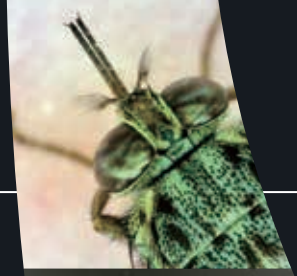
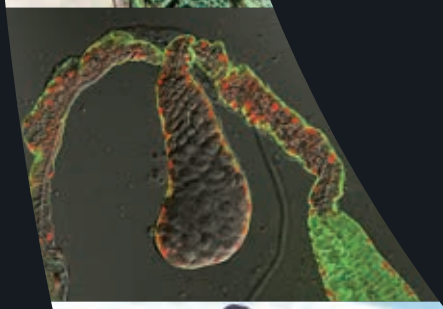
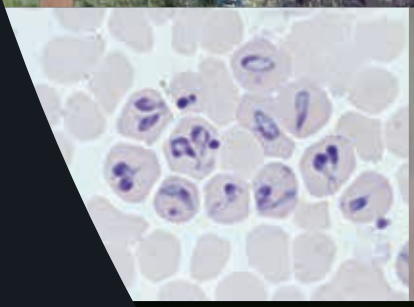
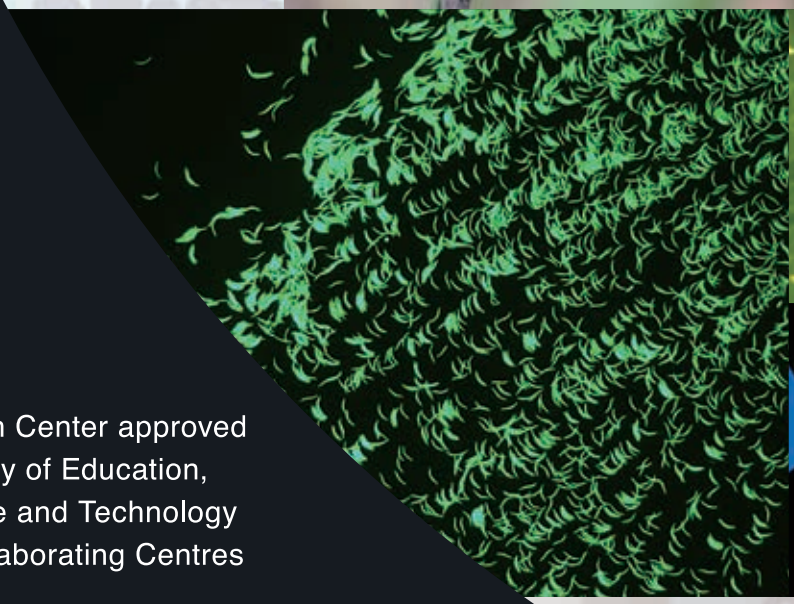
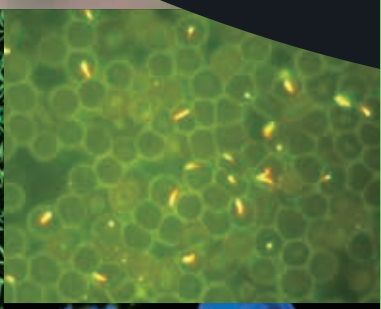
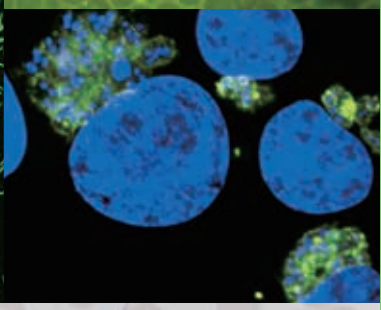






A Joint Usage/Research Center approved
by the Japanese Ministry of Education,
Culture, Sports, Science and Technology
and one of the OIE Collaborating Centres

National Research Center for Protozoan Diseases

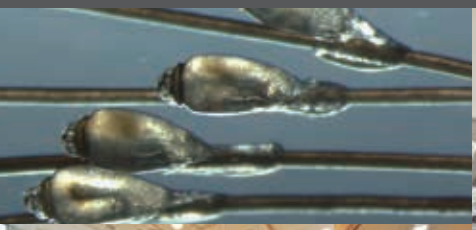
2021

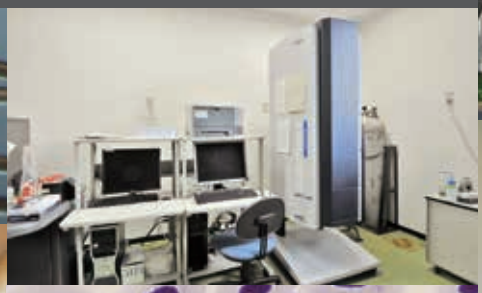
Obihiro University of
Agriculture and Veterinary Medicine

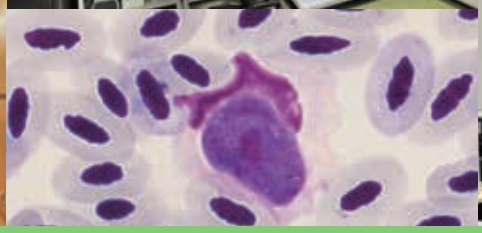
OIE collaborating centre
for surveillance and control
of animal protozoan diseases

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 interuniversity jointuse facility in 1990, certified as a national jointuse facility in 2000, and then as a jointuse 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 Organisation for Animal Health (OIE) in 2007, and then the entire National Research Center for Protozoan Diseases was certified as an OIE Collaborating Centre in 2008. In 2018, the OIE Reference Laboratory achieved International Standard, ISO/IEC17025: 2005 accreditation. The Center will continue to work in cooperation with the OIE 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 a 10month 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 200 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 300 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 jointuse/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 179 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 months to 1 year to re-train their professional skills and develop collaborative research projects with us. We accept 3~6 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

OIE Reference Laboratory and Collaborating Centre

The World Organization for Animal Health (OIE), 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, OIE 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 OIE Reference laboratories (bovine babesiosis, equine piroplasmosis and surra). In May 2008, the National Research Center for Protozoan Diseases was designated as the first OIE 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 OIE Manual" provided by OIE Reference laboratories has been certified as ISO/IEC17025:2005 in March 2017.

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

Joint hosting of the OIE Regional Workshop

Certificate of Accreditation of ISO/ IEC 17025:2005

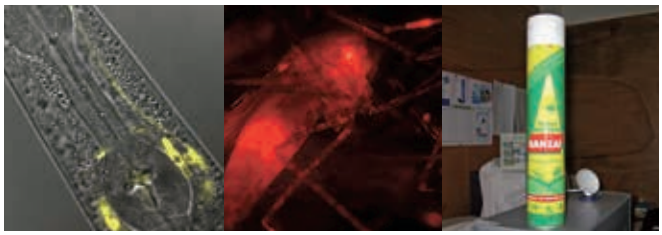
Plate declaring the National Research Center for Protozoan Diseases an OIE Collaborating Centre

Department of Infection and Immunity

Research Unit for Vector Biology

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.



Research Unit for Vector Biology

Research Unit for Host Defense

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

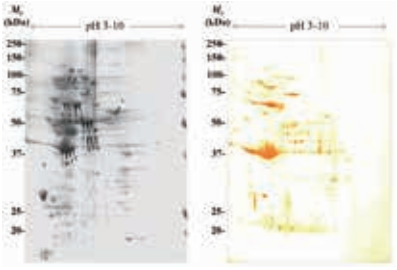
1) Elucidation of the mechanism of hemolytic anemia caused by babesiosis.

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 Host Defense

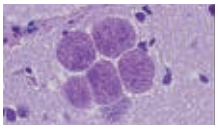
Research Unit for Host Defense

Professor
Yoshifumi Nishikawa

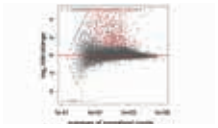
We are researching functional disorders of the central nervous system (CNS) and behavioral changes in host animals, as well as the mechanism of miscarriage or vertical transmission of protozoan infections. In addition, we are attempting to identify and analyze parasite-derived factors that control inflammatory 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



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*

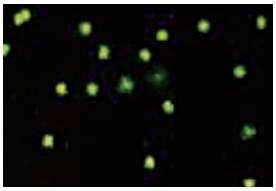
Lab HP: https://sites.google.com/site/nishihdlab/

Research Unit for Host Defense

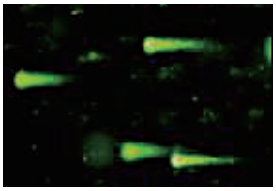
Research Unit for Functional Genomics

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.



(A)



(B)

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 Functional Genomics

Research Unit for Functional Genomics

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.

Research Unit for Functional Genomics

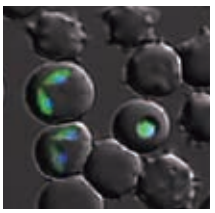
Department of Global Cooperation

Research Unit for Global Infection Control

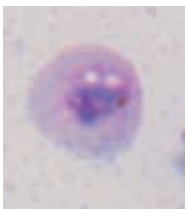
Associate Professor
Masahito Asada

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

Research Unit for Global Infection Control

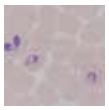
Department of Disease Control

Research Unit for Molecular Diagnostics

Professor
Naoaki Yokoyama

Bovine piroplasmosis (bovine theileriosis and babesiosis) caused by species of genera *Babesia* and *Theileria*, is characterized by fever and anemia. The disease usually results in severe economic losses in cattle industry worldwide. However, preventive and control measures against bovine piroplasmosis have often been ineffective. With an ultimate aim of minimizing the incidence of bovine piroplasmosis, we conduct research to 1) determine the current status of bovine piroplasmosis in Japan and other endemic countries; 2) identify tick vectors transmitting bovine *Theileria*, and thereby establish systematic tick-control measures; 3) determine immunological responses against *Theileria* infection in cattle and develop vaccine; 4) clarify the mechanisms by which Babesia invades erythrocytes with the objective of vaccine development; 5) establish effective techniques and tools to analyze the genetic polymorphism in vaccine candidate antigens; and 6) develop made-to-order type subunit vaccines effective in different endemic regions. To expedite our aim of eliminating bovine piroplasmosis, we maintain a strong international collaborative network and accept postgraduate students and young postdoctoral researchers for the development of human resources in countries where bovine piroplasmosis is endemic.

Theileria parasites



Babesia parasites

Tick in Mongolia

Development of a liposome-based vaccine and conducting field trials

Epidemiological surveys (buffaloes in Thailand, cattle in Mongolia and Vietnam)

Research Unit for Molecular Diagnostics

Research Unit for Advanced Preventive Medicine

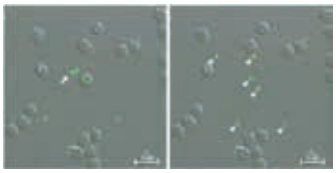
Professor
Shin-ichiro Kawazu

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 prove) expressing *Babesia bovis*

Research Unit for Advanced Preventive Medicine

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.

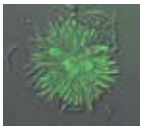


Fig. 1: GFP expressed transgenic *Trypanosoma congolense* (Suganuma et al., 2012 & 2013)

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

Research Unit for Advanced Preventive Medicine

Research Unit for Infection and Pathology

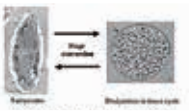
Professor
Makoto Igarashi

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.

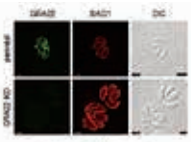


Stage conversion of *Toxoplasma*

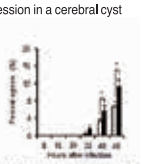
Identification of the bradyzoite-specific DPA molecule and its expression in a cerebral cyst

○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.



Creation of a GRA22 gene knockout strain



Is GRA22 involved in egress from host cells?

Research Unit for Infection and Pathology

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 OIE Reference Laboratory (bovine babesiosis and equine piroplasmosis: Prof. Igarashi, surra: Prof. Inoue).

May 2008 Certified as an OIE 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

The Journal of Protozoology Research

Introduction of Publications

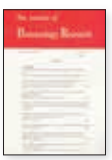
This journal has been issued once or twice a year as an international journal on protozoan diseases since 1990.

Call for papers

We are calling for review papers, original papers and short commu-ni-cation papers pertaining to the study of protozoan diseases, pro-to-zoology, 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 OIE 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.

Since 2017, we are conducting a national project entitled “Establishment of Tick Biobank and its Application to Vector Biology Research” for further progress of the study relating to ticks and ticks-borne diseases. The goal of this project is establishment of “Tick Biobank” including construction of system of identification, maintenance and supply of ticks as well as aggregation of data relating to genetic information.

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

Joint research laboratory established in Makerere University, Uganda

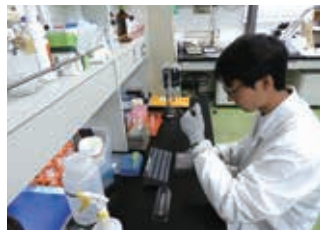
Joint laboratory established in Shanghai Veterinary Research Institute, China

MOU Conclusion with University of the Philippines

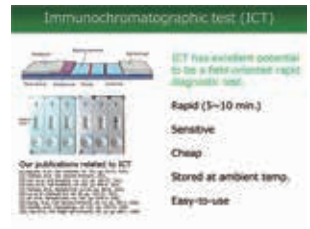
Social Contribution Activity

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	FY2019	FY2020	FY2021
Japan Society for the Promotion of Science	Grant-in-Aid for Scientific Research on Innovative Areas	1	0	0
	Grant-in-Aid for Scientific Research (B)	5	5	4
	Grant-in-Aid for Scientific Research (C)	2	2	2
	Challenging Research (Exploratory)	4	3	3
	Grant-in-Aid for Young Scientists	2	3	2
	Grant-in-Aid for Research Activity Start-up	2	1	0
	Fostering Joint International Research (B)	4	5	5
	Grant-in-Aid for JSPS Fellows	8	8	5
	Core-to-Core Program	1	1	1
	Joint Research Projects/Seminars	2	1	1
	Ronpaku (Dissertation Ph.D.) Program	1	1	0
Ministry of Health, Labour and Welfare	Health and Labour Sciences Research Grants	0	1	0
Japan International Cooperation Agency (JICA)	Master's Degree and Internship Program of African Business Education Initiative for Youth	2	0	0
Japan Agency for Medical Research and Development	International Collaborative Research Program (NTDs)	1	0	0
Japan Racing and Livestock Promotion Foundation	Livestock Promotion Business	1	1	0
Private Research grant etc. (500,000 yen or more)	Joint research	0	2	1
	Contract research	0	1	0
	Grants	2	2	2
	Total	38	37	26

Members of the Center

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

Department of Infection and Immunity

Research Unit for Vector Biology
Assoc. Prof. Shinya Fukumoto

Research Unit for Host Defense
Prof. Xuenan Xuan / Prof. Yoshifumi Nishikawa

Research Unit for Functional Genomics
Prof. Hiroshi Suzuki / Assoc. Prof. Rika Umemiya-Shirafuji

Department of Disease Control

Research Unit for Molecular Diagnostics
Prof. Naoaki Yokoyama

Research Unit for Advanced Preventive Medicine
Prof. Shin-ichiro Kawazu / Assistant Prof. Keisuke Suganuma

Research Unit for Infection and Pathology
Prof. Makoto Igarashi

Department of Global Cooperation

Research Unit for Global Infection Control
Assoc. Prof. Masahito Asada

Research Unit for Global Surveillance
Prof. Naoaki Yokoyama (Concurrent)
Assoc. Prof. Shinya Fukumoto (Concurrent)
Assistant Prof.Keisuke Suganuma (Concurrent)

Research Unit of International Cooperation
Prof. Shin-ichiro Kawazu
Prof. Makoto Igarashi

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 Granduate 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

Project Researchers
Thillaiampalam Sivakumar, Yuho Watanabe, Nanako Ushio-Watanabe, Bumduuren Tuvshintulga, Takahiro Shirozu,

JSPS Research Fellowship for Young Scientists
Tomoyo Taniguchi

JSPS Postdoctoral Fellowships for Research in Japan
Ehab Elnour Ahmed Mossaad, Nanang Rudianto Ariefta

Senior Chief	Tsuyoshi Habaguchi
Technical Assistant	Ai Shindo, Yoshiko Fujioka
Assistant Clerk	Yuko Kanomata, Rina Morimoto

Member of the Steering Committee in 2021

Shigeyuki Kano	Director, Research Institute National Center
Yasushi Kawaguchi	Professor, The Institute of Medical Science, The University of Tokyo
Hirofumi Kugita	Representative, OIE Asia Pacific Regional Office
Yasuhiko Suzuki	Professor, Hokkaido University Research Center for Zoonosis Control
Nariaki Nonaka	Professor, Hokkaido University School of Veterinary Medicine
Badgar BATTSETSEG	Director, Institute of Veterinary Medicine, Mongolian University of Life Science
Kenji Hirayama	Professor, Institute of tropical medicine Nagasaki university
Toshihiro Horii	Professor, Research Institute for Microbial Diseases, Osaka University
Taisuke Horimoto	Professor, Faculty of Agriculture, The University of Tokyo
Makoto Igarashi	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 2021

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

Tamasa Araki	Fixed-term Researcher, National Institute of Infectious Diseases
Hiromi Ikadai	Associate Professor, Kitasato University
Aiko Iguchi	Senior Assistant Professor, Tottori University
Yuzuru Ikehara	Professor, Chiba University
Takahiro Ishizaki	Project Researcher, Umeå University
Mitsuhiro Iyori	Associate Professor, Kanazawa University
Shunji Kasai	Former Researcher, Eisai Co., Ltd.
Satoru Kawai	Professor, Dokkyo Medical University
Takumi Koshiba	Professor, Fukuoka University
Naoya Kojima	Professor, Tokai University
Yoshiyasu Kobayashi	Professor, Obihiro University of Agriculture and Veterinary Medicine
Tatsuki Sugi	Assistant Professor, Hokkaido University
Takeshi Suzuki	Associate Professor, Tokyo University of Agriculture and Technology
Madoka Seki	Assistant Professor, Iwate University
Tetsuya Tanaka	Professor, Kagoshima University
Manabu Tokeshi	Professor, Hokkaido University
Youichi Nakao	Professor, Waseda University
Ryo Nakao	Associate Professor, Hokkaido University
Koichi Narita	Assistant Professor, Tohoku Medical and Pharmaceutical University
Coh-ichi Nihei	Senior Researcher, Microbial Chemistry Research Foundation
Enoch Y. Park	Professor, Shizuoka University
Kenji Hikosaka	Senior Assistant Professor, Chiba University
Akikazu Fujita	Professor, Kagoshima University
Tatsunori Masatani	Associate Professor, Gifu University
Toshihiro Murata	Senior Assistant Professor, Tohoku Medical and Pharmaceutical University
Ayumu Moriya	Senior Researcher, Hokudo Co., Ltd.
Junya Yamagishi	Associate Professor, Hokkaido University
Yasunaga Yoshikawa	Senior Assistant Professor, Kitasato University
DeMar Taylor	Professor, University of Tsukuba
Badgar BATTSETSEG	Director, Institute of Veterinary Medicine Mongolian University of Life Science
Daniel Sojka	Research Scientist, Institute of Parasitology, Biology Centre CAS
Haiyan Gong	Associate Professor, Shanghai Veterinary Research Institute, Chinese Academy of Agricultural Sciences
Jack Sunter	David Fell Research Fellow, Oxford Brookes University
Jinlin Zhou	Professor, Shanghai Veterinary Research Institute, Chinese Academy of Agricultural Sciences
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	Director, Department of Animal Production and Health
Priyanntha Silva	Veterinary Research Institute
Tserendorj MUNKHJARGAL	Researcher, Institute of Veterinary Medicine, Mongolian University of Life Science
Zhe Hu	Associate Professor, Harbin Veterinary Research Institute, CAAS

Logo of National Research Center for Protozoan Diseases

Main concept

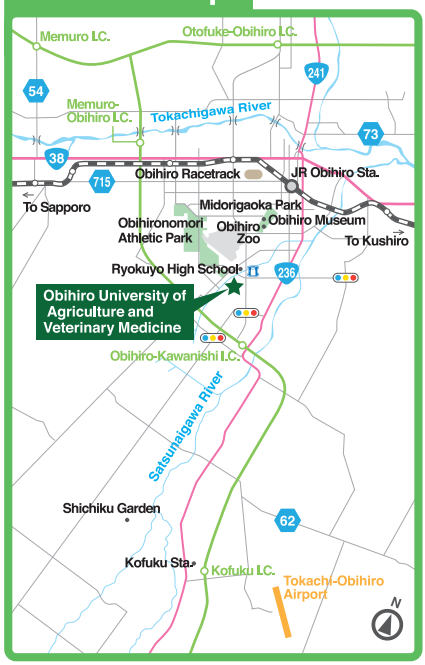
Through daily research on protozoa,

We inspire the high aspiration for health and symbiosis of humans and animals.

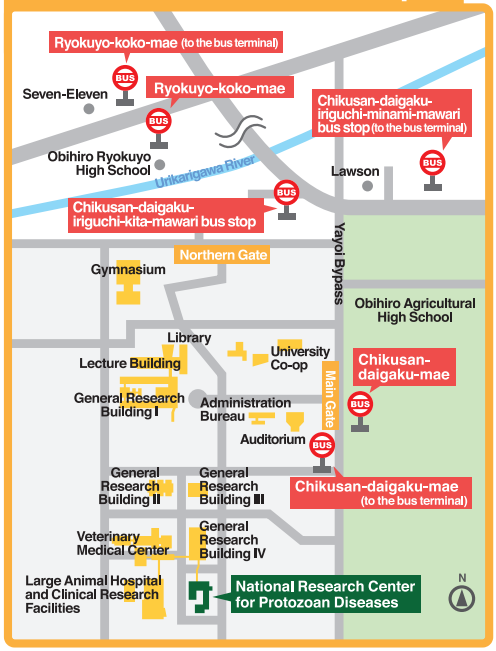
We feel the dynamism of beautiful life and the realization of fruitful achievement.

Access to us

Access Map



Information for bus stops



From Obihiro Station to the University

- **Tokachi Bus**

① **Ozora-danchi Route (#70)**

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
Obihiro University of Agriculture and Veterinary Medicine

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