

Opportunity Title: USDA-ARS Postdoctoral Fellowship in Food Microbiology and Safety

Opportunity Reference Code: USDA-ARS-2022-0116

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-2022-0116

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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 [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 6/30/2022 3:00:00 PM Eastern Time Zone

Description *Applications will be reviewed on a rolling-basis.

ARS Office/Lab and Location: A food microbiologist or biologist postdoctoral fellowship is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Eastern Regional Research Center (ERRC), Residue Chemistry and Predictive Microbiology Research Unit (RCPMRU) located in Wyndmoor, PA.

Research Project: The selected participant will be conducting research to develop mathematical models to predict the dynamic growth and survival of foodborne pathogens in raw and processed foods to enhance the safety of the nation's food supply. This research program involves development of deterministic and stochastic methodologies to predict the dynamic changes in the microbial populations throughout the supply chain. The Fellow will collaborate with a team of microbiologists, food technologists, and food engineers to develop predictive models to stakeholders in the food industry and regulatory agencies.

Learning Objectives:

- The participant will gain valuable experience collaborating with a team of food microbiologists, technologists, and engineers to develop predictive models for foodborne pathogens.
- The participant will become proficient at integrating disparate data sources and modeling techniques.
- The participant will gain experience in developing dynamic predictive models in food microbiology.
- The participant will gain valuable experience in the process of conducting scientific research, synthesizing data, and publishing the results in peer reviewed journal articles.

Mentor(s): The mentor for this opportunity is Lihan Huang (lihan.huang@usda.gov). If you have questions about the nature of the research please contact the mentor(s).



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Anticipated Appointment Start Date: **Summer 2022.** 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, 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. This opportunity requires a pre-employment check and a full background investigation. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

This is an equal opportunity program open to all qualified individuals without regard to race, color, age, sex, religion, national origin, mental or physical disability, genetic information, sexual orientation, or covered veteran's status.



Questions: Please visit our [Program Website](#). After reading, if you have additional questions about the application process please email USDA-ARS@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 (e.g. Food Science, Chemical Engineering, Biosystem Engineering), or be currently pursuing the degree to be received by the start date of the appointment. Degree must have been received within five years of the appointment start date.

Preferred Skills:

- Hand-on experience in food microbiology in a BSL-2 laboratory
- Calculus and statistical analysis skills
- Working knowledge in R, MATLAB, SAS, or equivalent computational tools
- Predictive microbiology

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
 - **Engineering** ([6](#) )
 - **Life Health and Medical Sciences** ([7](#) )