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

National Research Center for Protozoan Diseases

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

2023
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

Shin-ichiro Kawazu

The National Research Center for Protozoan Diseases 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. The Center, which is the only research base for protozoan diseases in Japan, has taken a leadership role in basic and applied research into the monitoring and control of protozoan diseases in order to achieve three missions, "advanced research", "international cooperation", and "human resource development", and has also provided a number of experts in protozoan diseases at home and abroad.

The infectious diseases with protozoan parasites are mostly zoonotic diseases that not only cause problems in food production but also directly jeopardize human health and safe social activities. To solve these issues, the Center has constructed its own genomic and transcriptomic database of pathogenic protozoans and the arthropods that transmit these protozoans, which are important for the medical and veterinary communities, and distributes this information to the world. The Center also continues to vigorously push forward on basic and applied research into protozoan diseases by using the database for its own research purposes.

Furthermore, two laboratories belonging to the Center were certified as Reference Laboratories of the World Organization for Animal Health (WOAH) in 2007, and then the entire National Research Center for Protozoan Diseases was certified as an WOAH Collaborating Centre in 2008. In 2017, the WOAH Reference Laboratory achieved International Standard, ISO/IEC17025: 2005 accreditation. The Center will continue to work in cooperation with the WOAH and related veterinary disease agencies to further monitor and control protozoan diseases on a global scale.

In addition, since 1995 and for more than 20 years now, the Center has conducted Japan International Cooperation Agency (JICA) Group Training Course by inviting experts from emerging and developing countries who are involved in the prevention of common zoonotic diseases. Nearly 230 participants have completed this course so far. The international network constructed by JICA Training Course participants and individuals who have completed their doctoral course (around 400 now) serves as a driving force in the development of educational and research activities not only in the Center but also in the entire university. In the future, the Center will strive to contribute to the advancement of academic institutions by utilizing the human capital we have accumulated so far both domestically and internationally in related academic societies.

The National Research Center for Protozoan Diseases realizes that future joint-use/research bases will be expected to contribute to the development of related academic societies and academia by inheriting the wisdom and technologies established in Japan by our predecessors.

The Center will steadfastly fulfill the role required of it by society by sincerely carrying out the three missions of "advanced research", "international cooperation", and "human resource development" involved in the monitoring and control of protozoan diseases. We truly appreciate for your continued support.

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 232 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 to re-trai n 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 182 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 or reference laboratories. 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 collaborating centres to developing countries so that diagnostic technology for infectious diseases and livestock sanitation standards can be improved in these countries. In June 2007, two laboratories in the National Research Center for Protozoan Diseases were designated as WOAH Reference laboratories (bovine babesiosis, equine piroplasmosis and surra). In May 2008, the National Research Center for Protozoan Diseases was designated as the first WOAH Collaborating Centre in Asia. The National Research Center for Protozoan Diseases 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 Reference laboratories has been certified as ISO/IEC17025:2017 in April 2021.

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

Joint hosting of the WOAH Regional Workshop

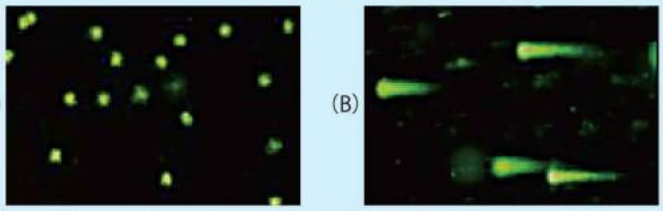
Plate declaring the National Research Center for Protozoan Diseases an WOAH Collaborating Centre

Department of Drug Discovery and Development

Research Unit for Innovative Medicine

Professor Hiroshi Suzuki

We use developmental biotechnology to analyze the gene function of hosts and protozoa. The development of new techniques for developmental biotechnology and reproductive biotechnology is also one of our missions. In this research field, we are investigating the possibility of preventing and treating protozoan infectious diseases by modifying the hosts' physiological condition. For example, recent research using alpha-tocopherol transfer-protein knockout mice have found that a vitamin E deficiency in the host inhibits the growth of malarial protozoa and Trypanosoma. Moreover, we utilize developmental and reproductive biology techniques to improve the breeding of assistance dogs, including guide dogs, for the purpose of contributing to society.



The nuclei of malarial protozoa infecting the red blood cells of a wild-type mouse (A).Disturbances in the DNA of protozoa infecting the red blood cells of an α-TTP deficient mouse (B).

Research Unit for Innovative Medicine

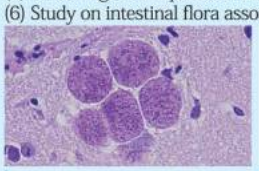
Professor Yoshifumi Nishikawa

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.

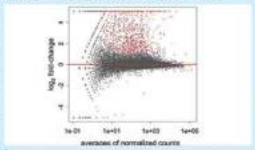
Main Research Projects]

(1) Study on behavioral changes of host animals and CNS disorder following Toxoplasma and Neospora infection.
(2) Study on immune evasion mechanisms of Toxoplasma and Neospora
(3) Pathological study of malaria, toxoplasmosis, neosporosis and cryptosporidiosis
(4) Vaccine development based on multifunctional materials
(5) Screening of anti-parasite drug from natural products
(6) 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

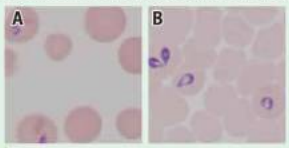
Aborted fetus from cow infected with Neospora

Department of Disease Control

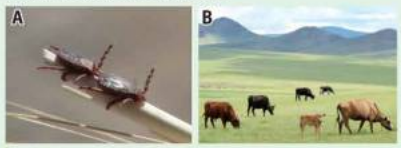
Research Unit for Molecular Diagnostics

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 WOAH 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 WOAH 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

Research Unit for Molecular Diagnostics

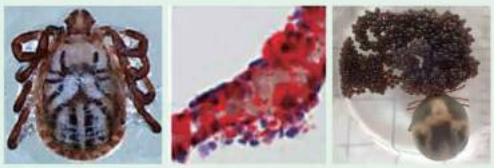
Associate Professor Rika Umemiya-Shirafuji

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.



Department of Disease Control

Research Unit for Advanced Preventive Medicine

Professor Noboru Inoue

As an WOAH Reference Laboratory (WOAH RL) Expert for Surra, I am in charge in periodic revisions of the WOAH documents, such as Animal Health Code and the WOAH Manual, in collaboration with other WOAH 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 trypanosomoses and piroplasmosis in livestock, which are serious concern in Mongolia, and are conducting joint research for the practical application of diagnostic methods for these protozoan diseases.

Our diagnostic kits are practically used in Mongolia

WOAH-NTTAT Network Meeting at WOAH-HQ

Trypanosome sampling from dourine horse

Research Unit for Advanced Preventive Medicine

Assistant 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.

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

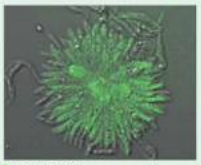


Fig. 1: GFP expressed transgenic *Trypanosoma congolense* (Suganuma et al., 2012 & 2013)

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

Department of Disease Control

Research Unit for Infection and Pathology

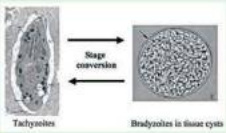
Professor Makoto Igarashi

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

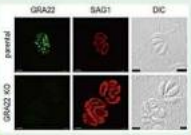
○Understanding Toxoplasma' s parasitism in host cells:
We aim to identify target molecules for new medicines by isolating molecules involved in Toxoplasma's parasitism in host cells.

○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.

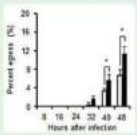


Stage conversion of Toxoplasma

Identification of the bradyzoitespecific DPA molecule and its expression in a cerebral cyst



Creation of a GRA22 gene knockout strain



Is GRA22 involved in egress from host cells?

Research Unit for Infection and Pathology

Research Unit for Infection and Pathology

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.

Department of Global Cooperation

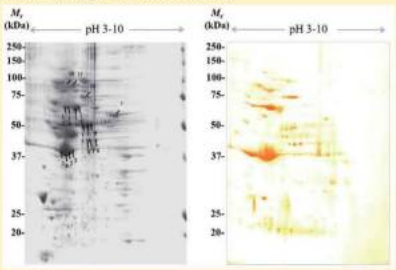
Research Unit for Global Infection Control

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

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



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

Research Unit for Global Infection Control

Research Unit for Global Infection Control

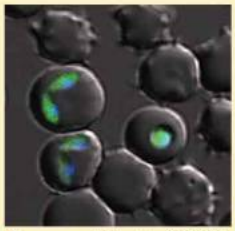
Associate Professor Masahito Asada

Babesia and *Plasmodium* parasites are intraerythrocytic apicomplexan protozoans which cause sever 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.

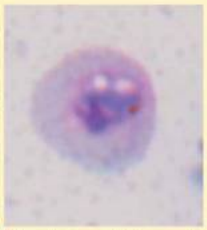
○ Mechanisms of parasite invasion into the erythrocyte

○ Mechanisms of erythrocyte modification by the parasites

○ Field epidemiology of protozoan diseases



Genome editing by CRISPR/ Cas9 system



Ungulate malaria parasite

Department of Global Cooperation

International Cooperation Unit

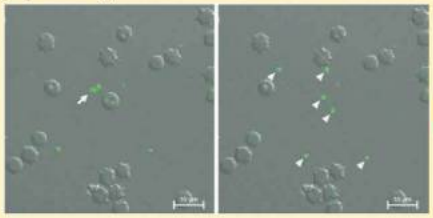
Professor Shin-ichiro Kawazu

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 (H_2O_2 sensor probe) expressing *Babesia bovis*

International Cooperation Unit

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:
nisikawa@obihiro.ac.jp

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 WOAH Collaborating Centre-related research to promote developmental research into technology relating to protozoan disease prevention that will become the international standard. Using the framework of the JST/JICA SATREPS Program "Epidemiological studies on animal protozoan diseases in Mongolia and development of effective diagnostics measures", which was adopted in May 2013, this center established a research hub for foreign fields in the Institute of Veterinary Medicine in Mongolia. This is used to implement the experimental system of authentic infection for livestock protozoan diseases, and to perform research on site in areas where protozoan diseases prevail.

As part of this effort, 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 cen for drug discovery on livestock protozoan diseases" with a view to realizing social implementation.

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

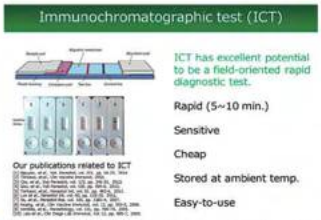
Joint research laboratory established in the Institute of Veterinary Medicine in Mongolia

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 not only in Japan but 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 Acquirement of External Funds (number)

Source of Budget	Budget Item	FY2020	FY2021	FY2022
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)	5	4	5
	Grant-in-Aid for Scientific Research (C)	2	2	1
	Challenging Research (Exploratory)	3	3	2
	Grant-in-Aid for Young Scientists	3	2	1
	Grant-in-Aid for Research Activity Start-up	1	0	0
	Fostering Joint International Research (B)	5	6	5
	Grant-in-Aid for JSPS Fellows	8	5	5
	Core-to-Core Program	1	1	1

Source of Budget	Budget Item	FY2020	FY2021	FY2022
	Joint Research Projects/Seminars	1	1	1
	Ronpaku (Dissertation Ph.D.) Program	1	1	1
Ministry of Health, Labour and Welfare	Health and Labour Sciences Research Grants	1	0	0
Japan International Cooperation Agency (JICA)	Master's Degree and Internship Program of African BusinessEducation Initiative for Youth	0	0	0
Japan Agency for Medical Research and Development	International Collaborative Research Program (NTDs)	0	0	0
Japan Racing and Livestock Promotion Foundation	Livestock Promotion Business	1	0	0
Private Research grant etc. (500,000 yen or more)	Joint research	2	3	0
	Contract research	1	0	2
	Grants	2	2	0
	Total	37	30	24

Members of the Center

Director General Shin-ichiro Kawazu **Vice Director General** Naoaki Yokoyama

Department of Drug Discovery and Development

Research Unit for Innovative Medicine
Prof. Hiroshi Suzuki / Prof. Yoshifumi Nishikawa
Specially Appointed Assistant Prof. Nanako Ushio-Watanabe

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 / Assistant 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)
Assistant Prof. Keisuke Suganuma (Concurrent)

International Cooperation Unit
Prof. Shin-ichiro Kawazu / Prof. Makoto Igarashi (Concurrent)
Prof. Noboru Inoue (Concurrent)
Ms. Zoljargal Myagmar
Dr. Juan Joel Mosqueda Gualito
Dr. Berdikulov Atabek

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

Prof. Hiroshi Suzuki (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
Prof. Naotoshi Tsuji
Kitasato University School of Medicine
Prof. Shinjiro Hamano
Nagasaki University Institute of Tropical Medicine
Fellow Kozo Fujisaki
National Agriculture and Food Research Organization
Prof. Toshihiro Horii
Research Institute for Microbial Diseases, Osaka University
Honorary Prof. DeMar Taylor
University of Tsukuba

Project Researchers

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Assistant Clerk	Yuko Kanomata, Nozomi Suzuki, Yumiko Yamamoto

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Toshihiro Horii	Professor, Research Institute for Microbial Diseases, Osaka University
Taisuke Horimoto	Professor, Graduate School of Agricultural and Life Sciences, The University of Tokyo
Makoto Igarashi	Professor, NRCPD
Noboru Inoue	Professor, NRCPD
Shin-ichiro Kawazu	Professor, NRCPD
Xuenan Xuan	Professor, NRCPD
Hiroshi Suzuki	Professor, NRCPD
Yoshifumi Nishikawa	Professor, NRCPD
Naoaki Yokoyama	Professor, NRCPD

Member of the collaborative researchers in 2023

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

Tamasa Araki	Fixed-term Researcher, National Institute of Infectious Diseases
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Takumi Koshiba	Professor, Fukuoka University
Tatsuki Sugi	Assistant Professor, Hokkaido University
Takeshi Suzuki	Associate Professor, Tokyo University of Agriculture and Technology
Tetsuya Tanaka	Professor, Kagoshima University
Youichi Nakao	Professor, Waseda University
Ryo Nakao	Associate Professor, Hokkaido University
Koichi Narita	Assistant Professor, Tohoku Medical and Pharmaceutical University
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Batdorj Davaasuren	Researcher, Institute of Veterinary Medicine
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Jinlin Zhou	Professor, Shanghai Veterinary Research Institute, Chinese Academy of Agricultural Sciences
Kishor Pandey	Associate Professor, Tribhuvan University
Mark Carrington	Professor, University of Cambridge,
Marvin Ardeza Villanueva	Senior Science Research Specialist, Philippine Carabao Center
Morakot Kaewthamasorn	Associate Professor, Chulalongkorn University,
Phung Thang Long	Vice Rector(Associate Professor), Hue University of Agriculture and Forestry
Sanjay Kumar	Principal Scientist, ICAR-National Research Centre on Equines, India
Seekkuge Susil Priyanntha Silva	Director, Department of Animal Production and Health Veterinary Research Institute
Zhe Hu	Associate Professor, Harbin Veterinary Research Institute, CAAS

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 462㎡ 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 970㎡ area.

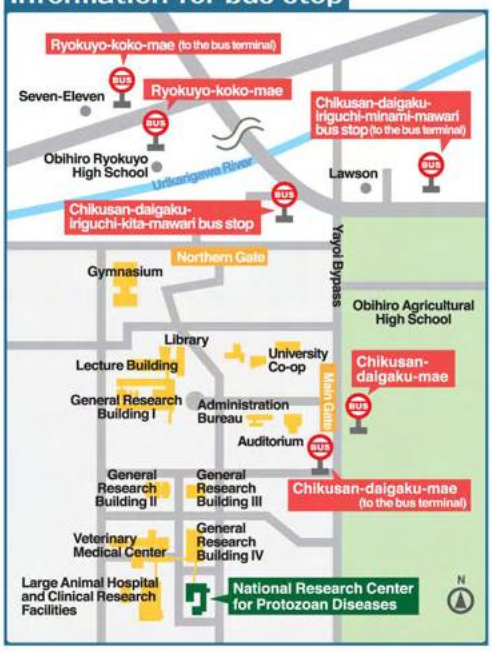
III National Research Center for Protozoan Diseases (2000 to the present)

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 ㎡ 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 ㎡ area
June 2007 Certified as an WOAH Reference Laboratory (bovine babesiosis and equine piroplasmosis: Prof. Igarashi, surra: Prof. Inoue).
May 2008 Certified as an WOAH 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

Information for bus stop



From Obihiro Station to the University

Tokachi Bus

① **Ozora-danchi Route (#70 or 72)**

Boarding at **platform #9 in the Bus Terminal near Obihiro Station**

A 15-min. walk from **Ryokuyo-koko-mae bus stop** to the main gate of the university

•Time required: About 30 min. •Fare: 420 yen •Departures: 1 per hour

② **Northern route (Route #28)**

Boarding at **platform #11 in the Bus Terminal near Obihiro Station**

A 10-min. walk from **Chikusan-daigaku-iriguchi bus stop** to the main gate of the university

•Time required: About 30 min. •Fare: **420 yen** •Departures: 4 per day

③ **Chikudai Route (#79)**

Boarding at **platform #9 in the Bus Terminal near Obihiro Station**

A 10-min. walk from **Chikusan-daigaku-mae bus stop** to the main gate of the university

•Time required: About 30 minutes •Fare: 420 yen •Departures: 2 per day

Taxi

•Time required: About 20 minutes •Fare: about 2,000 yen (about 7 km)

From Tokachi-Obihiro Airport to the University

Tokachi Bus

To Obihiro Station from Tokachi-Obihiro Airport
•Time required: About 40 minutes •Fare: About 1,000 yen
From Obihiro Station see schedule shown above.

Taxi

•Time required: About 25 minutes •Taxi fare: about 5,500 yen (about 21km)

National Research Center for Protozoan Diseases

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

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