

A Joint Usage/Research Center approved  
by the Japanese Ministry of Education,  
Culture, Sports, Science and Technology  
and one of the WOAHC Collaborating Centres

# National Research Center for Protozoan Diseases



National Research Center for Protozoan Diseases  
Obihiro University of Agriculture and Veterinary Medicine



2024

Obihiro University of  
Agriculture and Veterinary Medicine



# Mission

Our mission, as the only MEXT Joint Usage/Research Center of Protozoan Diseases in Japan, is to promote cutting-edge research on the control of protozoan diseases in humans and livestock. This research is conducted to contribute to the health and welfare of human beings as well as to the global issue of food safety and security. This will be accomplished through cooperation with domestic and foreign universities, relevant ministries and international institutes.



## Message from the Director General

**Noboru Inoue**

The National Research Center for Protozoan Diseases (NRCPD) of Obihiro University of Agriculture and Veterinary Medicine was established as an inter-university joint-use facility in 1990, certified as a national joint-use facility in 2000, and then as a joint-use facility/research center in 2009 by the Ministry of Education, Culture, Sports, Science and Technology. In addition, in terms of collaborative activities with related international organizations, our two professors were appointed as Reference Laboratory (RL) experts by the World Organization for Animal Health (WOAH) in 2007, and the following year, NRCPD was recognized as the first WOAH Collaborating Center in the world in the field of protozoan diseases. In 2017, the WOAH RL developed an international standard diagnostic testing system by obtaining ISO/IEC 17025 accreditation for the diagnostic tests provided by the WOAH RL. In collaboration with WOAH and other relevant international organizations, we will continue to contribute to the global surveillance and control of protozoan diseases through academic research and international human resource development. As an example, since 1995, with the support of the Japan International Cooperation Agency (JICA), NRCPD has invited experts from emerging and developing countries who are involved in zoonotic disease control,

mainly protozoan diseases, and has conducted group training courses. Nearly 243 trainees have so far completed the course and are now playing a central role in veterinary and livestock administration and infectious disease research and education in their respective countries. Our network of international researchers consisting of these graduates has become an important human resource in the internationalization of education and research activities at the University as well as at NRCPD.

The damage caused to humans and animals by protozoan diseases is immeasurable. Protozoan parasites are tough enemies with a high similarity to host cells and sophisticated survival strategies such as antigenic variations, immune disruption, and complex life cycles. Unfortunately, there are still few prophylactic vaccines or safe treatments available. Therefore, the development of inexpensive diagnostic, prophylactic, and therapeutic methods that can be practically applied in livestock farms around the world is an urgent issue on a global scale. NRCPD will contribute to One Health issue resolution and promotion by actively promoting international collaborative research based on our global network of protozoan disease researchers.



## International Contribution/Development of Human Resources

The National Research Center for Protozoan Diseases, in collaboration with the Japan International Cooperation Agency (JICA), has provided training programs on zoonotic protozoan diseases to backbone and senior administrative technical researchers from developing countries, especially Asian and African nations, since 1995. Over 243 graduates working as advanced technical researchers perform zoonoses measures in their respective countries and act as important counterparts for the international joint research project. We also provide graduates the opportunity to join our research center for 3-6 months to re-train their professional skills and develop collaborative research projects with us. We accept 3~5 re-trainees every fiscal year.



Providing technical assistance for the diagnosis of protozoan diseases in Vietnam



Opening ceremony for a JICA advanced training course



Workshop for JICA trainee



Providing technical assistance for the diagnosis of malaria in the Philippines

## International Joint Research Center

Many protozoan diseases persistently infect livestock, causing anemia and miscarriages and worsening their chronic health condition. However, accurate means of diagnosis, prophylactic vaccines and safe specific medicines are not available for protozoan diseases. The detrimental effects of protozoan diseases on livestock must therefore be resolved on a global scale as quickly as possible. The National Research Center for Protozoan Diseases, as the international joint research center for protozoan diseases of animals in the world, has clarified the distribution and damage caused by these diseases by conducting a large-scale epidemiological survey using diagnostic technology developed in-house. Moreover, we train

young specialists throughout the world through these kinds of activities at the international joint research center. The center also continues to develop and make contributions to research on protozoan diseases, as well as maintaining an early recognition system and thereby contributing to the prevention of these diseases in livestock and thus to the development of the international livestock industry.

Cooperation countries:

The United States of America, Mongolia, China, Taiwan, South Korea, Philippines, Thailand, Vietnam, Indonesia, Sri Lanka, Egypt, Kenya, Uganda, Tanzania, Benin, Burkina Faso, South Africa, Turkey, India, Germany, Poland, Argentina and Mexico



Investigation for tsetse fly in Zambia



Epidemiological survey for livestock protozoan diseases in Vietnam



Epidemiological survey for livestock protozoan diseases in Mongolia



Investigation of ticks that transmit protozoa in China

## WOAH Reference Laboratory and Collaborating Centre

The World Organization for Animal Health (WOAH), an international organization with 183 member countries, aims to ensure the security and safety of livestock and livestock products. They certify the world's cutting-edge research institutes and specialists as collaborating centres (CC) or reference laboratories (RL). These institutes then utilize the results of the latest research for the development of new diagnostic methods for infectious diseases in animals and are responsible for the international standardization of vaccines. In recent years, WOAH has also emphasized the contribution of CCs to developing countries so that diagnostic

technology for infectious diseases and livestock sanitation standards can be improved in these countries. In June 2007, our two professors were designated as WOAH RL experts (bovine babesiosis, equine piroplasmosis and surra). In May 2008, the National Research Center for Protozoan Diseases (NRCPD) was designated as the first WOAH CC in Asia. NRCPD is highly expected to contribute for the control of zoonotic protozoan diseases in the world. Moreover, "protozoan DNA testing of bovine babesiosis, equine piroplasmosis and surra by PCR methods in accordance with WOAH Manual" provided by WOAH RLs has been certified as ISO/IEC 17025:2017 in April 2021.



Non-tsetse transmitted animal trypanosomoses (NTTAT) specialist conference at the WOAH headquarters



Joint hosting of the WOAH Regional Workshop



Plate declaring the National Research Center for Protozoan Diseases an WOAH Collaborating Centre



## Department of Drug Discovery and Development



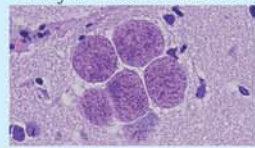
### Professor Yoshifumi Nishikawa

We are researching functional disorders of the central nervous system (CNS) and behavioral changes in host animals, as well as the mechanism of miscarriage or vertical transmission of protozoan infections. In addition, we are attempting to identify and analyze parasite-derived factors that control inflammatory response and immuno-suppression. Based on the results of this research, we are developing a new type of next-generation vaccine that can effectively transport a vaccine antigen to lymphoid tissues by utilizing multifunctional materials and can effectively stimulate immune cells. For practical application of our vaccine, we investigate the effects of the model vaccine based on infection models of mice and natural hosts.

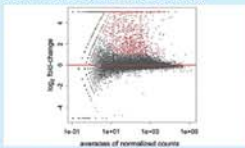
#### [Main Research Projects]

- Study on behavioral changes of host animals and CNS disorder following *Toxoplasma* and *Neospora* infection.
- Study on immune evasion mechanisms of *Toxoplasma* and *Neospora*
- Pathological study of malaria, toxoplasmosis, neosporosis and cryptosporidiosis
- Vaccine development based on multifunctional materials
- Screening of anti-parasite drug from natural products
- Study on intestinal flora associated with bovine diarrhea

Lab HP:  
<https://sites.google.com/site/nishihdlab/>



Cyst of *Toxoplasma* in brain tissue



Comparative transcriptome using the brain tissue of a mouse infected with *Toxoplasma*



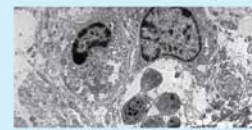
Aborted fetus from cow infected with *Neospora*



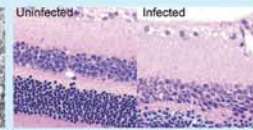
### Specially Appointed Assistant Professor Nanako Ushio-Watanabe

We are researching the pathology of parasite infections in animals and humans by using pathological analysis. Specifically, we focus on chronic infection in the central nervous system and acute and chronic infection in the retina caused by *Toxoplasma* and *Neospora*, as well as the infection during pregnancy.

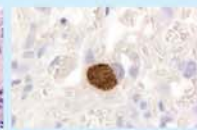
- Chronic infection in the central nervous system: *Toxoplasma* and *Neospora* form cysts in the brain and cause lifelong chronic infections. Chronic infection with *Toxoplasma* has been reported to induce behavioral changes in the host. We are studying the pathogenesis and the impact of parasite-derived molecules that cause behavioral changes in the host.
- Acute and chronic infection in the retina: *Toxoplasma* infection, both congenital and acquired, can lead to inflammation in the retina, which result in blindness. We are focusing on Müller glial cells in the retina to analyze the pathogenesis of this condition.
- Infection during pregnancy: *Toxoplasma* and *Neospora* infections can cause miscarriage and neonatal infections. We analyze on mouse model of congenital infection and studying the pathogenesis of vertical transmission and postpartum depression.



*Neospora caninum* in a neuron.



Degeneration of the retina



*Toxoplasma gondii* in a trophoblast.

## Department of Drug Discovery and Development



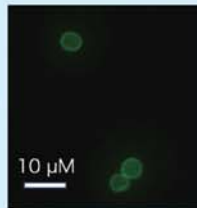
### Specially Appointed Assistant Professor Rie Kubota

We are researching the cellular parasitic mechanisms of *Cryptosporidium*, which causes diarrhoea in humans and animals. *Cryptosporidium* parasites infect all mammals including humans and animals. There is no effective vaccine or prophylactic drug, and *Cryptosporidium* infection, especially in calves, causes lethal diarrhoea, resulting in economic losses to the cattle industry, including Japan. Parasites invade intestinal epithelial cells and shed their seeding (oocysts) by sexual reproduction, but the detailed mechanisms of parasitism and development are not clear. We aim to understand the parasitic strategies of *Cryptosporidium* parasites, including the analysis of their gene function, using genetic modification techniques.

#### [Main Research Projects]

- Elucidation of the cellular invasion mechanism of *Cryptosporidium* parasite
- Discovery of anti-cryptosporidium parasite drugs
- Development of in vitro culture systems for *Cryptosporidium* parasite
- Study on the intestinal microflora associated with *Cryptosporidium* infection
- Discovery of vaccine antigens

*Cryptosporidium* oocysts from bovine faeces (immunofluorescence staining)



## Department of Global Cooperation



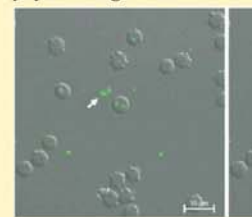
### Professor Shin-ichiro Kawazu

#### Babesia

We are developing technology to manipulate genes using *Babesia*. So far, we have developed a foreign gene expression system (green fluorescent protein-expressing protozoa) and a gene knockout system, and we are currently trying to use live imaging to clarify the mechanism of the said protozoa's growth and infection into the red cells and the vector tick; and the pathology of cerebral babesiosis.

#### Japanese bilharziasis

Japanese bilharziasis is a zoonotic disease closely related to public and animal health in rural areas of Asian countries. We are developing ELISA and POCT as suitable and affordable diagnostic tools, and are conducting comprehensive epidemiological surveys with the newly developed ELISA protocol and population genetic tools towards elimination of the disease in the Philippines.



Hyper (HzO<sub>2</sub> sensor probe) expressing *Babesia bovis*

## Department of Global Cooperation

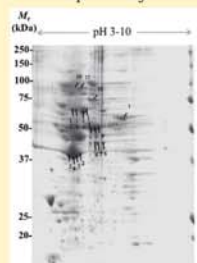


### Professor Xuenan Xuan

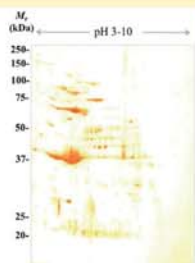
The main focus of this lab is to elucidate the host defense mechanisms against protozoan diseases, and to develop medical agents and recombinant vaccines that could efficiently stimulate the host protective immunity.

#### Main Research Projects

- Elucidation of the mechanism of hemolytic anemia caused by babesiosis.
- Analysis of the host protective immunity against babesiosis.
- Identification of genome-wide metabolic pathways and vaccine candidate molecules of *Babesia* parasites.
- Development of molecule-targeting treatments and recombinant vaccines against babesiosis.
- International epidemiological surveys of tick-borne protozoan diseases.



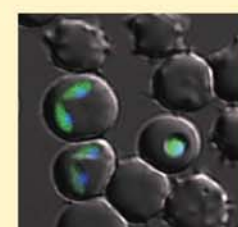
Proteomic analysis of autoimmunity against platelets caused by *Babesia* parasite infection.



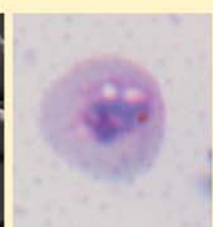
### Associate Professor Masahito Asada

*Babesia* and *Plasmodium* parasites are intraerythrocytic apicomplexan protozoans which cause severe morbidity and mortality to the animals and humans in the world. These parasites invade into the host erythrocytes and extensively modify structural and mechanical properties of the erythrocytes. To find a way to control babesiosis and malaria, we are studying on invasion and host erythrocyte modification mechanisms of the parasites by using genome manipulation techniques. Furthermore, we are performing field epidemiology of protozoan diseases.

- Mechanisms of parasite invasion into the erythrocyte
- Mechanisms of erythrocyte modification by the parasites
- Field epidemiology of protozoan diseases



Genome editing by CRISPR/Cas9 system



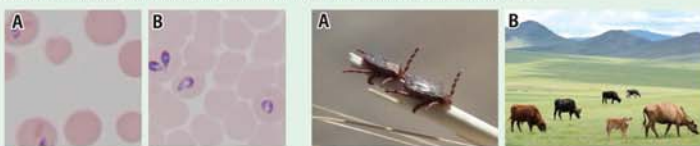
Ungulate malaria parasite





## Professor Naoaki Yokoyama

Bovine and equine piroplasmosis (babesiosis and theileriosis) caused by species of genera *Babesia* and *Theileria* is characterized by fever and anemia. The disease usually results in severe economic losses in cattle and horse industry worldwide. Therefore, control and prevention of bovine and equine piroplasmosis through surveillance and risk factor identification are vital. As WOAHP reference laboratories for bovine babesiosis and equine piroplasmosis, we survey the cattle and horses on a global scale to ascertain the current epidemiological status of *Babesia* and *Theileria* species, determine their genetic diversity, identify the risk factors, and discover novel parasite species with clinical importance. We also develop methods and scientific tools to aid better research and diagnosis. Moreover, we provide diagnostic services and materials to WOAHP member countries to improve control and preventive efforts, particularly to prevent the spread of infections through the transnational movement of animals. To accelerate our goal of minimizing bovine and equine piroplasmosis, we maintain a robust international collaborative network and welcome postgraduate students and young postdoctoral researchers for the development of human resources in countries where these diseases are endemic.



Theileria (A) and Babesia (B) parasites | Tick (A) and cattle (B) in Mongolia



## Associate Professor Rika Umemiya-Shirafuji

Ticks are obligatory hematophagous arthropods and are known to be important vectors for various pathogens in vertebrates, such as *Babesia* and *Theileria* parasites. Our laboratory focuses on the molecular mechanisms underlying nutrient metabolism in unfed or fed ticks and tick oogenesis. Our aim is to contribute to the development of new methods for controlling ticks and tick-borne pathogens.

### ○ Nutrient metabolism in unfed ticks

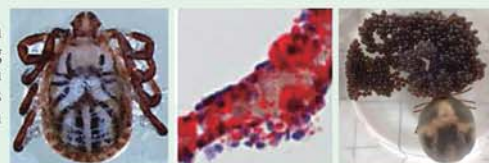
Most hard tick species have a life span of several months or years. Their life is essentially composed of relatively short parasitic periods and long non-feeding periods, without intake of blood. This remarkable viability is important for understanding the biology and epidemiology of ticks and tick-borne pathogens.

### ○ Nutrient metabolism in fed ticks

Energy and nutrient reserves provided by digestion of a blood meal in female ticks allow the synthesis of vitellogenin (Vg), the yolk protein precursor. Synthesis and uptake of Vg are essential processes in the oogenesis of ticks.

### ○ Vector biology

Using ticks infected with parasites, we are studying the relationship between transmission of parasites and nutrient metabolism of ticks.



## Professor Noboru Inoue

As an WOAHP Reference Laboratory (WOAHP RL) Expert for Surra, I am in charge in periodic revisions of the WOAHP documents, such as Animal Health Code and the WOAHP Manual, in collaboration with other WOAHP RL Experts. I also provide definitive diagnosis of Surra at the request of international clients involved in the import and export of livestock, pets, and zoo exhibit animals, and conduct research on development of new diagnostic methods for trypanosomoses.

We are conducting research to clarify the interaction between *Trypanosoma* and vectors/hosts at the molecular level. We particularly focused on the epimastigote (EMF) stage-specific cell surface molecules involving cell adhesion in tsetse salivary gland. We have so far discovered two EMF stage-specific surface proteins, CESP (function unknown) and TcEphBR (hemoglobin receptor).

Development of simple/rapid diagnostic methods and social implementation research of epidemiological studies for practical use in endemic areas are being conducted. We have established Mongolian office and research facilities at the Institute of Veterinary Medicine, Mongolia, and are conducting collaborative research on animal trypanosomoses, which are serious concern in Mongolia, and are conducting joint research for the practical application of diagnostic methods and control measures for the protozoan diseases.



Our diagnostic kits are practically used in Mongolia | WOAHP-NTTAT Network Meeting at WOAHP-HQ | Trypanosome sampling from dourine horse



## Associate Professor Keisuke Suganuma

Trypanosomoses are endemic in many countries and affect both humans and animals. However, no effective control measures are available for this disease. We therefore aim to develop and establish effective control strategies for trypanosomoses.

### Studies on developmental-stage conversion mechanisms. (Fig. 1)

Developmental-stage conversion (or cell differentiation) is essential for trypanosomes to parasitize mammalian hosts and vectors. Therefore, we aim to reveal the stage conversion mechanisms using gene manipulation technology, with the aim of developing new control strategies for trypanosomoses.

### Global surveillance and establishment of new laboratory strains of trypanosomes. (Fig. 2)

We aim to establish effective control strategies for trypanosomoses in endemic countries based on field surveillance data. In addition, we intend to isolate and establish field strains of trypanosomes for further study.

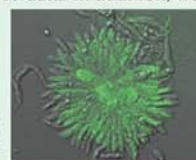


Fig. 1: GFP expressed transgenic *Trypanosoma congolense* (Suganuma et al., 2012 & 2013)



Fig. 2: *Trypanosoma equiperdum* isolated from Mongolia (IVM-t1 strain) (Suganuma et al., 2016)

### Development of novel trypanocidal drugs.

We aim to find novel trypanocidal compounds by using in vitro drug screening systems and mouse models.



## Professor Makoto Igarashi

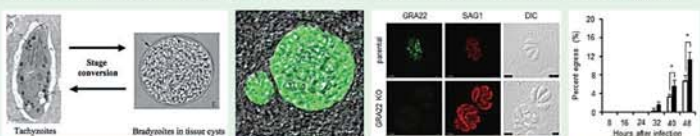
Toxoplasmosis is a zoonotic disease latently infecting 20% to 30% of the world's population. *Toxoplasma* causes serious problems in immune-suppressed people such as HIV patients and the elderly as well as in congenitally infected infants. This laboratory is working on unraveling the mechanism of *Toxoplasma*'s parasitism in hosts.

### Main Research Project

○ Understanding *Toxoplasma*'s parasitism in host cells:

We aim to identify target molecules for new medicines by isolating molecules involved in *Toxoplasma*'s parasitism in host cells.

○ Understanding the transition process from acute to chronic *Toxoplasma* infection: During the transition from an acute to a chronic infection *Toxoplasma* changes its life cycle from a propagation type to a cyst-forming type. By uncovering the mechanism of this change we aim to utilize it for vaccine development strategies.



Stage conversion of *Toxoplasma* | Identification of the bradyzoite-specific DPA molecule and its expression in a cerebral cyst | Creation of a GRA22 gene knockout strain | Is GRA22 involved in egress from host cells?



## Associate Professor Shinya Fukumoto

Certain infectious diseases such as malaria, sleeping sickness, Japanese encephalitis, and filariasis are transmitted by arthropods.

The transmission of these infectious diseases requires "vectors". In other words, if the vector stage is cut off, infections of animals and humans can be avoided. Based on this concept, we raise the following questions: How do etiological agents behave within vectors? How do a vector and an etiological agent interact with each other? What are etiological agents to vectors in the first place? We are researching the items above in an effort to achieve the suppression of protozoan diseases by controlling the vector stage. We systematically integrate a wide range of information, from data generated by basic laboratory experiments to field research in endemic areas, as well as thoroughly analyzing unique life phenomena caused by the relationship between such etiological agents and vectors.





## Base of Activities

As an international joint research center for the control of protozoan diseases, the National Research Center for Protozoan Diseases develops technology for the diagnosis, prevention and treatment of livestock protozoan diseases in domestic and foreign countries. We utilize an experimental system that simulates the life cycle of each protozoon in nature (experimental system of authentic infection). In addition, we use WOA Collaborating Centre-related research to promote developmental research into technology relating to protozoan disease prevention that will



Online International Symposium on Ticks as a Joint Usage/Research Center Project



Joint research laboratory established in Makerere University, Uganda



Joint laboratory established in Shanghai Veterinary Research Institute, China



Joint research laboratory established in the Institute of Veterinary Medicine in Mongolia

become the international standard. In the 4th mid-term target period, we are conducting a national project entitled "Establishment of a comprehensive drug discovery research center utilizing the analysis matrix for livestock protozoan diseases (Drug Discovery Project)". For the development of new therapeutic agents for livestock protozoan diseases, screening of candidate compounds and studies of their mechanism of action are underway. The goal of this project is establishment of "research center for drug discovery on livestock protozoan diseases" with a view to realizing social implementation.

## Social Contribution Activity

We offer diagnostic services for infectious diseases, especially protozoan diseases, in domestic animals in cooperation with the Veterinary Medical Center at Obihiro University of Agriculture and Veterinary Medicine to help the community with our research achievements. We also provide extremely advanced and specialized diagnostic services for protozoan diseases that have been developed by the National Research Center for Protozoan Diseases. Moreover, as a core research institute for protozoan

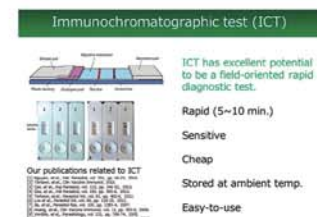
diseases, we would like to contribute to the development of protozoan disease research worldwide. We therefore provide bioresources such as protozoan parasites, ticks, cDNA libraries, and monoclonal antibodies. Information about the bioresources offered is openly available on our home page. Furthermore, by establishing and providing systems of bioassay for pathogenic protozoan parasites, we contribute actively to development of anti-protozoal agents.



Introduction of our research to the general public



Special diagnostic service for infectious diseases



Immunochromatography for the diagnosis of protozoan diseases



Bioresources (protozoan parasites)

## Situation for Acquisition of External Funds (number)

Source of Budget	Budget Item	FY2021	FY2022	FY2023
Japan Society for the Promotion of Science	Grant-in-Aid for Scientific Research on Innovative Areas	0	0	0
	Grant-in-Aid for Scientific Research (B)	4	5	6
	Grant-in-Aid for Scientific Research (C)	2	1	1
	Challenging Research (Exploratory)	3	2	2
	Grant-in-Aid for Young Scientists	2	1	1
	Grant-in-Aid for Research Activity Start-up	0	0	0
	Fostering Joint International Research (B)	6	5	4
	International Collaborative Research	0	0	1
	Grant-in-Aid for JSPS Fellows	5	5	6
	Core-to-Core Program	1	1	1
	Joint Research Projects/Seminars	2	3	2
	Ronpaku (Dissertation Ph.D.) Program	1	1	0
Ministry of Agriculture, Forestry and Fisheries	Bilateral joint research project	0	1	1
Japan Agency for Medical Research and Development	Research Program on Emerging and Re-emerging Infectious Diseases	0	1	1
Private Research grant etc. (500,000 yen or more)	Joint research	3	0	1
	Contract research	0	2	3
	Grants	2	0	2
Total		31	28	32

## The Journal of Protozoology Research

### Introduction of Publications

This journal has been issued once or twice a year as an international journal on protozoan diseases since 1990.

#### Call for papers

We are calling for review papers, original papers and short communication papers pertaining to the study of protozoan diseases, protozoology, and arthropod vectors.

#### Contact regarding contribution to this journal

Yoshifumi Nishikawa:  
nishikawa@obihiro.ac.jp





# Members of the Center

**Director General** Noboru Inoue **Vice Director General** Yoshifumi Nishikawa

## Department of Drug Discovery and Development Research Unit for Innovative Medicine

Prof. Yoshifumi Nishikawa  
Specially Appointed Assistant Prof. Nanako Ushio-Watanabe  
Specially Appointed Assistant Prof. Rie Kubota

## Department of Disease Control

### Research Unit for Molecular Diagnostics

Prof. Naoaki Yokoyama / Assoc. Prof. Rika Umemiya-Shirafuji

### Research Unit for Advanced Preventive Medicine

Prof. Noboru Inoue / Assoc. Prof. Keisuke Suganuma

### Research Unit for Infection and Pathology

Prof. Makoto Igarashi / Assoc. Prof. Shinya Fukumoto

## Department of Global Cooperation

### Research Unit for Global Infection Control

Prof. Xuenan Xuan / Assoc. Prof. Masahito Asada

### Research Unit for Global Surveillance

Prof. Naoaki Yokoyama (Concurrent)  
Assoc. Prof. Shinya Fukumoto (Concurrent)  
Assoc. Prof. Keisuke Suganuma (Concurrent)

### International Cooperation Unit

Prof. Shin-ichiro Kawazu / Prof. Makoto Igarashi (Concurrent)  
Prof. Noboru Inoue (Concurrent)  
Dr. Angwe Martin Kamilo  
Dr. Janine Aucamp  
Dr. Kamarli Aitakin  
Dr. Punsantsogvoo Myagmarsuren

## Bio-Self-Regulating Science Laboratory (Hakuju Institute for Health Science Co.,Ltd)

Prof. Noboru Inoue(Concurrent)  
Visiting Prof. Shinji Harakawa

### Visiting Professor

Honorary Prof. Ikuo Igarashi  
Obihiro University of Agriculture and Veterinary Medicine  
Prof. Kentaro Kato  
Tohoku University Graduate School of Agricultural Science  
Prof. Osamu Kaneko  
Nagasaki University Institute of Tropical Medicine  
Director: Shigeyuki Kano  
Research Institute National Center for Global Health and Medicine  
Prof. Kiyoshi Kita  
Nagasaki University School of Tropical Medicine and Global Health  
Honorary Prof. Hiroshi Suzuki  
Obihiro University of Agriculture and Veterinary Medicine  
Prof. Naotoshi Tsuji  
Kitasato University School of Medicine  
Prof. Shinjiro Hamano  
Nagasaki University Institute of Tropical Medicine  
Fellow Koza Fujisaki  
National Agriculture and Food Research Organization  
Prof. Toshihiro Horii  
Osaka University Research Institute for Microbial Diseases  
Honorary Prof. DeMar Taylor  
University of Tsukuba

### Project Researchers

Thillaiampalam Sivakumar, Nanang Rudianto Ariefita,  
Maria Angenica Fulo Regilme, Lee Jae Seung, Zafar Iqra

### JSPS Postdoctoral Fellowships for Research in Japan

Azirwan Guswanto, Macalanda Adrian Miki Cular

**Senior Chief** Tsuyoshi Habaguchi

**Assistant Clerk** Yuko Kanomata, Nozomi Suzuki, Yumiko Yamamoto

**Technical Assistant** Manami Yanagihara

## Member of the Steering Committee in 2024

Shigeyuki Kano Director, Research Institute National Center for Global Health and Medicine  
Yasushi Kawaguchi Professor, The University of Tokyo  
Hirofumi Kugita The Institute of Medical Science,  
Yasuhiko Suzuki Representative, WOAHA Asia Pacific Regional Office  
Nariaki Nonaka Professor, Hokkaido University School /  
Badgar Battsetseg Faculty of Veterinary Medicine  
Kenji Hirayama Director, Mongolian University of Life Science  
Toshihiro Horii Institute of Veterinary Medicine,  
Taisuke Horimoto Professor, Nagasaki University School of  
Makoto Igarashi Tropical Medicine and Global Health  
Noboru Inoue Professor, Osaka University  
Shin-ichiro Kawazu Research Institute for Microbial Diseases  
Xuenan Xuan Professor, The University of Tokyo  
Yoshifumi Nishikawa Graduate School of Agricultural and Life Sciences  
Naoki Yokoyama Professor, NRCPD  
Professor, NRCPD  
Professor, NRCPD  
Professor, NRCPD  
Professor, NRCPD

## Member of the collaborative researchers in 2024

(in order of the Japanese syllabary, with titles omitted)

Tamasa Araki Postdoctoral fellow, National Institute of  
Infectious Diseases  
Hiromi Ikadai Associate Professor, Kitasato University  
Yuzuru Ikehara Professor, Chiba University  
Takahiro Ishizaki Senior Assistant Professor, Rakuno Gakuen University  
Shunji Kasai Former Researcher, Eisai Co., Ltd.  
Hiroki Kaneko Associate Professor, Nagoya University  
Satoru Kawai Professor, Dokkyo Medical University  
Takumi Koshiba Professor, Fukuoka University  
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University of Technology Srivijaya  
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# HISTORY

## I The Laboratory for Protozoan Immunology (1984-1990)

April 1984. The Laboratory for Protozoan Immunology was established as an annex of the Department of Veterinary Physiology (Prof. Em. Naoyoshi SUZUKI)

## II The Research Center for Protozoan Molecular Immunology (1990-2000)

June 1990 The Research Center for Protozoan Molecular Immunology granted permission by MEXT, and established as a Joint Research-Educational Facility at Obihiro University until March 31, 2000. Research Unit of Molecular Immunology was established.

April 1992 Research Unit of Pathophysiology, established.

June 1993 New research building constructed with 462m<sup>2</sup> area.

April 1995 Research Unit of Disease Control and Genetics, established.

April 1997 Research Unit of Molecular Arthropodology, established.

November 1997 New research building constructed with 970m<sup>2</sup> area.

## III National Research Center for Protozoan Diseases (2000 to the present)

April 2000 Establishment of the "National Research Center for Protozoan Diseases:NRCPD" as a national research facility covering a 10 year period (2000-2010). Research Unit for Molecular Diagnosis and Research Unit for Advanced Preventive Medicine, established.

March 2002 Extension of research building completed with 1,730 m<sup>2</sup> area.

October 2002 NRCPD recognized and selected to implement the "21st Century Center of Excellence (COE) Program", by MEXT.

April 2003 Department of Large Animal Infections, established.

April 2005 Department of Global Surveillance of Protozoan Diseases, established with the three Research Units.

March 2006 Extension of research building completed with 1,520 m<sup>2</sup> area  
June 2007 Certified as an WOA Reference Laboratory (bovine babesiosis and equine piroplasmosis: Prof. Igarashi, surra: Prof. Inoue).

May 2008 Certified as an WOA Collaborating Centre (the first facility in the world in the field of protozoan diseases).

June 2009 Certified as the Joint Usage Research Center by MEXT.

November 2012 Bio-Self Regulating Science Laboratory (Hakuju donated fund laboratory), established.

March 2013 Research Unit for Global Infection Control, established (Tenure-Track Promotion Program, JST).

April 2016 Re-certified as the Joint Usage Research Center by MEXT.

March 2017 Certified as ISO/IEC17025:2005 (Bovine babesiosis, Equine piroplasmosis, and Surra).

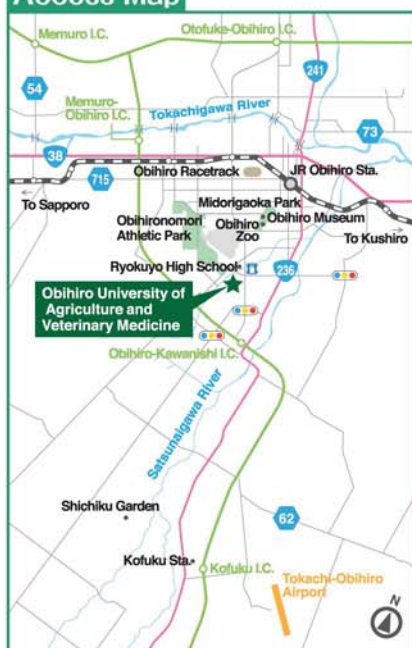
January 2018 Research Unit for International Surveillance, established

April 2022 Re-certified as the Joint Usage Research Center by MEXT.

April 2022 Department of Drug Discovery and Development, Research Unit for Innovative Medicine, established

# Access to us

## Access Map



## From Obihiro Station to the University

### Tokachi Bus

There are 2 bus routes from Obihiro Station to the University.

#### ① From Obihiro Station Bus Terminal #9, take bus #70 or #72 bound for Oozora Danchi.

Get off at **Ryokuyou Koko Mae Bus Stop**. (about 30 min.)

It's about a 15 min. walk to the University entrance.

#### ② From Obihiro Station Bus Terminal #9, take bus #73 bound for Ito Yokado.

Get off at **Nougyou Koko seimon kita Mae Bus Stop**. (about 30 min.)

It's about a 15 min. walk to the University entrance.

### Taxi

It takes about 20 min. and costs around 2,400 yen (about 7 km).

## From Tokachi-Obihiro Airport to the University

### Tokachi Bus

There is a bus from the airport to Obihiro Station. (about 40 min., 1,000 yen)

From Obihiro Station see schedule shown above.

### Taxi

It takes about 30 min. by taxi and costs around 7,000 yen (about 21 km).



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