Opportunity Title: USDA-ARS Postdoctoral Fellowship in Food Safety
Opportunity Reference Code: USDA-ARS-2022-0069

Organization	U.S. Department of Agriculture (USDA)
Reference Code	USDA-ARS-2022-0069
How to Apply	***Connect with ORISE...on the GO!*** Download the new ORISE GO mobile app in the <u>Apple App Store</u> or <u>Google Play Store</u> to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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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. All transcripts must be in English or include an official English translation. Click <u>here</u> 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

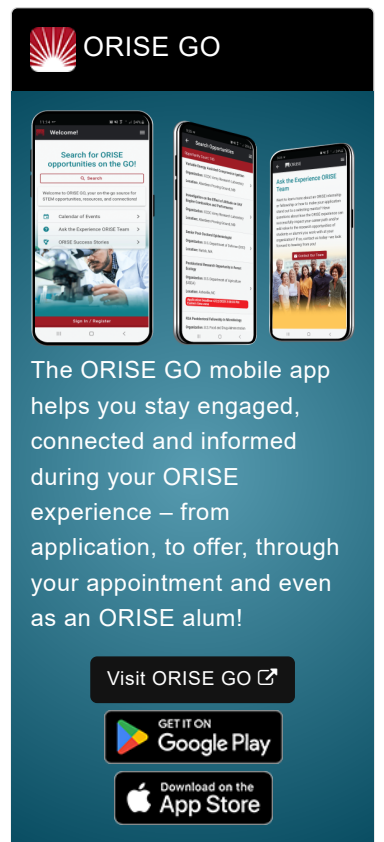All documents must be in English or include an official English translation.

Description

*Applications will be reviewed on a rolling-basis and this posting will remain open until filled.

<u>ARS Office/Lab and Location:</u> A postdoctoral research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS) located in Clay Center, Nebraska. This appointment will start 100% remote due to ongoing pandemic related ARS facility policies, with the opportunity for an in-person appointment as permitted.

<u>Research Project:</u> The U.S. Department of Agriculture - Agricultural Research Service (USDA ARS) mission involves problem-solving research in the widely diverse food and agricultural areas encompassing plant production and protection; animal production and protection; natural resources and sustainable agricultural systems; and nutrition; food safety; and quality. The programs are conducted in 46 of the 50 States, Puerto Rico, and the U.S. Virgin Islands. For ARS to maintain its standing as a premier scientific organization, major investments in computing, networking, and storage infrastructure are required. Training in data and information management are integral to the integrity, security, and accessibility of research findings, results, and outcomes within the ARS research enterprise. Nearly 2000 scientists and support staff conduct research within the ARS research enterprise.

Ensuring the safety of the nation's food supply from foodborne pathogens is challenging. Despite the implementation of numerous process controls there has been no progress in decreasing the incidence rate of salmonellosis in the U.S. over the past decade. Moreover, *Salmonella* outbreaks attributed to poultry, beef and pork continue to occur. This challenge requires integrating multiple disciplines and developing innovative strategies including new detection tools, comprehensive on-farm through processing data and application of AI/machine learning and predictive analytics tools to analyze vast amounts of high quality data of many different types to develop decision support tools to reduce the risk of *Salmonella* in fresh meat.

<u>Learning Objectives:</u> The selected participant will have the opportunity to learn about the challenges in producing a safe meat supply while learning a range of computational skills, including machine learning, needed to conduct these analyses. The participant will have the opportunity to collaborate with multiple USDA ARS scientists on data analysis projects, and to write

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collaborative scientific papers. The participant will apply relevant predictive analytics, AI and machine learning technologies for control of *Salmonella* in food production systems. This unique opportunity will allow the participant the opportunity to apply their analysis skills to a real-world problem.

USDA-ARS Contact: If you have questions about the nature of the research please contact Tommy Wheeler (tommy.wheeler@usda.gov).

Anticipated Appointment Start Date: As soon as a qualified candidate is identified. 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(s) will receive a monthly stipend commensurate with educational level and experience.

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the Guidelines for Non-U.S. Citizens Details page of the program website for information about the valid immigration statuses that are acceptable for program participation.

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 USDA-ARS@orau.org and include the reference code for this opportunity.

Qualifications

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

Preferred skills:

- Experience working with systems approach with large, diverse datasets and data mining approaches
- Strong computational and analytical skills
- Experience in predictive analytics
- Strong database skills
- Strong oral and written communication skills
- Practical knowledge of agricultural sciences, biology, or a similar field is beneficial

Eligibility Requirements

- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (4 👁)
  - **Earth and Geosciences** (1 👁)
  - **Environmental and Marine Sciences** (4 👁)

- **Life Health and Medical Sciences** ([10 👁](#))
- **Mathematics and Statistics** ([1 👁](#))