

Opportunity Title: USDA-ARS Postdoctoral Fellowship in Insect Population

Genomics

Opportunity Reference Code: USDA-ARS-PA-2026-0338

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-PA-2026-0338

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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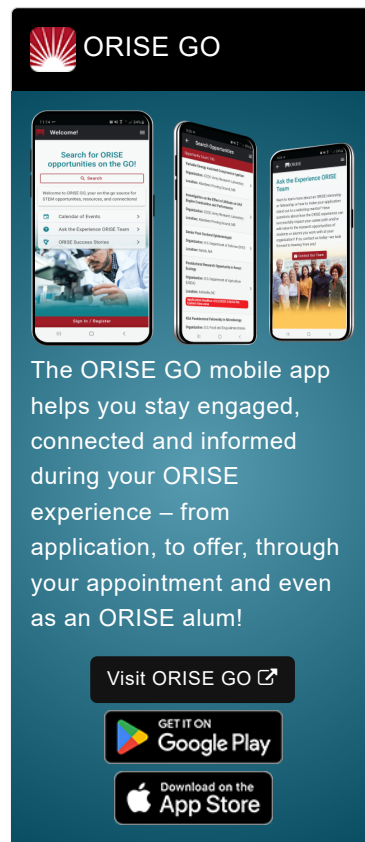
Application Deadline 10/23/2026 3:00:00 PM Eastern Time Zone

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 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 fellowship is based in the Stored Product Insect and Engineering Research Unit at the USDA-ARS Center for Grain and Animal Health Research in Manhattan, KS. Our mission is to develop economical, effective, and ecologically sound methods for managing insect pests of grain and processed commodities, improve post-harvest management practices, and develop methods to rapidly evaluate grain quality, using a combination of cutting edge tools, such as chemical ecology, molecular biology, and genomics to artificial-intelligence-driven monitoring systems to forecast and manage stored product insect populations and insecticide resistance. Home to Kansas State University and The Flint Hills, Manhattan, KS provides a blend of academic energy and outdoors lifestyle in a college-town environment.



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Research Project: Under the guidance of a mentor, you will use population-genomic datasets generated by USDA scientists to characterize movement patterns of stored-product insects across U.S. agroecosystems and to identify invasion pathways. This includes modeling environmental variables that predict population expansions and conducting genomic analyses to detect resistance alleles in populations recovering from fumigant or insecticide exposure. You will evaluate how the implementation of rotational integrated pest management (IPM) tactics alters resistance-allele frequencies and assess whether tactic alternation can mitigate or prevent resistance resurgence. This also involves developing high-quality reference genomes for key stored-product pest species using long-read sequencing and advanced annotation methods, enabling comparative genomic analyses to determine how variation in gene content and genome architecture contributes to differences in susceptibility to pest-management tactics, insecticides, and fumigants among different stored product insect species.

Learning Objectives: During the course of this appointment, you will have the opportunity to:

- Gain experience using population genomics to study movement patterns and invasion pathways of stored-product insect pests across U.S. agroecosystems.
- Develop skills in genomic data analysis to identify resistance alleles associated with insecticide and fumigant exposure.
- Learn how environmental and ecological variables influence insect population expansion and resistance dynamics.
- Gain experience evaluating integrated pest management (IPM) strategies and their effects on resistance-allele frequencies over time.
- Develop experience in long-read sequencing, genome assembly, and genome annotation for agricultural pest species.
- Learn comparative genomics approaches to investigate how genome variation influences susceptibility to pest-management tactics and chemical controls.
- Gain interdisciplinary exposure to genomics, bioinformatics, agricultural science, evolutionary biology, and pest management research.

Mentor(s): The mentor for this opportunity is

Erin Scully (erin.scully@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: **October 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.

Citizenship Requirements: This opportunity is available to U.S. citizens only.

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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.

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 doctoral degree in the one of the relevant fields.

Preferred skills:

- Experience in analyzing population genetics or genomics datasets and bioinformatics

Stipend \$70,000.00 – \$90,000.00 Yearly

Point of Contact [Janeen](#)

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Doctoral Degree.
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([5](#) )