

**Opportunity Title:** Postdoctoral Research Opportunity in Molecular Biology and Genetics of Postharvest Fungal Pathogens

**Opportunity Reference Code:** USDA-ARS-2020-0059

**Organization** U.S. Department of Agriculture (USDA)

**Reference Code** USDA-ARS-2020-0059

**How to 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. 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.

If you have questions, send an email to [USDA-ARS@oraui.org](mailto:USDA-ARS@oraui.org). Please include the reference code for this opportunity in your email.

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

A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Beltsville Agricultural Research Center (BARC), Food Quality Laboratory located in Beltsville, Maryland.

Under the guidance of a mentor, the selected participant will be specifically involved in achieving objectives and milestones contained in the USDA-ARS base funded OSQR-approved project plan entitled "Development of Novel Tools to Manage Fungal Plant Pathogens that Cause Postharvest Decay of Pome Fruit to Reduce Food Waste". The project will involve targeted functional analysis of virulence, toxin and fungicide resistance gene candidates in the blue mold fungus, *Penicillium expansum*, using conventional and contemporary gene deletion approaches (split marker, CRISPR, RNAi etc.). Most of the gene targets have been elucidated via comparative genomic, RNAseq, proteomic and other omics-based approaches. Hence, knowledge of basic bioinformatic programs and analysis would be helpful, but not required. The participant will apply standard molecular genetic techniques, fungal transformation and molecular biology protocols and classical genetic principles to understand fungal virulence, toxin regulation, and fungicide resistance mechanisms in the blue mold fungus. Opportunities to learn about apple packing, storage, and production practices will be obtained during the appointment and during site visits which will be used to direct the lab studies. The participant will be able to participate in multiple opportunities to improve public speaking, in writing scientific manuscripts, and critical evaluation of scientific literature.

During the appointment, there will be occasional travel to professional meetings, to visit stakeholders, and/or hands-on training at surrounding federal/university locations and may include stateside and foreign venues.

The mentor for this opportunity is Dr. Wayne M. Jurick II ([wayne.jurick@usda.gov](mailto:wayne.jurick@usda.gov)).

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. The initial appointment is for one year, but may be renewed upon recommendation of ARS and is contingent on the availability of funds. **The participant will receive an annual stipend of \$60,000. A health insurance and**



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**travel allowance will be provided. No relocation allowance will be provided.** Proof of health insurance is required for participation in this program. The appointment is full-time at ARS in the Beltsville, Maryland, area. Participants do not become employees of USDA, ARS, DOE or the program administrator, and there are no employment-related benefits.

This opportunity is available to U.S. citizens only.


For more information about the ARS Research Participation Program, please visit the [Program Website](#).

**Qualifications** The qualified candidate should have received a doctoral degree in one of the relevant fields. Candidates with a proven track record of publication in peer-reviewed journals, grant writing skills, and experience with delivering oral presentations are highly desirable.

Preferred skills:

- Solid wet lab skills
- Timely observations and keen attention to detail
- Excellent written and oral communication skills, evidenced by presentations at professional society meetings

- Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
  - **Degree:** Doctoral Degree.
  - **Discipline(s):**
    - **Life Health and Medical Sciences** ([9](#) )