicants nominated for these scholarships are exempt from payment of the examination fee.

### **6-4. Selection process for the admission**

#### **(1) Application Document Screening**

Process	Application Period	The result of First Screening
Application Document Screening	Jun 5, 2023 - Oct 19, 2023	Nov 2, 2023

The Committee for International Exchange in Graduate School of Veterinary Medicine and Graduate School of Infectious Diseases, Hokkaido University will carefully evaluate your potency to be eligible for completion as a preliminary evaluation through submitted information. Official selection will be then done by the committee on the basis of the quality of your documents with special reference to form C, an essay in the form A, and the summary of master degree thesis, if applicable. Academic transcripts, recommendation letters, and English proficiency may also be taken into consideration.

#### **(2) Oral Examination**

Process	Application Period	The result of the Second Screening and confirmation of scholarship
Oral Examination	Nov 13, 2023 - Nov 17, 2023	Dec 13, 2023– Dec 18, 2023

You will be asked questions in English mainly about your previous research and knowledge in your chosen field of education/research.

\*Interview will be conducted via Zoom or teleconference system.

\* The interview will not be rescheduled due to the unstable environment for internet connection. So, we will conduct the internet connection test. Please prepare the most stable environment for internet connection.

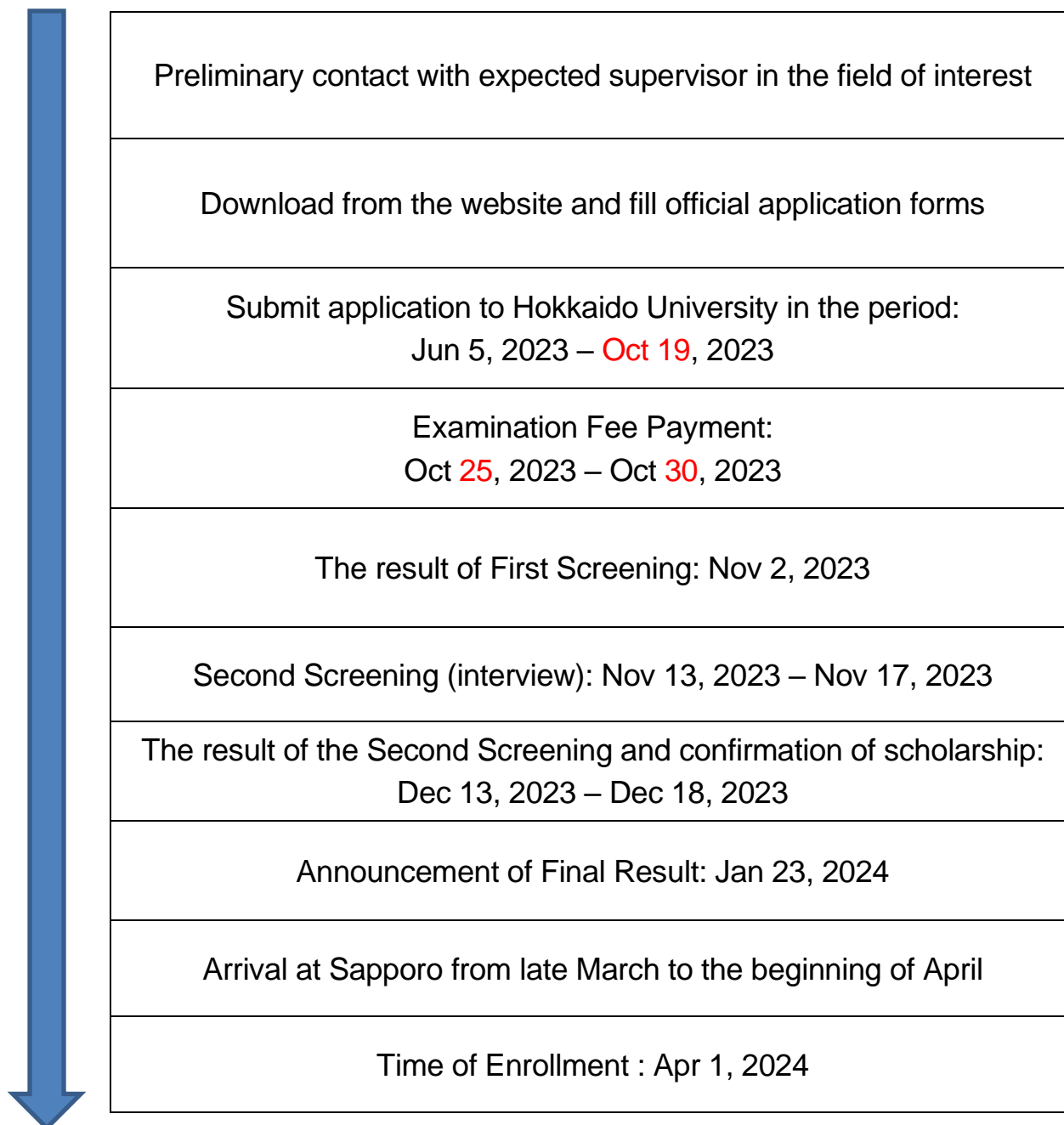
#### **6-5. Notification of the results**

Applicants will be notified of the results on January 23, 2024. Successful applicants will be enrolled as full-time graduate students at Graduate School of Veterinary Medicine/Graduate School of Infectious Diseases, Hokkaido University.

#### **6-6. Supplementary Explanation for the Scholarship**

- (1) Time of arrival: Successful applicants must arrive in Japan from late March to the beginning of April. The specific period will be announced to the successful applicant later.
- (2) Term of the study: Students must complete thesis research and necessary evaluation for a Ph.D. within four years.
- (3) Personal accidental insurance for students pursuing education and research: This insurance compensates for physical casualties from which students suffer in their intra-curricular activities, both on and off campus, and extra-curricular activities on campus. All the students must enroll. The premium is about 4,730 Yen for four years (subject to change).
- (4) Visa Requirement: Successful applicants must obtain a College Student (ryuugaku 留学) visa from the Japanese diplomatic mission in the country of their nationality, in principle, prior to their arrival in Japan and the period of study as a graduate student at the graduate school.

## Flow Chart of the Application/Selection Procedure



# List of supervisors and study area/research contents

As of May 1, 2023

## Educational Organization: Graduate School of Veterinary Medicine

<b>Faculty of Veterinary Medicine</b> (*To send email to a professor you want to contact with, use address with the corresponding laboratory ID + vetmed.hokudai.ac.jp (i.e. ID@ vetmed.hokudai.ac.jp)	
	<b>Laboratory of Anatomy (ID: y-kon@)</b>  Professor: KON Yasuhiro Associate Professor: ICHII Osamu  Study area/Research contents 1) Morphology and molecular biology of autoimmune diseases 2) Morpho-genetic analysis of urogenital disorders 3) Functional analysis of local innate immune structures
	<b>Laboratory of Physiology (ID:souya@)</b>  Associate Professor: YAMAGUCHI Soichiro Assistant Professor: YANO Saori  Study area/Research contents 1) Ion channels and transporters 2) Mechanisms of epithelial ion transport 3) Brain science for parenting and attachment 4) Behavioral and physiological alteration in pregnancy
	<b>Laboratory of Biochemistry (ID: k-kimura@)</b>  Professor: KIMURA Kazuhiro Associate Professor: OKAMATSU Yuko  Study area/Research contents 1) Neural and hormonal control of metabolism 2) Mesenchymal and epithelial interaction in the mammary gland 3) Regulation of metabolic adaptation to environment in mammals
	<b>Laboratory of Pharmacology (ID: otsuguro@)</b>  Professor: OTSUGURO Ken-ichi Assistant Professor: EGUCHI Ryota  Study area/Research contents 1) Action of gliotransmitters 2) Neurobiology and neuropharmacology 3) Functional analysis of ion channels and receptors
	<b>Laboratory of Radiation Biology (ID: inanami@)</b>  Professor: INANAMI Osamu Associate Professor: YASUI Hironobu  Study area/Research contents 1) Cellular and molecular responses to ionizing radiation 2) Tumor microenvironment in cancer radiotherapy 3) Development of novel radiosensitizing and radioprotective agents 4) Application of ESR spectroscopy in biological systems

	<p><b>Laboratory of Laboratory Animal Science and Medicine</b> (ID: mmorimat@)</p> <p>Professor: MORIMATSU Masami Associate Professor: NAKAMURA Teppei</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Genetic analysis of the laboratory animal</li> <li>2) Production of genetically modified animals</li> </ol>
	<p><b>Laboratory of Toxicology</b> (ID: ishizum@)</p> <p>Professor: ISHIZUKA Mayumi (Professor: IKENAKA Yoshinori) Associate Professor: NAKAYAMA Shouta</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Effect of environmental chemicals on wild and domestic animals</li> <li>2) Establishment of biomarkers to assess the health of ecosystem</li> <li>3) Regulation of expression and roles of cytochrome P450 and phase II enzymes</li> <li>4) Species differences in sensitivity to toxicity of xenobiotics</li> </ol>
	<p><b>Laboratory of Wildlife Biology and Medicine</b> (ID: tsubota@)</p> <p>Professor: TSUBOTA Toshio Associate Professor: SHIMOZURU Michito Assistant Professor: SASHIKA Mariko</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Ecology and physiology of wildlife such as bears, deer and seals in Hokkaido</li> <li>2) Ecology and infectious disease in wildlife</li> <li>3) Wildlife management and conservation medicine</li> </ol>
	<p><b>Laboratory of Veterinary Internal Medicine</b> (ID: mtaki@)</p> <p>Professor: TAKIGUCHI Mitsuyoshi Associate Professor: NAKAMURA Kensuke Assistant Professor: YOKOYAMA Nozomu</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Diagnostic imaging in companion animal practice</li> <li>2) Molecular pathogenesis of inflammatory and immune-mediated diseases</li> <li>3) Application of therapeutic ultrasound in veterinary medicine</li> <li>4) Diagnosis and treatment of cardiopulmonary disease</li> </ol>
	<p><b>Laboratory of Veterinary Surgery</b> (ID: okumuram@)</p> <p>Professor: OKUMURA Masahiro Assistant Professor: KIM Sangho Assistant Professor: SUNAGA Takafumi</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Diagnostic and therapeutic interventions of joint diseases and orthopedic conditions in dogs and horses</li> <li>2) Establishment of diagnostic and therapeutic measure in osteoarthritis in small animals</li> <li>3) Plate fixation system using newly formed metal materials for fracture repair in dogs</li> <li>4) Autologous and allogenic marrow transplant for canine lymphoproliferative disorders</li> </ol> <p>Verification of volumetric modulated arc radiotherapy in dogs with spontaneously occurring solid tumors</p>
	<p><b>Laboratory of Comparative Pathology</b> (ID: tkimura@)</p> <p>Professor: KIMURA Takashi Assistant Professor: AOSHIMA Keisuke</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Pathogenesis of animal infectious diseases</li> <li>2) Host cell factors involved in the development of encephalitis/encephalopathy</li> <li>3) Molecular pathology of animal cancer epigenetics and stem cells</li> <li>4) Development of rapid detection methods for equine glanders</li> </ol>

	<p><b>Laboratory of Theriogenology</b> (ID: katagiri@)</p> <p>Professor: KATAGIRI Seiji Associate Professor: YANAGAWA Yojiro</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Infertility of dairy cows</li> <li>2) Use of male factors to improve fertility</li> <li>3) Reproductive physiology of zoo and wildlife</li> <li>4) Assisted reproductive technology in zoo and wildlife</li> </ol>
	<p><b>Laboratory of Molecular Medicine</b> (ID: inazo@)</p> <p>Professor: INABA Mutsumi</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Molecular bases for inherited red cell membrane disorders</li> <li>2) Molecular mechanisms for the differentiation and maturation of erythroid cells</li> <li>3) Molecular mechanisms for the ER-quality control/ER-associated degradation and the intracellular trafficking of transmembrane proteins</li> </ol>
	<p><b>Laboratory of Advanced Veterinary Medicine</b>(ID: mtaki@)</p> <p>(Professor: TAKIGUCHI Mitsuyoshi ) (Associate Professor: HOSOYA Kenji) (Assistant Professor: MORISHITA Keitaro)</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Genetical diagnosis for animal tumors and therapeutic methods</li> <li>2) Clinical application of contrast-enhanced ultrasonography in small animal practice</li> </ol>
	<p><b>Hokkaido University Veterinary Teaching Hospital</b></p> <p>(Professor: TAKIGUCHI Mitsuyoshi ) Professor: IKENAKA Yoshinori (See Toxicology Lab above.) Associate Professor:YAMAZAKI Jumpei (The role of DNA methylation in aging and cancer development) Associate Professor: HOSOYA Kenji (See Advanced Veterinary Medicine Lab above.) Associate Professor: TAMURA Jun (Development of veterinary anesthesia and pain management) Lecturer: SASAKI Noboru (Clinical application of therapeutic ultrasound, liquid biopsy using LC/MS/MS) Assistant Professor: MORISHITA Keitaro (See Advanced Veterinary Medicine lab above.) Specially Appointed Assistant Professor: SHIMBO Genya (Diagnostic imaging in companion animal practice) Specially Appointed Assistant Professor: SASAOKA Kazuyoshi (Small animal neurology, hospital infection) Specially Appointed Assistant Professor: OYAMA Norihiko (Small animal anesthesiology and pain management) Specially Appointed Assistant Professor: KINOSHITA Ryohei (Establishment of patient-derived xenografts and new therapeutics for canine tumor) Specially Appointed Assistant Professor: TAKEUCHI Kyosuke (Small animal soft tissue surgery)</p>



## Educational Organization: Graduate School of Infectious Diseases

### Faculty of Veterinary Medicine

(\*To send email to a professor you want to contact with, use address with the corresponding laboratory ID + vetmed.hokudai.ac.jp (i.e. ID@ vetmed.hokudai.ac.jp)

#### Laboratory of Microbiology (ID: sakoda@)

Professor: SAKODA Yoshihiro  
Associate Professor: ISODA Norikazu  
Lecturer: HIONO Takahiro

##### Study area/Research contents

- 1) Molecular basis of ecology and pathogenicity of influenza virus
- 2) Molecular basis of ecology and pathogenicity of pestivirus
- 3) Development of new diagnosis method and effective vaccine for viral infections

#### Laboratory of Infectious Diseases (ID: konnai@)

Professor: KONNAI Satoru  
(Specially Appointed Professor: OHASHI Kazuhiko)  
Associate Professor: MURATA Shiro

##### Study area/Research contents

- 1) Analysis of the molecular pathogenesis of Marek's disease virus and bovine leukemia virus
- 2) Development of anti-tick vaccine to prevent tick-transmitted diseases
- 3) Analysis of immune responses against infections in domestic animals

#### Laboratory of Parasitology (ID: nnonaka@)

Professor: NONAKA Nariaki  
Associate Professor: NAKAO Ryo

##### Study area/Research contents

- 1) Pathophysiology, epidemiology and control of parasitic diseases
- 2) Host-parasite and vector-parasite interplays in parasitic diseases
- 3) Genome analysis of parasites and vectors
- 4) Studies on symbiotic microorganisms in vector arthropods

#### Laboratory of Public Health (ID: kariwa@)

Professor: KARIWA Hiroaki  
Associate Professor: KOBAYASHI Shintaro

##### Study area/Research contents

- 1) Diagnosis and pathogenesis of flavivirus infection
- 2) Ecology and diagnosis of hantavirus infection

#### Laboratory of Veterinary Hygiene (ID: horiuchi@)

Professor: HORIUCHI Motohiro  
Associate Professor: SATO Toyotaka  
(Specially Appointed Assistant Professor : KOMATSU Yusuke)

##### Study area/Research contents

- 1) Comprehensive analysis of pathobiology and neuropathogenesis of prion diseases
- 2) Analysis of neuron-glia interaction in intractable neurodegenerative diseases
- 3) Antimicrobial resistance and etiology of food-borne diseases

### International Institute for Zoonosis Control

(\*To send email to a professor you want to contact with, use address with the corresponding department ID + czc.hokudai.ac.jp (i.e. ID@ czc.hokudai.ac.jp)

#### Division of Global Epidemiology (ID: atakada@)

Professor: TAKADA Ayato  
Associate Professor: IGARASHI Manabu

<p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Ecology, evolution, and natural hosts of viruses</li> <li>2) Pathogen-host interactions</li> <li>3) Structure and function of pathogen and host proteins</li> <li>4) Development of diagnostics and therapeutics for viral infections</li> </ol>
<p><b>Division of Molecular Pathobiology</b> (ID: orbay@)</p> <p>Associate Professor: ORBA Yasuko Lecturer: SASAKI Michihito</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Cellular and molecular biology of interaction between virus and host cells</li> <li>2) Identification of cellular factors preventing viral infection</li> <li>3) Establishment of therapeutic strategy for viral infectious diseases</li> <li>4) Surveillance of viral infectious diseases</li> </ol>
<p><b>Division of Bioresources</b> (ID: suzuki@)</p> <p>Professor: SUZUKI Yasuhiko Professor: NAKAJIMA Chie Assistant Professor: THAPA Jeewan</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Surveillance of zoonoses caused by bacterial pathogens</li> <li>2) Elucidation of drug resistance acquisition mechanism in bacteria</li> <li>3) Development of diagnostics for bacterial zoonoses</li> <li>4) Development of biopharmaceuticals</li> </ol>
<p><b>Division of Collaboration and Education</b> (ID: junya @)</p> <p>Associate Professor: YAMAGISHI Junya Assistant Professor: HAYASHIDA Kyoko Assistant Professor: SUGI Tatsuki</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Functional genomics of protozoan parasites (Trypanosoma, Theileria, Babesia, Plasmodium), Rickettsia and vector arthropods (tsetse fly, tick)</li> <li>2) Investigation of host-pathogen interactions by transcriptomics</li> <li>3) Development of methods in genome epidemiology</li> </ol>
<p><b>Division of Bioinformatics</b> (ID: itok@)</p> <p>Professor: ITO Kimihito Associate Professor: OMORI Ryosuke</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Computer prediction on the evolution of zoonotic pathogens</li> <li>2) Mathematical modeling and statistical analysis of infectious diseases</li> <li>3) Development of bioinformatics algorithms and tools</li> </ol>
<p><b>Division of Infection and Immunity</b> (ID: hidea-hi@)</p> <p>Professor: HIGASHI Hideaki</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Investigation of host response against zoonotic pathogens</li> <li>2) Genome sequencing and analysis of zoonotic pathogens</li> <li>3) Structure-based study of bacterial pathogens and cellular molecules</li> <li>4) Development of diagnostic and therapeutic methods for bacterial infectious diseases</li> </ol>
<p><b>Division of Risk Analysis and Management</b> (ID: matsuk@)</p> <p>Associate Professor : MATSUNO Keita Assistant Professor: OHARI Yuma</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Epidemiology of emerging infectious diseases</li> <li>2) Evolutional mechanism and ecological interface of pathogens and vectors</li> <li>3) Molecular basis of virus-vector-host interaction</li> </ol>

	<p><b>Division of Biologics Development</b> (ID: shingaim@)</p> <p>Associate Professor: SHINGAI Masashi  Assistant Professor: SEKIYA Toshiki  Assistant Professor: OHNO Marumi</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Development of biologics for viral infections</li> <li>2) Analysis and control of immune responses to viral infections</li> </ol>
	<p><b>Division of International Research Promotion</b> (ID: kajihara@)</p> <p>Associate Professor: KAJIHARA Masahiro  Assistant Professor: OGATA Shohei  Specially Appointed Assistant Professor: NAO Naganori  Specially Appointed Assistant Professor: NOMURA Naoki</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Development of international cooperation</li> <li>2) Identification of natural host animals and transmission routes of zoonotic pathogens</li> <li>3) Comprehensive screening of unknown pathogens</li> <li>4) Prevention and control of zoonoses</li> </ol>
	<p><b>Division of Pathogen Structure</b> (ID: h-fukuhara@)</p> <p>Associate Professor: FUKUHARA Hideo</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Structural analysis of infectious pathogens</li> <li>2) Protein engineering for the development of vaccines and immunotherapeutics</li> </ol>
<p><b>Institute for Genetic Medicine</b>  (*To send email to a professor you want to contact with, use address with the corresponding department ID + igm.hokudai.ac.jp (i.e. ID@ igm.hokudai.ac.jp)</p>	
	<p><b>Division of Microbiology and Infectious Diseases</b> (ID: yosimatu@)</p> <p>Associate Professor: MORIMATSU-YOSHIMATSU Kumiko</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Investigation of rodent borne zoonoses</li> <li>2) Development of serological and molecular biological diagnostic methods</li> <li>3) Analysis of pathogenesis of virus infections by using animal model</li> </ol>
<p><b>Institute for Vaccine Research and Development</b>  (*To send email to a professor you want to contact with, use address with the corresponding department ID + ivred.hokudai.ac.jp (i.e. ID@ ivred.hokudai.ac.jp)</p>	
	<p><b>Division of Vaccine Research and Development</b> (ID: h-sawa@)</p> <p>Professor: SAWA Hirofumi</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Construction of library of zoonotic pathogens &amp; selection for vaccine R&amp;D</li> <li>2) Development of vaccines for influenza, coronavirus infectious diseases and tuberculosis</li> <li>3) Basic research for vaccine development</li> </ol>