

**Opportunity Title:** USDA-ARS Postdoctoral Fellowship in Characterizing Metabolic Reactions

**Opportunity Reference Code:** USDA-ARS-PWA-2025-0132

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

**Reference Code** USDA-ARS-PWA-2025-0132

**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** 11/21/2025 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 at the Physiology and Pathology of Tree Fruits unit in Wenatchee, Washington.

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:** The USDA-ARS, Physiology and Pathology of Tree Fruits unit in Wenatchee, WA is presenting a research opportunity for recent graduates to help find solutions for reducing cold chain losses for our US apple and pear growers. Physiological disorders of the peel and flesh of apples and pears contribute to significant annual losses of these commodities. Many of these disorders result from the transition of fruit from the warm orchard environment to the much lower storage temperatures often alongside altered atmospheric compositions. Much of



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the outcome of this transition is manifest in the immediate biochemical response, and, consequently, this specific response may be indicative of the later storage outcome. Research will focus on, but will not be limited to, immediate metabolic responses to chilling and changes of atmospheric composition leading to a specific disorder outcome. The successful candidate will help with research under the guidance of location staff using a variety of advanced tools, including GC and LCMS to both define and track metabolic changes during these events. Techniques may include using GC and LCMS for metabolic flux analysis using pathway labelling as well as analysis of changes in peel surface polymers due to cold chain conditions. Researchers will be encouraged to report findings at industry and scientific conferences as well as publish articles in scientific journals.

**Learning Objectives:** Expected learning objectives include, but are not limited to:

- Understanding unbiased, global metabolic profiling as employed for dynamic and steady-state flux;
- Finding changes to natural plant surface polymers linked with orchard and cold chain environment, and;
- Determining which changes are associated with fruit phenotype later in the cold chain.

**Mentor(s):** The mentor for this opportunity is David Rudell ([david.rudell@usda.gov](mailto:david.rudell@usda.gov)). If you have questions about the nature of the research, please contact the mentor(s).

**Anticipated Appointment Start Date: 2025.** Start date is flexible and will depend on a variety of factors.

**Appointment Length:** The appointment will initially be for two years, 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. The anticipated stipend range is \$61,111 - \$73,939

**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.

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**Questions:** Please visit our [Program Website](#). After reading, if you have additional questions about the application process, please email [ORISE.ARS.PacificWest@orau.org](mailto:ORISE.ARS.PacificWest@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. Degree must have been received within the past four years.

**Stipend** \$61,111.00 – \$73,939.00 Yearly

**Point of Contact** [Janeen](#)

- Eligibility**
- **Citizenship:** U.S. Citizen Only
- Requirements**
- **Degree:** Doctoral Degree received within the last 48 month(s).
  - **Discipline(s):**
    - **Life Health and Medical Sciences** ([6](#) )