Opportunity Title: Research Opportunity in Microbiology - PIADC
Opportunity Reference Code: PIADC-ARS-2017-398-0026

Organization U.S. Department of Agriculture (USDA)

Reference Code PIADC-ARS-2017-398-0026

How to Apply A complete application consists of:

- An application
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Official transcripts – scanned copies are acceptable

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

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

Description A research opportunity is available at the The Plum Island Animal Disease Center (PIADC).

The current opportunity is to participate in an ongoing research project entitled "Ecology of Vesicular Stomatitis Virus (VSV) in North America". Vesicular Stomatitis Virus (VSV) is an arthropod-borne virus that causes serious vesicular disease resulting in economic losses to the cattle, swine, and horse industries due to decreased animal production and quarantines. In cattle and swine, the disease is clinically indistinguishable from Foot-and-Mouth Disease (FMD), one of the most devastating exotic diseases in livestock. For decades, outbreak cycles of VS lasting 1-3 years have occurred sporadically in the southwestern United States. Different VSV strains causing each of these outbreak cycles are closely related to those circulating in enzootic areas of Mexico, but their means of transmission and introduction to the United States remain unclear. The environmental, host, and viral factors influencing the emergence, spread, and transmission of VSV are poorly understood. This research project is aimed at understanding the ecology of emerging strains of VSV in North America and characterizing epidemiological, ecological, climatological and environmental factors associated with VSV emergence and maintenance. This understanding will provide scientific evidence to generate models that predict future outbreaks and to develop intervention strategies to minimize the impact of future disease outbreaks.

The participant will be involved in research activities at the Foreign Animal Disease research Unit (FADRU) at Plum Island Animal Disease Center in Orient, NY in close collaboration with the Arthropod Borne Disease Research Unit located in Manhattan, Kansas. The successful candidate will be actively involved both in laboratory aspects including virus genetic characterization by next generation sequencing and phylogenetic

analysis, as well as in-vivo characterization in insect and mammalian hosts of VSV viruses of different pathogenesis levels as well as collection and integration of ecological data. Travel to Kansas and to Mexico might be necessary during different phases of this research. This position will involve training in biosafety and various aspects of research in high containment (BSL3Ag).

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. Access to the facility requires eligibility requisites including medical and security clearances that are requisites for final selection.

For additional information about the PIADC Research Participation Program, please see https://www.orau.gov/piadc.

Selected candidates will receive a stipend as support for their living and other expenses during this appointment. Stipend rates are determined by PIADC officials and are based on the candidate's academic and professional background. Candidates will also be eligible to receive a health insurance allowance and reimbursement for travel expenses. Appointments are for one year. Appointments may be extended in increments of up to one year, contingent upon project needs and funding availability. The maximum length of time a participant can spend in the ORISE program is five years from the initial appointment start date. Participants will not enter into an employee/employer relationship with ORISE, ORAU, USDA, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

Qualifications

To be eligible, applicants must:

- Have or be completing a Doctor In Veterinary Medicine (DVM) or post graduate MSc. or Ph.D. degree in microbiology, virology, genetics, epidemiology or other discipline related to animal diseases.
- Have or be eligible to obtain a security clearance.
- Be a U.S. citizen or permanent resident alien, or be eligible for a J-1 visa, if a foreign national.

Applicants should have experience with:

- Mammalian cell culture maintenance.
- Common virology techniques: viral titers, stock preparation.
- Molecular biology techniques: cloning, western blot, DNA / RNA isolation.

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Eligibility Requirements

- **Degree:** Master's Degree or Doctoral Degree.
- **Academic Level(s):** Graduate Students, Postdoctoral, or Post-Master's.
- **Discipline(s):**
  - **Life Health and Medical Sciences** (9 👁)