

# Fiscal 2027 “Joint Usage / Research Center” Application Guidelines for Joint Research Program

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

### Application Details

The National Research Center for Protozoan Diseases (NRCPD) at Obihiro University of Agriculture and Veterinary Medicine (OUAVM) is Japan’s only university research center dedicated to protozoan diseases and their vectors. The Center conducts comprehensive research on the diagnosis, treatment, and prevention of protozoan diseases, and, as a MEXT-designated Joint Usage/Research Center, actively promotes joint research and research exchange with researchers in Japan and abroad.

To further advance research exchange and joint research, the NRCPD invites applications for **FY2027 Joint Research**.

### Joint Research

Referring to the following research departments and topics, we invite collaborative research proposals under either A. General Joint Research or B. WOAHP-related Joint Research. Proposals should be initiated by the applicant (principal investigator) and conducted in cooperation with faculty members of the Center.

### Research Departments and Topics

#### Department of Drug Discovery and Development

|                                       | Research content                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Faculty members of the Center                                            |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Research Unit for Innovative Medicine | In order to develop control strategy against refractory protozoan diseases, we are researching parasite-host interaction and mechanism of pathogenesis on infections with <i>Toxoplasma</i> , <i>Neospora</i> , malaria parasite and <i>Cryptosporidium</i> regarding immune response, central nervous system, pregnancy and diarrhea.                                                                                                                                                | Yoshifumi<br>NISHIKAWA<br>TEL: +81-155-49-5886<br>nisikawa@obihiro.ac.jp |
|                                       | Targeting pathogenic protozoa, including <i>Toxoplasma</i> and <i>Cryptosporidium</i> , we research parasite-host interactions and develop novel methods for diagnosis, treatment, and prevention. We aim to elucidate the functions of protozoan genes using molecular genetic approaches, analyze pathogenicity and host immune responses, develop serodiagnostic methods using antigens and antibodies, and screen candidate compounds for the development of antiprotozoal drugs. | Rie<br>KUBOTA<br>TEL: +81-155-49-5937<br>kubot1121@obihiro.ac.jp         |

## Department of Disease Control

|                                                | Research content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Faculty members of the Center                                                     |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Research Unit for Molecular Diagnosis          | Bovine and equine piroplasmosis (theileriosis and babesiosis) caused by species of genera <i>Babesia</i> and <i>Theileria</i> , is characterized by fever and anemia. The disease usually results in severe economic losses in the industry worldwide. However, preventive and control measures against the piroplasmosis have often been ineffective. With an ultimate aim of minimizing the incidence of piroplasmosis, we conduct research to 1) determine the current status of piroplasmosis in Japan and other endemic countries; 2) identify tick vectors transmitting bovine <i>Theileria</i> , and thereby establish systematic tick-control measures; 3) determine immunological responses against <i>Theileria</i> infection in cattle and develop vaccine; 4) clarify the mechanisms by which <i>Babesia</i> invades erythrocytes with the objective of vaccine and drug developments; 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. | Naoaki YOKOYAMA<br>TEL: +81-155-49-5649<br>yokoyama@obihiro.ac.jp                 |
|                                                | Ticks are obligate blood-sucking arthropods and are known to be important vectors for various pathogens. Understanding tick biology and physiology is essential to develop novel control methods against ticks. Our research themes are 1) molecular mechanisms of nutrient metabolism in unfed or fed ticks, 2) tick oogenesis, 3) molecular mechanisms of tick-pathogen interactions, and 4) symbionts of ticks.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Rika UMEMIYA-SHIRAFUJI<br>TEL: +81-155-49-5800<br>umemiya@obihiro.ac.jp           |
|                                                | We focus on bovine and equine piroplasmosis caused by species of the genera <i>Babesia</i> and <i>Theileria</i> . Through molecular biology, diagnostics, epidemiology, field surveys and international collaborative research, we aim to advance the understanding, surveillance and control of piroplasmosis. Major research activities include 1) global surveillance of bovine and equine piroplasmosis, 2) development of diagnostic methods, 3) analysis of emerging and previously unrecognized piroplasm parasites, and 4) cultivation of <i>Babesia</i> parasites and drug susceptibility studies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Thillaiampalam Sivakumar<br>TEL:+81-155-49-5938<br>siva@obihiro.ac.jp             |
| Research Unit for Advanced Preventive Medicine | Our current control measures to combat trypanosomoses are limited, i.e., early diagnosis followed by isolation of patients and affected animals, treatment with drugs which often cause severe adverse effects, and vector control. To improve such current situation, we are conducting development of simpler, affordable, and more accurate diagnostic methods, safe therapeutic agents, and vaccines, as well as to analyze the prevalence and risk factors of the disease.<br>Another research project focuses on the survival strategies of trypanosomes as parasitic organisms. Trypanosomes can survive within their mammalian hosts and vectors (often insects), which have completely different internal environments. However, mechanisms of their life-cycle development and environmental adaptation are largely unknown. Our research is particularly focused on the identification and functional analysis of developmental stage-specific surface molecules.                                                                                                                                 | Noboru INOUE<br>TEL:+81-155-49-5652<br>ircpmi@obihiro.ac.jp                       |
|                                                | Animal trypanosomosis is endemic in many developing countries. However, no effective control measures are available for this disease. We therefore aim to develop and establish effective control strategies for trypanosomosis.<br>1) Epidemiological surveillance of animal trypanosomosis and establishment of new laboratory strains of animal trypanosomes.<br>2) Development of new trypanocidal drugs using <i>in vitro</i> drug screening assay and <i>in vivo</i> trypanosome infection model.<br>3) Investigation of parasitic strategy, especially tissue parasitism of <i>T. equiperdum</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Keisuke SUGANUMA (Concurrent)<br>TEL: +81-155-49-5697<br>k.suganuma@obihiro.ac.jp |

## Department of Global Cooperation

|                                              | Research content                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Faculty members of the Center                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Research Unit for Global Infection Control   | <p>We focus on the protozoan parasitic diseases which have serious impacts on livestock health and public health in the world. In order to develop effective intervention strategies against the diseases, we aim to understand the basic biology of the parasites.</p> <p>Babesiosis: Development of novel genetic manipulation techniques for the parasites and study on molecular mechanisms of erythrocyte invasion and modification by the parasites.</p> <p>Malaria: Epidemiological surveillance of ungulate malaria parasites and study on the pathogenicity and co-infection status of other parasites.</p>   | <p>Masahito ASADA<br/>TEL: +81-155-49-5647<br/>masada@obihiro.ac.jp</p>                                                                                                                                                                                                                                                                                                            |
|                                              | <p>It is essential for the control of the protozoan diseases to obtain the findings of the infection dynamics among protozoa, vectors, and hosts. We work on the visualization of protozoan transmission mainly in the vectors such as ticks. In addition, epidemiological analysis in wild birds would be performed to accumulate the information of the protozoan infection and transmission in Japan.</p>                                                                                                                                                                                                           | <p>Misuzu OKAJIMA<br/>TEL: +81-155-49-5739<br/>mokajima@obihiro.ac.jp</p>                                                                                                                                                                                                                                                                                                          |
| Research Unit for International Surveillance | <p>In May 2008, National Research Center for Protozoan Diseases was approved as the World Organization for Animal Health (WOAH) collaborating center for Surveillance and Control of Animal Protozoan Diseases, We are doing the following activities.</p> <p>1) research on the development and prevention method of novel diagnostic methods for protozoan diseases, 2) epidemiological survey on domestic and overseas protozoan diseases and arthropods, 3) other international collaborative research on diagnosis, prevention and control of protozoan diseases, technical advice, international evaluation.</p> | <p>Naoaki YOKOYAMA<br/>(Concurrent)<br/>TEL: +81-155-49-5649<br/>yokoyama@obihiro.ac.jp</p> <p>Noboru INOUE<br/>(Concurrent)<br/>TEL: +81-155-49-5652<br/>ircpmi@obihiro.ac.jp</p> <p>Keisuke SUGANUMA<br/>(Concurrent)<br/>TEL: +81-155-49-5697<br/>k.suganuma@obihiro.ac.jp</p> <p>Thillaiampalam Sivakumar<br/>(Concurrent)<br/>TEL: +81-155-49-5938<br/>siva@obihiro.ac.jp</p> |
| Research Unit for International Cooperation  | <p>National Research Center for Protozoan Diseases has trained overseas experts from developing countries through our own training programs. In cooperation with overseas institutions and experts, we focus on major protozoan diseases that are causing economic loss to the country and develop diagnostic, preventive and therapeutic methods for control of the diseases.</p>                                                                                                                                                                                                                                     | <p>Noboru INOUE<br/>(Concurrent)<br/>TEL: +81-155-49-5652<br/>ircpmi@obihiro.ac.jp</p> <p>Masahito ASADA<br/>TEL: +81-155-49-5647<br/>masada@obihiro.ac.jp</p>                                                                                                                                                                                                                     |

## WOAH-related joint research

| Research content                                                                                                                                                                                                                                                                                                                                                                                                                      | Faculty members of the Center                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The NRCPD has three WOAH- reference laboratories for equine piroplasmosis, bovine babesiosis, and surra. These laboratories offer various services to the international community, such as providing diagnostic services and reagents, training, education, and consulting services. In this joint research, we will support international research projects aimed at controlling protozoan diseases based on the principles of WOAH. | Naoaki YOKOYAMA<br>TEL: +81-155-49-5649<br>yokoyama@obihiro.ac.jp<br><br>Noboru INOUE<br>TEL :+81-155-49-5652<br>ircpmi@obihiro.ac.jp<br><br>Thillaiampalam Sivakumar<br>TEL : +81-155-49-5938<br>siva@obihiro.ac.jp |

## Application eligibility

Faculty members of domestic and foreign universities, researchers who belong to other research institutes and those engaging in research on protozoan diseases and in related fields who are deemed to have equivalent research capability. In particular, challenging research by young researchers and participation of diverse researchers are desirable, and therefore, the applicants who are young researchers, female researchers and foreign researchers will be encouraged to apply. Graduate school students may participate in research as co-researchers, but the principal investigator must be a faculty member who is the supervisor of such students. Please inquire separately concerning the participation of undergraduate students.

## Research period

One to three years from the date of adoption (April 1, 2027, or later).

Note: Even if the research period is more than one year, the screening result and the amount of financial support will be determined for each year. An additional application form for the ongoing project must be submitted in every subsequent year.

“Ongoing project” means a multi-year research project in its second or subsequent years.

## How to Apply

After consulting with relevant faculty members of the Center in advance about the research topic, research plan, necessary expenses, scheduled period of visiting the Center and other details, prepare the Joint Research Application Form (Form 1-1) and submit it to the e-mail address below in Word format.

For conducting the joint research, the approval of the head of the principal investigator’s affiliated organization (or the head of the relevant department or equivalent) must be obtained, and the Joint Research Consent Form (Attachment to Form 1-1) must be submitted together with the application. If there are co-researchers, the approval of the head of each co-researcher’s affiliated organization (or the head of the relevant department or equivalent) must also be obtained, and a Joint Research Consent Form (Form 1-2) must be submitted for each co-researcher.

\*An official seal on the consent form is not required. However, if an official seal is required under the rules or procedures of the affiliated organization, please follow the requirements of that organization. Depending on whether an official seal is affixed and the procedures of the affiliated organization, the consent form may be submitted in any format, such as PDF, by e-mail or post.

**E-mail address**

shien@obihiro.ac.jp

**Deadline**

Friday December ,4 2026

**Screening Result**

After discussions by the Center's steering committee, the Director of the Center will determine the screening result and notify it to the applicant. The adopted amount of funding determined as a result of screening may be less than the amount applied for.

**Expenses to Be Covered**

Travel expenses, consumables and other expenses necessary for the research will be covered by the Center. The budget must be planned within the limit of 500,000 yen per project per year, with a clear statement of the relationship between the use of expenses and the research content. If only part of the overall research plan is to be carried out using the budget for this joint research, the percentage of the funding to be provided by this joint research must be stated on the application form.

Travel expenses will be calculated in accordance with the Travel Expenses Regulations of the National University Corporation Hokkaido National Higher Education and Research System and, in principle, will be paid in arrears by bank transfer. Travel expenses for the principal investigator and co-researchers traveling between their place of work (or residence) and the Center will be covered. However, this does not apply when the destination for presenting the results of the joint research is a place other than the Center.

Items that are required to be treated as equipment under the regulations of the University (such as items costing 100,000 yen or more) are not eligible for funding, even if they are included in the application form. If you are unsure whether an item is eligible for funding, please consult the relevant faculty member of the Center in advance when preparing the application form.

**Research achievement report**

The principal investigator of joint research must submit the joint research report within 60 days after the end of research to the address for the submission of the application form. A debriefing session may be held for the presentation and sharing of research results and principal investigator may be asked to make presentations. Details will be notified separately.

**Presentation of research results**

When presenting research results, it must be clearly stated that research was conducted under this research project.

**【English】**

Cooperative Research Grant (2027-joint-#) of National Research Center for Protozoan Diseases. Obihiro University of Agriculture and Veterinary Medicine

Note: State the project number on the adoption notice in place of #)

**Handling of intellectual property**

Intellectual property rights as a result of the joint research program will be handled in accordance with the Rules on the Handling of Employee Inventions of our organization.

### **Address for Submission**

Research Support Section,  
Obihiro University of Agriculture and Veterinary Medicine.  
11 Nishi 2, Inadacho, Obihiro, Hokkaido 080-8555, Japan

E-mail: [shien@obihiro.ac.jp](mailto:shien@obihiro.ac.jp)

※ Website: <https://www.obihiro.ac.jp/facility/protozoa/en>  
(National Research Center for Protozoan Diseases)