

Opportunity Title: USDA-ARS Fellowship in Development of Alternative Vaccine Platforms for Swine Vesicular Diseases

Opportunity Reference Code: USDA-ARS-P-2024-0058

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-P-2024-0058

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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 4/26/2024 3:00:00 PM Eastern Time Zone

Description *Applications are reviewed on a rolling-basis.

ARS Office/Lab and Location: A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), located in Manhattan, Kansas.

The Agricultural Research Service (ARS) is the U.S. Department of Agriculture's chief scientific in-house research agency with a mission to find solutions to agricultural problems that affect Americans every day from field to table. ARS will deliver cutting-edge, scientific tools and innovative solutions for American farmers, producers, industry, and communities to support the nourishment and well-being of all people; sustain our nation's agroecosystems and natural resources; and ensure the economic competitiveness and excellence of our agriculture. The vision of the agency is to provide global leadership in agricultural discoveries through scientific excellence.

The National Bio- and Agro-Defense Facility (NBAF) is a federally owned and operated biocontainment facility designed to house Biosafety Level 2 (BSL-2) through Biosafety Level 4 (BSL-4) work, arthropod containment at BSL-2 (ACL-2) and BSL-3 (ACL-3), small animal containment at BSL-4 (ABSL-4), and large animal containment spaces (i.e., Animal Biosafety Level 3 Agriculture [ABSL-3Ag] and Animal Biosafety Level 4 Agriculture [ABSL-4Ag]). NBAF provides the United States (U.S.) with the capacity to conduct comprehensive research, develop vaccines, and provide enhanced diagnostic and training capabilities to protect against transboundary, emerging, and zoonotic animal diseases that threaten our nation's food supply, agricultural economy, and public health.

Located within NBAF, the Biologics Development Module (BDM) is a BSL-2

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lab space that will directly support and accelerate technology transfer of vaccines, diagnostics, biotherapeutics, and other veterinary countermeasures to commercial veterinary biologic manufacturers. The vision of the BDM is to put impactful biologics solutions into the hands of farmers, producers, and veterinarians through a focus on quality and collaboration with biologics manufacturers.

Research Project: This appointment will support the evaluation and development of multiple vaccine platforms against swine vesicular diseases, specifically Senecavirus and Foot-and-Mouth Disease Virus. Platforms to be developed include both attenuated virus platforms and virus like particle platforms. To accomplish this research project, under the guidance of a mentor, the participant will:

1. Engage in propagation, purification, and characterization of attenuated viruses
2. Express, purify, and evaluate virus like particle vaccine platforms
3. Produce experimental vaccine dosages for in-vivo evaluation

Learning Objectives: During this appointment applicant will have the opportunity to gain diverse experience in cell culture, bacterial culture, virus propagation and purification, protein expression, protein purification, vaccine design, assay development, and vaccinology. Aspects of the project may be modified to better suite selected applicants experience and education background.

Mentor: The mentor for this opportunity is Michael Puckette (michael.puckette@usda.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: 2024. 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 only.

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.

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

Qualifications The qualified candidate should be currently pursuing or have received a bachelor's, master's or doctoral degree in the one of the relevant fields, received or anticipated to be received by 09/02/2024.

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([4](#) 👁)
 - **Engineering** ([1](#) 👁)
 - **Life Health and Medical Sciences** ([25](#) 👁)
 - **Mathematics and Statistics** ([1](#) 👁)
 - **Other Non-Science & Engineering** ([1](#) 👁)