Opportunity Title: USDA-ARS Postdoctoral Research Opportunity: Development of Novel Vaccines for Poultry Viral Diseases
Opportunity Reference Code: USDA-ARS-SEA-2025-0215

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SEA-2025-0215

How to Apply ***To submit your application, scroll to the bottom of this opportunity and click 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. 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.

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Application Deadline 2/27/2026 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 Athens, Georgia.

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.

Research Project: The ORISE participant will be part of the research team learning about developing recombinant Marek's disease virus vaccines to prevent both Marek's disease and other poultry diseases. The project involves the construction of recombinant vaccines using molecularly cloned Marek's disease virus as a vector platform and the evaluation of the efficacy against Marek's disease and targeted poultry disease. The participant will construct the recombinant Marek's disease virus that expresses the foreign antigens. The participant will learn the construction of recombinant avian herpesvirus vaccines, conduct vaccine efficacy studies

to develop novel poultry vaccines, including sample collection from animals, execution of viral genome detection, and data analysis.

Learning Objectives: During the fellowship, the participant will acquire the following skills and knowledge through hands-on training:

- **Recovery of Infectious Avian Herpesviruses:** The fellow will learn the techniques required to recover infectious avian herpesviruses from DNA transfection processes, gaining a deeper understanding of molecular virology and virus recovery methods.
- **Quantification of Virus Infectivity and Titer:** The participant will be trained to accurately quantify virus infectivity and determine viral titers, developing expertise in virological assays and data interpretation.
- **Modification of Cloned Virus Genome:** The fellow will gain proficiency in using advanced recombineering technologies to modify cloned virus genomes, learning how to apply genetic engineering techniques for the study and manipulation of viral pathogens.
- **Evaluation of Vaccinal Efficacy:** The participant will learn how to evaluate the vaccinal efficacy of Marek's disease virus vector vaccines, including experimental design, data collection, and analysis to assess vaccine performance and effectiveness.

Through these learning objectives, the fellow will develop a robust skill set in virology, molecular biology, and vaccine development, contributing to advancements in avian disease prevention and control.

Mentor(s): The mentor for this opportunity is Taejoong Kim (taejoong.kim@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: February 2026. 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,

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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.

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

Qualifications

The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields.

Preferred skills:

- A highly motivated scientist in the virology and vaccine development
- Strong hands-on techniques in DNA/RNA amplification, molecular cloning, transgene gene expression, virus propagation, cell cultures

Point of Contact

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Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Life Health and Medical Sciences** (51 👁)