

Opportunity Title: Biodefense Research Opportunity in Infection and Vaccination of Foreign Animal Diseases

Opportunity Reference Code: USDA-PIADC-2019-0152

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-PIADC-2019-0152

How to Apply A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. All transcripts must be in English or include an official English translation. Click [here](#) for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations

All documents must be in English or include an official English translation.

If you have questions, send an email to PIADC@oraui.org. Please include the reference code for this opportunity in your email.

Application Deadline 2/28/2020 3:00:00 PM Eastern Time Zone

Description *Applications will be reviewed on a rolling-basis.

A research opportunity is currently available with the the U.S. Department of Agriculture (USDA), Plum Island Animal Disease Center (PIADC) in Orient Point, New York.

This research opportunity will involve the evaluation of innate and adaptive immunity during foot-and-mouth disease (FMD) infection and the immune response after different types of vaccination and/or immuno-modulatory treatments. By using immunological techniques, the participant will evaluate immune response during natural infection or induced by vaccination or other immuno-modulatory treatments such as interferon (IFN) or other cytokines. Under the guidance of a mentor, the participant will be involved in running animal studies in the natural host and some animal models to elucidate the importance of the different aspects of the immune response during infection and the mechanisms involved in protection during vaccination or treatment. The participant will also implement diagnostics tools to differentiate vaccinated from infected animals.

PIADC is the only U.S. laboratory facility performing research, development and diagnosis of foreign animal diseases of highest threat to the U.S. This critical national asset is located off the northeast coast of Long Island, NY, and accessible by government-provided ferry from Orient Point, NY, and Old Saybrook, CT. Research at PIADC is performed on animal diseases that threaten the nation's animal industries and exports. One of the missions of FADRU is to investigate foreign animal diseases (FADs) in their endemic settings to help mitigate the risks of catastrophic economic losses caused by these pathogens in the event of accidental or deliberate introduction to the United States.

Under the guidance of a mentor, the participant may be involved in the following activities:

- Study design for pathogenesis or vaccination/biotherapeutic experiments involving exotic viral diseases of livestock
- Execution of animal experiments involving exotic viral diseases of livestock
- Clinical examinations of livestock (pigs and/or cattle)
- Sample collection from living livestock



ORISE GO

The ORISE GO mobile app helps you stay engaged, connected and informed during your ORISE experience – from application, to offer, through your appointment and even as an ORISE alum!

Visit ORISE GO 

GET IT ON
 **Google Play**

Download on the
 **App Store**

Opportunity Title: Biodefense Research Opportunity in Infection and Vaccination
of Foreign Animal Diseases

Opportunity Reference Code: USDA-PIADC-2019-0152

- Postmortem examination, dissection, and sample collection
- Tissue culture and virus isolation
- Flow cytometry/sorting
- ELISA, ELISpot, Multiplex ELISA
- Immunofluorescence
- Polymerase chain reaction
- Data analysis
- Drafting manuscripts reporting experimental results

Being stationed at PIADC offers the selected participant with the opportunity of learning to handle select agents in livestock species and managing select agent inventories. The participant will have the opportunity of participating in national and international meetings, workshops and training courses for the advancement of their scientific careers in foreign animal diseases and emerging infectious animal diseases.

The participant must have or be eligible to obtain a high security clearance.

Anticipated Appointment Start Date is Flexible

This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and PIADC. The initial appointment is for one year, but may be renewed upon recommendation of PIADC and is contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE. The appointment is full-time at PIADC in the Orient Point, New York, area. Participants do not become employees of USDA, PIADC, DOE or the program administrator, and there are no employment-related benefits.

This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals.

Qualifications The qualified candidate should have received a master's or doctoral degree in one of the relevant fields, or be currently pursuing the degree and will reach completion by the start date of the appointment. Degree must have been received within five years of the appointment start date.

Preferred skills/experience:

- Experience in handling lab animals and livestock (swine-cattle)
- Knowledge of animal infectious diseases
- Knowledge on vaccine/biotherapeutics (potency/efficacy studies) as means to control animal diseases
- Experience in evaluation of immune responses (flow cytometry, sorting of cells, immunofluorescence, antibody detection and characterization of antibodies [neutralizing antibodies, total antibodies, antibody isotyping, etc.])
- Detection of cytokines by ELISA, ELISPOT and/or multiplex ELISA, qPCR, etc.
- Some experience in molecular biology techniques including cloning, cell culture, PCR, sequencing, western blotting, microscopy, etc.
- Knowledge of word and data processing and basic statistics

Eligibility Requirements • **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 11/1/2019 11:59:00 PM.

Opportunity Title: Biodefense Research Opportunity in Infection and Vaccination
of Foreign Animal Diseases

Opportunity Reference Code: USDA-PIADC-2019-0152

- **Discipline(s):**
 - **Life Health and Medical Sciences** ([13](#) 👁)
- **Veteran Status:** Veterans Preference, degree received within the last
120 month(s).