

Opportunity Title: USDA-ARS Fellowship on Solving Cryo-EM Structures for African Swine Fever Viral Proteins

Opportunity Reference Code: USDA-ARS-P-2023-0158

Organization U.S. Department of Agriculture (USDA)

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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. 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.

Application Deadline 6/23/2023 3:00:00 PM Eastern Time Zone

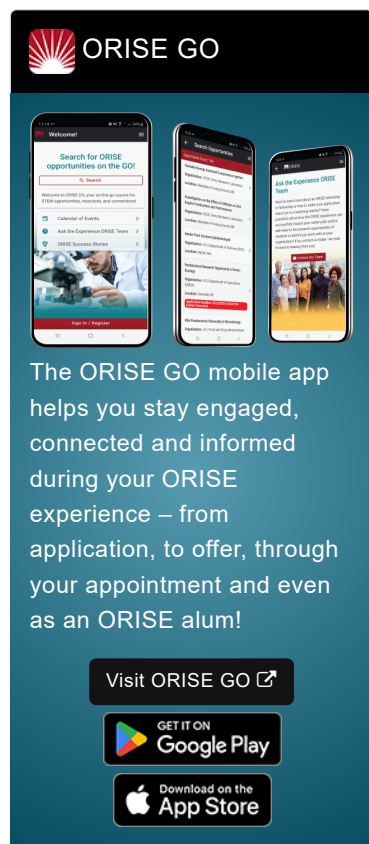
Description *Applications are reviewed on a rolling basis.

ARS Office/Lab and Location: Two postgraduate research opportunities are available at the La Jolla Institute for Immunology in San Diego, California with the U.S. Department of Agriculture (USDA), Plum Island Animal Disease Center (PIADC), Foreign Animal Disease Research Unit.

The Plum Island Animal Disease Center (PIADC) Research Participation Program offers biodefense research opportunities to motivated students and postgraduates interested in developing novel strategies to control foreign animal diseases, including foot-and-mouth disease (FMD) and African swine fever (ASF).

Research Project: One of the missions of PIADC is to develop technologies to help mitigate the risks of catastrophic economic losses caused by foreign animal disease agents accidentally or deliberately introduced into the United States.

There are approximately 190 proteins in ASF virus (ASFV) most of which have an unknown function, and very few that have a solved protein structure associated with them. The objective of this opportunity is to perform research to understand the function and structure of African swine fever virus proteins. This research will primarily involve expressing viral proteins in cell culture expression systems, purifying viral proteins and determining the structure using Cryo-EM or X-ray crystallography. The structures will be compared to other known protein structures to find similar folds and hypothesize functions; functional assays and biochemistry will drive discovery and confirmation.



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Learning Objectives: As a result of this training the participant will improve their skills in cryo-electron microscopy, protein purification, and solving protein structures.

Mentor(s): The mentor(s) for this opportunity is Douglas Gladue (douglas.gladue@usda.gov). Please contact the mentor if you have questions about this opportunity.

Anticipated Appointment Start Date: 2023. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be renewed upon recommendation of ARS and is contingent on the availability of funds.

Level of Participation: The appointment is full time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience.

Citizenship Requirements: This opportunity is available to U.S. citizens and Lawful Permanent Residents.

ORISE Information: 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 ARS. Participants do not become employees of USDA, ARS, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g., facial covering, physical distancing, testing, vaccination).

Questions: Please visit our [Program Website](#). After reading, if you have additional questions about the application process, please email ORISE.ARS.Plains@ornl.gov and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion before start of appointment. Degree must have been received within five years of the appointment start date.

- Eligibility Requirements**
- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([48](#) )
 - **Veteran Status:** Veterans Preference, degree received within the last

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120 month(s).