Opportunity Title: USDA ARS Fellowship in Harnessing Genomic Resources for Disease Resistance and Management in Cucurbit Crops
Opportunity Reference Code: USDA-ARS-SE-2023-0484A

Organization U.S. Department of Agriculture (USDA)

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How to Apply ***Connect with ORISE...on the GO!*** Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

A complete application consists of:

- An application
- Transcripts – 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 2/2/2024 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 Charleston, South Carolina.

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: This appointment is part of the "Cucurbit Coordinated Agricultural Project (CucCAP) Harnessing Genomic Resources for Disease Resistance and Management in Cucurbit Crops – Bringing the Tools to the Field". The overall project objective is to implement genomic technologies to improve watermelon and melon germplasm and elite cultivars with resistance to diseases like powdery mildew and downy mildew of melon and watermelon. This project offers a unique challenge in implementing novel approaches to investigate the power of 'genomic technologies' in enhancing disease resistance in melon and watermelon cultivars using germplasm collected in the wild. The candidate will be assigned to the project, and will help conduct extensive phenotyping while collecting and analyzing data useful for genomic predictions. Under the guidance of a mentor, research activities will include research in evaluating genetic populations for disease resistance. The appointment will involve close collaboration with plant pathologists, geneticists, and bioinformatics team at ARS, Clemson University, and the Boyce Thompson Institute (Cornell

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University). The successful candidate is expected to produce quality research to be published in open-access, peer-reviewed journals relevant to the field, as well communicate within the network of the cucurbit community.

Learning Objectives: The participant will gain experience and knowledge in:

- Scientific research related to plant genetics and genomics
- Plant breeding
- Phytopathology
- Agricultural science
- Statistical designs and analyses

Mentor(s): The mentor for this opportunity is Amnon Levi (amnon.levi@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: January 2, 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.

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 have received a bachelor's degree in one of the relevant fields.

Preferred skills:

- Knowledge in biology and genetics.
- Knowledge and experience in pollinating vegetable plants.

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- Knowledge and skills in field and greenhouse operation.
- Knowledge in experimental design and analysis, statistics, computer software.
- Knowledge and skills to apply phenotypic and genetic data and statistical analysis methodology.
- Experience in integrating phenotypic and genomic datasets to discover gene loci/genomic regions associated with complex traits in crop plants.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree.
- **Discipline(s):**
  - **Environmental and Marine Sciences** (2 👁)
  - **Life Health and Medical Sciences** (9 👁)