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Academic Year 2021

# Hokkaido University

Graduate School  
of Veterinary  
Medicine

Graduate School  
of Infectious  
Diseases

## Doctoral Program Application Guidelines 2021 (admission in April ▪ 2nd round application)

- Regular Selection

\* Guidelines for applicants wishing to be enrolled in either Graduate School of Veterinary Medicine or Graduate School of Infectious Diseases

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## **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 Research Center for Zoonosis Control who are specialized in veterinary medicine, medicine, pharmaceutical sciences, science and information science, as well as teaching staff of infectious disease-related laboratories at the Faculty of Veterinary Medicine and those of 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.

Also, 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/>.

# Contents

※Applicants for the Graduate School of Veterinary Medicine should read “ 1. About Graduate School of Veterinary Medicine (page 1)” and “3. Applicant Qualifications (page 7)” and thereafter.

※Applicants for the Graduate School of Infectious Diseases should read “ 2. About Graduate School of Infectious Diseases (page 4)” and “3. Applicant Qualifications (page 7)” and thereafter.

## (Regarding Graduate School of Veterinary Medicine)

1. About Graduate School of Veterinary Medicine (Educational Aims, Admission Policy, Number of Students Accepted, Examination Category and Outline, Selection Procedure, Fields of Education/Research, Supervisors, and Written Examination Subjects) . . . . . 1

## (Regarding Graduate School of Infectious Diseases)

2. About Graduate School of Infectious Diseases (Educational Aims, Admission Policy, Number of Students Accepted, Examination Category and Outline, Selection Procedure, Fields of Education/Research, Supervisors, and Written Examination Subjects) . . . . . 4

## (Regarding both graduate schools)

3. Applicant Qualifications . . . . . 7
4. Application Procedures . . . . . 8
5. Date, Time, and Place of Examination . . . . . 11
6. Announcement of Successful Applicants . . . . . 11
7. Entrance Fee and Other Payments . . . . . 11
8. Long-Term Study System . . . . . 11
9. Financial Aid and Research Support for Ph.D. Students . . . . . 12
10. Privacy Policy . . . . . 13
11. Miscellaneous . . . . . 13
- Organization . . . . . 14
- List of supervisors and study area/research contents . . . . . 15

# Doctoral Program Application Guidelines 2021

- Graduate School of Veterinary Medicine
- Graduate School of Infectious Diseases

## Regarding Graduate School of Veterinary Medicine

Following are guidelines for the Graduate School of Veterinary Medicine. Applicants should carefully read this clause, and the clauses on page 7 and thereafter.

### 1. About Graduate School of Veterinary Medicine

#### (1) Educational Aims of the Graduate School of Veterinary Medicine

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.

### (3) Number of Students Accepted

Division, Graduate School	Student capacity	Examination Category
		Regular Selection
Division of Veterinary Medicine, Graduate School of Veterinary Medicine	16	A small number of students

### (4) Examination Category and Outline

	Examination Category
	Regular Selection
Eligible person	Those who fulfill the qualification in “3. Applicant Qualification”.
Application period	Dec.21 – Jan.5 (Nov.27 – Dec.5: Those who are required to have the applicant qualification screening)
Place of examination	Sapporo Campus, Hokkaido Univ. (Sapporo city, JAPAN)
Dates of examination	Jan.26 – Jan.27
Selection procedure	Academic examination • Written examination (Major subject,) • Oral examination *

\* **【Important】** About submitting the English score

In a typical year, all applicants must submit a minimum TOEFL iBT score of 55 or an equivalent score from other English tests (for example: TOEIC score of 540 or IELTS score of 3.3) during the application period. Only test dates since January 27, 2019 are acceptable. However, due to the coronavirus outbreak, most English tests have been canceled or postponed around the world. Therefore, we will conduct our own Foreign Language test (in English) for applicants who cannot submit the score as outlined above. Please refer to (5) Selection Procedures below.

### (5) Selection Procedures

#### 【Regular selection】

Admission of applicants is determined comprehensively on the basis of results of their academic examination (written examination and oral examination), an external English tests (TOEFL, TOEIC, IELTS, etc...) and their transcripts.

#### Academic examination

##### (1) Written examination

Major subject: Subject in the field of education/research of your choice

※In the case that you cannot submit an English score, our own Foreign Language test (in English) will be conducted for you. When you take the test, you are not allowed to use a dictionary.

\* Applicants who are citizens of designated countries\*<sup>1)</sup> and have completed undergraduate studies in English and have subsequently worked in an English speaking country are exempt.

designated countries: Australia, Canada (except Quebec), New Zealand, Republic of Ireland, United Kingdom and United States.

(2) Oral examination

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

(6) Fields of Education/Research, Supervisors, and Written Examination Subjects

Division, Graduate School	Field of Education/Research	Supervisor	【Regular Selection】 Written Examination Subject	
			Major Subject	Foreign Language
Division of Veterinary Medicine, Graduate School of Veterinary Medicine	Anatomy	Yasuhiro KON	Anatomy	*2
	Physiology	Soichiro YAMAGUCHI	Physiology	
	Biochemistry	Kazuhiro KIMURA	Biochemistry	
	Pharmacology	Ken-ichi OTSUGURO	Pharmacology	
	Radiation Biology	Osamu INANAMI	Radiation Biology	
	Laboratory Animal Science and Medicine	Takashi AGUI	Laboratory Animal Science and Medicine	
	Toxicology	Mayumi ISHIZUKA	Toxicology	
	Wildlife Biology and Medicine	Toshio TSUBOTA	Wildlife Biology and Medicine	
	Veterinary Internal Medicine	Mitsuyoshi TAKIGUCHI <sup>1)</sup>	Veterinary Internal Medicine	
	Veterinary Surgery	Masahiro OKUMURA	Veterinary Surgery	
	Comparative Pathology	Takashi KIMURA	Comparative Pathology	
	Theriogenology	Seiji KATAGIRI	Theriogenology	
	Molecular Medicine	Mutsumi INABA	Molecular Pathology	
	Advanced Veterinary Medicine	Mitsuyoshi TAKIGUCHI <sup>1)</sup>	Clinical Pathology	

\*1 In charge of two fields

\*2 All applicants must submit a minimum TOEFL iBT score of 55 or an equivalent score from other English tests (for example: TOEIC score of 540 or IELTS score of 3.3) during the application period. Only test dates since January 27, 2019 are acceptable. However, due to the coronavirus outbreak, most English tests have been canceled or postponed around the world. Therefore, we will conduct our own Foreign Language test (in English) for applicants who cannot submit the score as outlined above. Please refer to (5) Selection Procedures above.

Also, Applicants who are citizens of designated countries and have completed undergraduate studies in English and have subsequently worked in an English speaking country are exempt.

designated countries: Australia, Canada (except Quebec), New Zealand, Republic of Ireland, United Kingdom and United States.

## **Regarding Graduate School of Infectious Diseases**

**Following are guidelines for the Graduate School of Infectious Diseases. Applicants should carefully read this clause, and the clauses on page 7 and after.**

### 2. About Graduate School of Infectious Diseases

#### (1) Educational Aims of the Graduate School of Infectious Diseases

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

#### (3) Number of Students Accepted

Division, Graduate School	Student capacity	Examination Category
		Regular Selection
Division of Infectious Diseases, Graduate School of Infectious Diseases	12	A small number of students

#### (4) Examination Category and Outline

	Examination Category
	Regular Selection
Eligible person	Those who fulfill the qualification in “3. Applicant Qualification”.
Application period	Dec.21 – Jan.5 (Nov.27 – Dec.5: Those who are required to have the applicant qualification screening)
Place of examination	Sapporo Campus, Hokkaido Univ. (Sapporo city, JAPAN)
Dates of examination	Jan.26 – Jan.27
Selection procedure	Academic examination * • Written examination (Major subject) • Oral examination

\* **【Important】** About submitting the English score

In a typical year, all applicants must submit a minimum TOEFL iBT score of 55 or an equivalent score from other English tests (for example: TOEIC score of 540 or IELTS score of 3.3) during the application period. Only test dates since January 27, 2019 are acceptable. However, due to the coronavirus outbreak, most English tests have been canceled or postponed around the world. Therefore, we will conduct our own Foreign Language test (in English) for applicants who cannot submit the score as outlined above. Please refer to (5) Selection Procedures below.

#### (5) Selection Procedures

##### 【Regular selection】

Admission of applicants is determined comprehensively on the basis of results of their academic examination (written examination and oral examination), an external English tests and their transcripts.

##### Academic examination

###### (1) Written examination

Major subject: Subject in the field of education/research of your choice

※In the case that you cannot submit an English score, our own Foreign Language test (in English) will be conducted for you. When you take the test, you are not allowed to use a dictionary.

\* Applicants who are citizens of designated countries\*<sup>1)</sup> and have completed undergraduate studies in English and have subsequently worked in an English speaking country are exempt.

designated countries: Australia, Canada (except Quebec), New Zealand, Republic of Ireland, United Kingdom and United States.

###### (2) Oral examination

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

(6) Fields of Education/Research, Supervisors, and Written Examination Subjects

Division, Graduate School	Field of Education/Research	Supervisor	【Regular Selection】 Written Examination Subject	
			Major Subject	Foreign Language
Division of Infectious Diseases, Graduate School of Infectious Diseases	Microbiology	Yoshihiro SAKODA	Microbiology	*
	Infectious Diseases	Kazuhiko OHASHI	Infectious Diseases	
	Parasitology	Nariaki NONAKA	Parasitology	
	Public Health	Hiroaki KARIWA	Public Health	
	Veterinary Hygiene	Motohiro HORIUCHI	Veterinary Hygiene	
	Virology	Ayato TAKADA	Virology	
	Infection Pathology	Hirofumi SAWA	Infection Pathology	
	Bacteriology	Yasuhiko SUZUKI	Bacteriology	
	Protozoology	Junya YAMAGISHI	Protozoology	
	Bioinformatics	Kimihito ITO	Bioinformatics	
	Infection Immunity	Hideaki HIGASHI	Infection Immunity	
	Risk Analysis	T B D	Risk Analysis	
	Biologics Development	Masashi SHINGAI	Biologics Development	
	Microbiology and Infectious Diseases	Kumiko MORIMATSU	Microbiology and Infectious Diseases	

\* All applicants must submit a minimum TOEFL iBT score of 55 or an equivalent score from other English tests (for example: TOEIC score of 540 or IELTS score of 3.3) during the application period. Only test dates since January 27, 2019 are acceptable. However, due to the coronavirus outbreak, most English tests have been canceled or postponed around the world. Therefore, we will conduct our own Foreign Language test (in English) for applicants who cannot submit the score as outlined above. Please refer to (5) Selection Procedures above.

Also, Applicants who are citizens of designated countries and have completed undergraduate studies in English and have subsequently worked in an English speaking country are exempt.

designated countries: Australia, Canada (except Quebec), New Zealand, Republic of Ireland, United Kingdom and United States.

## **Regarding both graduate schools**

**Following are common guidelines for both Graduate School of Veterinary Medicine and Graduate School of Infectious Diseases.**

**Applicants should carefully read the contents below, chose one of the graduate schools and the examination category through which you will apply, and go through the procedures.**

### 3. Applicant Qualifications

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

- (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, 2021.
- (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, 2021.
- (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, 2021.
- (4) Those who have completed or are expected to complete a study program at an educational institution in Japan by March 31, 2021, 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, 2021.
- (6) Those designated by the Minister of Education, Culture, Sports, Science and Technology.
- (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.
  - (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, 2021.
  - (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, 2021.

- (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, 2021.
  - (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, 2021.
- (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, 2021.

#### 4. Application Procedure

Applicants should submit all the application documents listed in (2) within the application period. Applicants should contact and obtain approval on the submission from supervisor in the field of education/research prior to submission.

- (1) Application period

Selection Procedure	Application Period
Regular selection	From December 21(Mon),2020 to January 5 (Tue),2021

Note that applicants falling under (5), (6), (7), or (8) in “3. Applicant Qualifications” are required to undergo the applicant qualification screening in advance. (See “(3) Applicant qualification screening.”)

- (2) Application documents and examination fee

#### 【Regular selection】

Documents to be Submitted	Applicants Required to Submit Document	Remarks
Application for admission	All applicants	Form Provided (attach your photo to the form).
Curriculum vitae	All applicants	Form Provided
Transcript	Only if necessary	Submit the transcript issued by your university. If you are a (prospective) graduate of a graduate school, submit transcripts issued by your department and graduate school. If you are a current student or graduate of the School of Veterinary Medicine, Hokkaido University, you are not required to submit your transcripts.
Certification of (prospective) graduation	Only if necessary	Submit a certification of your (prospective) graduation issued by your university. If you are a (prospective) graduate of a graduate school, submit the certifications of (prospective) graduation issued by your department and graduate school. If you are a

		<p>current student or graduate of the School of Veterinary Medicine, Hokkaido University, you are not required to submit your certification of (prospective) graduation.</p> <p>*Those who graduated or will graduate from a university in China (excluding Hong Kong and Macau) must submit the following documents.</p> <p>Graduates:</p> <p>a. Online Verification Report of Higher Education Qualification Certificate (教育部学历证书电子注册备案表)</p> <p>b. A certified copy of Graduation Diploma (毕业证书) and a certified copy of Degree Diploma (学位证书)</p> <p>Expected Graduates:</p> <p>a. Online Verification Report of Student Record (教育部学籍在线验证报告)</p> <p>b. Certificate of Expected Graduation</p> <p>Obtain documents “a” above by requesting it at “中国高等教育学历证书查询” : <a href="http://www.chsi.com.cn/xlcx/bgys.jsp">http://www.chsi.com.cn/xlcx/bgys.jsp</a>.</p> <p>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.</p>
External English tests (TOEFL, TOEIC, IELTS, etc...)	All applicants	<p>In a typical year, all applicants must submit a minimum TOEFL iBT score of 55 or an equivalent score from other English tests (for example: TOEIC score of 540 or IELTS score of 3.3) during the application period. Only test dates since January 27, 2019 are acceptable. However, due to the coronavirus outbreak, most English tests have been canceled or postponed around the world. Therefore, we will conduct our own Foreign Language test (in English) for applicants who cannot submit the score as outlined above.</p>
Examination admission card	All applicants	Form Provided (attach your photo to the form).
Return envelope	All applicants except who reside outside Japan	<p>This envelope is used for correspondence regarding your examination. Write your address on an envelope (size: long form No. 3) and put stamps worth 374 yen (including an express-delivery charge) on the envelope.</p>
Examination fee	Only if necessary	<p>Use the attached payment slip to pay 30,000 yen into the bank account within the application period.</p> <p>(If you are an applicant falling under (5), (6), (7), or (8) in “5. Applicant Qualifications,” pay an examination fee after you are considered “eligible” in the applicant qualification screening.)</p> <p>If you are a (prospective) graduate of the master’s program of a Hokkaido University Graduate School and take an entrance examination for the doctoral program of the Graduate School of Veterinary Medicine or if you are an international student sponsored by the Japanese government (recipient of a scholarship granted by the Ministry of Education, Culture, Sports, Science and Technology), then you are not required to pay the examination fee. In this case, make sure to inform us when submitting your application.</p> <p>Once you pay the examination fee, the fee will not be refunded, except for the following cases:</p> <ol style="list-style-type: none"> <li>① You pay the examination fee, but do not submit your application, or your application is not accepted due to deficiencies in your application documents.</li> <li>② You pay the examination fee twice by mistake.</li> <li>③ You pay the examination fee despite the fact that you are not required to do so.</li> </ol> <p>* Payment via the online Application Website (payment with credit cards or others) is open to all applicants. To use this</p>

		method, please contact Academic Affairs Section in advance. Please kindly bear all the remittance charges (500yen) with you.
Examination fee receipt	Only if necessary	Attach the “Examination fee receipt” that was issued when you pay the examination fee, onto the designated space on the form designated by Administration Office for Veterinary Medicine.
Documents for the applicant qualification screening	Only if necessary (applicant qualification screening)	Submit a set of documents described in “(3) Applicant qualification screening” only if you are an applicant falling under (5), (6), (7), or (8) in “3. Applicant Qualifications.”
A copy of resident card	Only for foreigners living in Japan	Submit your resident card only if you are a foreigner living in Japan.

### (3) Applicant qualification screening

If you are an applicant falling under (5), (6), (7), or (8) in “3. Applicant Qualifications,” you are required to undergo the applicant qualification screening in advance. In this case, submit application documents (including the documents for the applicant qualification screening, excluding the examination fee) and documents for the applicant qualification screening within the screening application period. The notification letter of the results will be mailed to you. Those who are deemed eligible to apply should pay the examination fee during the designated period as shown on the notification letter.

If you are an applicant falling under (8) in “3. Applicant Qualifications,” then you may be required to undergo the oral screening for assessing your academic ability as required for (8) in “3. Applicant Qualifications.” This oral screening will take place within the application period.

Selection Procedure	Application Period	Screening Period
Regular selection	From November 27(Fri) to December 4(Fri),2020	Middle to late December

<p>Documents to submit for the applicant qualification screening</p> <ul style="list-style-type: none"> <li>- Application for applicant qualification screening (in the designated form)</li> <li>- Letter of reference (containing your research history) prepared by your supervisor or the head of your department (in any form)</li> <li>- List of research achievements (such as conference presentations, papers, patents, granted research subsidies, and research achievements at your workplaces) (in any form) .</li> <li>- Other documents showing your research capability, if any</li> <li>- Envelope for the notification letter of the screening result (A standard-sized, self-addressed envelope with 374-yen stamp attached) (not required of the applicants residing outside Japan)</li> </ul>
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(4) Where to submit application documents and contact information

Academic Affairs Section, Administration Office for Veterinary Medicine,  
Hokkaido University(weekdays 8:30-17:00)  
Kita 18, Nishi 9, Kita-ku, Sapporo City 060-0818, JAPAN  
Tel: +81-11-706-5175  
Fax: +81-11-706-5190

5. Date, Time, and Place of Examination

**【Regular selection】**

(1) Academic examination

Date	Time	Examination Subject
January 26 (Tue), 2021	From 9:30 to 11:30	Foreign Language (in English)*
	From 13:00 to 15:00	Major subject (one subject)
January 27 (Wed), 2021	From 9:00	Oral examination

\* All applicants must submit a minimum TOEFL iBT score of 55 or an equivalent score from other English tests (for example: TOEIC score of 540 or IELTS score of 3.3) during the application period. Only test dates since January 27, 2019 are acceptable. However, due to the coronavirus outbreak, most English tests have been canceled or postponed around the world. Therefore, we will conduct our own Foreign Language test (in English) for applicants who cannot submit the score as outlined above.

(2) Place of examination

Faculty of Veterinary Medicine, Hokkaido University (Kita 18, Nishi 9, Kita-ku, Sapporo City)

6. Announcement of Successful Applicants

Results of the regular selection will be announced on the bulletin board of the Faculty of Veterinary Medicine on January 27, 2021 around 5p.m. and be sent by mail to each applicant.

7. Entrance Fee and Other Payments

Entrance fee: 282,000 yen (scheduled)

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.

Domestic or overseas internship is required for completion of the Ph.D. courses at the Graduate School of Veterinary Medicine, and overseas internship is required at the Graduate School of Infectious Diseases. Please be reminded that applicants shall be expected to pay part of the internship costs, such as travel expenses, accommodation fees, travel insurance and the like.

8. Long-Term Study System

The long-term study system is for students who indicate their intent to complete the course of study for

periods exceeding the standard period for completion of the course (four years) due to work or other circumstances (including elder care, child-rearing etc.), and we may approve their plan of study by screening based on their application.

The time of application for long-term study is principally at the same time as submission of the application documents for the Doctoral program, so applicants should express their intent to the Academic Affairs Section and receive the application documents in advance.

Please note that applicants should consult with their supervisor before applying for the long-term study system.

## 9. Financial Aid and Research Support for Ph.D. Students

Support provided for Ph.D. students is listed below. Eligibility, application requirements and number of successful applicants differ, so not all students are eligible for the support. Applicants should take the financial requirements necessary to study into consideration when applying for graduate school.

### (1) the World Leading Innovative and Smart Education (WISE) program

The development of preventive and curative medicine and the promotion of preventive measures have made it possible to control certain infectious diseases. At the same time, however, emerging and re-emerging infectious diseases have successively occurred, posing a threat to humankind. In addition, health hazards to people and animals due to chemical substances and the destruction of the ecosystem constantly occur as people enjoy the conveniences of life. These problems occur beyond national boundaries. We now have a mission to promote a healthy environment of people and animals from damaging hazards (infectious agents and chemicals) and preserve a sustainable and healthy biosphere and ecosystem for future generations.

The One Health Frontier Graduate School of Excellence, promoted by Hokkaido University's Graduate School of Veterinary Medicine and Graduate School of Infectious Diseases, produces experts with a clear philosophy of disease control and prevention and a balanced international perspective who can see the health of animals, people and the ecosystem from a higher point of view and who can design and implement solutions involving One Health (professionals with knowledge and technological expertise).

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) Teaching Assistants (TA), Research Assistants (RA), Teaching Fellows (TF)

TA: Academic assistants on undergraduate courses (experiment guidance support and the like)

RA: Faculty research assistants (support and the like regarding research projects)

TF: Academic supervision of undergraduate courses (experiment guidance on a higher level than that of a TA)

### (3) Entrance Fee Exemption (or Deferment), Tuition Fee Exemption (See below)

<https://www.global.hokudai.ac.jp/prospective-students/student-fees/>

### (4) Scholarships from Japan Student Services Organization, private organization and local governments (See below)

<https://www.global.hokudai.ac.jp/prospective-students/scholarships/>

### (5) JSPS Research Fellowship for Young Scientists (See below)

<https://www.jsps.go.jp/english/e-pd/pddc.htm>

## 10. Privacy Policy

The Graduate School of Veterinary Medicine will not use private information such as your name, sex, date of birth, address, or other personal information contained in your application documents for any purpose other than selection, announcement of successful applicants, admission procedures, research and study on selection procedures, and other related purposes.

## 11. Miscellaneous

- (1) Applicants who are physically disabled and who may need special accommodations to take examinations and attend classes should notify the Academic Affairs Section of their condition by the last day of the application period.
- (2) If you wish to request by mail a Doctoral Program Application Guidelines, an application form, and other forms, then write “Request for Application Form for Admission to Graduate School of XXXX, Admission in (month), (year)” in red on the front of an envelope (Be sure to clarify the name of the graduate school, and time of admission) and enclose a self-addressed return envelope (large enough to contain A4 sheets) within the envelope along with stamps worth 210 yen.
- (3) If submitting your application by mail, send the documents by acceptance-recorded mail (*tokutei kiroku yubin*) and write “Enc. Application for Admission to Graduate School (Regular selection, April Admission)” in red on the front of the envelope. Send the documents so that they will reach us within the application period.
- (4) If any information contained in your application documents is not true, then your admission may be cancelled.

### Contact information

Academic Affairs Section,

Administration Office for Veterinary Medicine, Hokkaido University

E-mail: [kyomu@vetmed.hokudai.ac.jp](mailto:kyomu@vetmed.hokudai.ac.jp)

October 2020

# Organization

## Educational Organization (Graduate School)

Organization	Field of Education/Research
<b>Graduate School of Veterinary Medicine</b>	Anatomy
	Physiology
	Biochemistry
	Pharmacology
	Radiation Biology
	Laboratory Animal Science and Medicine
	Toxicology
	Wildlife Biology and Medicine
	Veterinary Internal Medicine
	Veterinary Surgery
	Comparative Pathology
	Theriogenology
	Molecular Medicine
	Advanced Veterinary Medicine



## Organization for Teaching Staff

Organization	Laboratory
<b>Faculty of Veterinary Medicine</b>	Anatomy
	Physiology
	Biochemistry
	Pharmacology
	Radiation Biology
	Laboratory Animal Science and Medicine
	Toxicology
	Wildlife Biology and Medicine
	Veterinary Internal Medicine
	Veterinary Surgery
	Comparative Pathology
	Theriogenology
	Molecular Medicine
	Advanced Veterinary Medicine
	Department of Advanced Pharmaceutics
	International Affairs Office
Veterinary Teaching Hospital	

Organization	Field of Education/Research
<b>Graduate School of Infectious Diseases</b>	Microbiology
	Infectious Diseases
	Parasitology
	Public Health
	Veterinary Hygiene
	Virology
	Infection Pathology
	Bacteriology
	Protozoology
	Bioinformatics
	Infection Immunity
	Risk Analysis
	Biologics Development
	Microbiology and Infectious Diseases



Organization	Laboratory
<b>Faculty of Veterinary Medicine</b>	Microbiology
	Infectious Diseases
	Parasitology
	Public Health
	Veterinary Hygiene
<b>Research Center for Zoonosis Control</b>	Global Epidemiology
	Molecular Pathobiology
	Bioresources
	Collaboration and Education
	Bioinformatics
	Infection and Immunity
	Risk Analysis and Management
	Biologics Development
	Hokudai Center for Zoonosis Control in Zambia
	Unit for International Cooperation
<b>Institute for Genetic Medicine</b>	Microbiology and Infectious Diseases

As of October 2020

# List of supervisors and study area/research contents

As of October 1, 2020(expected)

## Educational Organization: Graduate School of Veterinary Medicine

### 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 Anatomy (ID: y-kon@)

Professor: KON Yasuhiro  
Associate Professor: ICHII Osamu  
Assistant Professor: Yaser Hosny Ali ELEWA

#### 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

#### Laboratory of Physiology (ID:souya@)

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

#### Laboratory of Biochemistry (ID: k-kimura@)

Professor: KIMURA Kazuhiro  
Associate Professor: OKAMATSU Yuko  
Assistant Professor: TODA Chitoku

#### Study area/Research contents

- 1) Neural and hormonal control of metabolism
- 2) Mesenchymal and epithelial interaction in the mammary gland
- 3) Regulation of appetite and energy metabolism

#### Laboratory of Pharmacology (ID: otsuguro@)

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

#### Laboratory of Radiation Biology (ID: inanami@)

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 (ID: agui@)</b></p> <p>Professor: AGUI Takashi Associate Professor: MORIMATSU Masami</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 (ID: ishizum@)</b></p> <p>Professor: ISHIZUKA Mayumi Associate Professor: IKENAKA Yoshinori Assistant 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 (ID: tsubota@)</b></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 (ID: mtaki@)</b></p> <p>Professor: TAKIGUCHI Mitsuyoshi Associate Professor: NAKAMURA Kensuke Assistant Professor: SASAKI Noboru</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> </ol>
<p><b>Laboratory of Veterinary Surgery (ID: okumuram@)</b></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 (ID: tkimura@)</b></p> <p>Professor: KIMURA Takashi Associate Professor: KOBAYASHI Atsushi Assistant Professor: AOSHIMA Keisuke Specially Appointed Assistant Professor: ROKUJUNANA</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> </ol>

<p><b>Laboratory of Theriogenology (ID: katagiri@)</b></p> <p>Professor: KATAGIRI Seiji Assistant 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) Artificial breeding and reproductive physiology of wildlife and zoo animals</li> <li>3) Improvement of semen quality for assisted reproductive technology</li> <li>4) In vitro production and preservation of embryos and oocytes in domestic animals</li> </ol>
<p><b>Laboratory of Molecular Medicine (ID: inazo@)</b></p> <p>Professor: INABA Mutsumi Associate Professor: TAKADA Kensuke</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Molecular bases for inherited diseases of membrane proteins</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> <li>4) Regulation of T cell immune response and memory formation</li> </ol>
<p><b>Laboratory of Advanced Veterinary Medicine (ID: mtaki@)</b></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) Associate Professor: HOSOYA Kenji Assistant Professor: MORISHITA Keitaro Specially Appointed Associate Professor: YAMAZAKI Jumpei Specially Appointed Assistant Professor: SHIMBO Genya Specially Appointed Assistant Professor: SASAOKA Kazuyoshi Specially Appointed Assistant Professor: DEGUCHI Tatsuya Specially Appointed Assistant Professor: OYAMA Norihiko Specially Appointed Assistant Professor: TAMURA Masahiro Specially Appointed Assistant Professor: YOKOYAMA Nozomu Specially Appointed Assistant Professor: KINOSHITA Ryohei Specially Appointed Assistant Professor: TAKEUCHI Kyosuke Specially Appointed Assistant Professor: TAMURA Jun Specially Appointed Assistant Professor: NAGATA Noriyuki</p>

<p><b>Educational Organization: Graduate School of Infectious Diseases</b></p>
<p><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))</p>
<p><b>Laboratory of Microbiology (ID: sakoda@)</b></p> <p>Professor: SAKODA Yoshihiro</p> <p>Associate Professor: ISODA Norikazu</p> <p>Study area/Research contents</p> <ol style="list-style-type: none"> <li>1) Molecular basis of ecology and pathogenicity of influenza virus</li> <li>2) Molecular basis of ecology and pathogenicity of pestivirus</li> <li>3) Development of new diagnosis method and effective vaccine for viral infections</li> </ol>

**Laboratory of Infectious Diseases (ID: okazu@)**

Professor: OHASHI Kazuhiko  
 Associate Professor: KONNAI Satoru  
 Assistant 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 tick-borne encephalitis
- 2) Diagnosis and epidemiology of West Nile fever
- 3) Ecology and diagnosis of hantavirus infection

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

Professor: HORIUCHI Motohiro

## 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) Etiology of food-borne diseases such as listeriosis and campylobacteriosis
- 4) Molecular epidemiology of proliferative enteropathy in animals

**Research Center 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  
 Assistant Professor: KAJIHARA Masahiro \*1

## Study area/Research contents

- 1) Ecology, evolution, and natural hosts of viruses
- 2) Pathogen-host interactions
- 3) Structure and function of pathogen and host proteins
- 4) Development of diagnostics and therapeutics for viral infections

**Division of Molecular Pathobiology (ID: h-sawa@)**

Professor: SAWA Hirofumi  
 Associate Professor: ORBA Yasuko  
 Lecturer: SASAKI Michihito

## Study area/Research contents

- 1) Cellular and molecular biology of interaction between virus and host cells
- 2) Identification of cellular factors preventing viral infection
- 3) Establishment of therapeutic strategy for viral infectious diseases
- 4) Surveillance of viral infectious diseases

**Division of Bioresources (ID: suzuki@)**

Professor: SUZUKI Yasuhiko  
Professor: NAKAJIMA Chie  
Assistant Professor: THAPA Jeewan

## Study area/Research contents

- 1) Surveillance of zoonoses caused by bacterial pathogens
- 2) Elucidation of drug resistance acquisition mechanism in bacteria
- 3) Development of diagnostics for bacterial zoonoses
- 4) Development of biopharmaceuticals

**Division of Collaboration and Education (ID: junya @)**

Associate Professor: YAMAGISHI Junya  
Assistant Professor: HAYASHIDA Kyoko  
Assistant Professor: SUGI Tatsuki

## Study area/Research contents

- 1) Functional genomics of protozoan parasites (Trypanosoma, Theileria, Babesia, Plasmodium), Rickettsia and vector arthropods (tsetse fly, tick)
- 2) Investigation of host-pathogen interactions by transcriptomics
- 3) Development of methods in genome epidemiology

**Division of Bioinformatics (ID: itok@)**

Professor: ITO Kimihito  
Associate Professor: OMORI Ryosuke

## Study area/Research contents

- 1) Computer prediction on the evolution of zoonotic pathogens
- 2) Mathematical modeling and statistical analysis of infectious diseases
- 3) Development of bioinformatics algorithms and tools

**Division of Infection and Immunity (ID: hidea-hi@)**

Professor: HIGASHI Hideaki  
Lecturer: FURUTA Yoshikazu  
Specially Appointed Assistant Professor: Paudel Atmika

## Study area/Research contents

- 1) Investigation of host response against zoonotic pathogens
- 2) Genome sequencing and analysis of zoonotic pathogens
- 3) Structure-based study of bacterial pathogens and cellular molecules
- 4) Development of diagnostic and therapeutic methods for bacterial infectious diseases

**Unit of Risk Analysis and Management (ID: matsuk@)**

Lecture: MATSUNO Keita

## Study area/Research contents

- 1) Epidemiology of emerging viruses
- 2) Evolutional mechanism and ecological interface of virus emergence
- 3) Molecular basis of virus-host interaction

**Laboratory for Biologics Development (ID: shingaim@)**

Associate Professor: SHINGAI Masashi  
Assistant Professor: SEKIYA Toshiki  
Assistant Professor: OHNO Marumi

## Study area/Research contents

- 1) Development of biologics for viral infections
- 2) Analysis and control of immune responses to viral infections

**Hokudai Center for Zoonosis Control in Zambia (ID: h-sawa @)**

Professor: SAWA Hirofumi  
Assistant Professor: QIU Yongjin \*1  
Specially Appointed Assistant Professor: NAO Naganori

Study area/Research contents

- 1) Identification of natural host animals and transmission routes of zoonotic pathogens in Africa
- 2) Comprehensive screening of unknown pathogens in Africa
- 3) Prevention and control of zoonoses

\*1

Field of Education / Research is Infection Immunity.

**Unit for International Cooperation** (ID: atakada @)

Professor: TAKADA Ayato

Lecturer: NAKAMURA Ichiro \*

Specially Appointed Assistant Professor: NOMURA Naoki

Study area/Research contents

- 1) Development of international cooperation
- 2) Management of safety

\* Field of Education / Research is Virology.

**Institute for Genetic Medicine**

(\*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)

**Division of Microbiology and Infectious Diseases** (ID: yosimatu@)

Associate Professor: MORIMATSU-YOSHIMATSU Kumiko

Study area/Research contents

- 1) Investigation of rodent borne zoonoses
- 2) Development of serological and molecular biological diagnostic methods
- 3) Analysis of pathogenesis of virus infections by using animal model