

Opportunity Title: Bio-based Product Development Research Opportunity

Opportunity Reference Code: ARS-BOACRU-2015-0088

Organization U.S. Department of Agriculture (USDA)

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How to Apply A complete application consists of:

- An application
- Official transcript(s) – [Click here for detailed information about acceptable transcripts](#)
- A current resume/CV

If you have questions, send an email to USDA-ARS@orau.org. Please include the reference code for this opportunity in your email.

Description A Post-Master's opportunity is available with the Biobased and Other Animal Co-Products Research Unit (BOACRU) in Wyndmoor, Pennsylvania. The research group is primarily engaged in developing bio-based flocculants. Flocculants are substances that aid in clarifying water by causing suspended contaminants to settle. Many commercial flocculants are fossil-fuel based polymers. The flocculants being developed are made from by-products of the meat industry, specifically blood and rendered protein. The group is focused on three types of problems:

- developing inexpensive processes for transforming the raw material into the product
- improving the performance of the product
- adapting the technology to meet the needs of different types of end-user

Initially, the participant's research would relate to the first of these. Research is primarily laboratory based, but pilot plant experiments are also conducted. The associate will conduct research under the supervision of the PI.

The appointment is full-time for one year and may be renewed upon recommendation of the ARS and availability of funding. The annual stipend rate for this position is \$41,797. A stipend supplement in the amount of \$4,000 is provided to offset the cost of an individual or family health insurance plan. The participant must show proof of health and medical insurance. Health insurance may be obtained through ORISE. An allowance of \$1,500 is available for travel-related expenses to scientific and professional development activities. **The participant does not become an employee of ARS or ORISE.**

While participants will not enter into an employment relationship with ARS, this position requires a pre-employment check and a full background investigation.

This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals.

This is an equal opportunity program open to all qualified individuals without regard to race, color, age, sex, religion, national origin, mental or



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physical disability, genetic information, sexual orientation, or covered veteran's status.

For more information about the ARS Research Participation Program, please visit <http://www.orise.orau.gov/usda-ars>.

Qualifications Applicants must have completed a Master's thesis which involved laboratory research. A degree must have been received within five years of the desired starting date. A wide variety of disciplines related to chemistry, food science, biology, and engineering are appropriate. The applicant is not expected to have specific subject matter expertise related to the research topic.

The following skills are preferred:

- Strong competence with general biological and chemical laboratory equipment.
- A willingness to work with animal blood.
- Strong written and verbal communication skills.
- Ability and discipline to clearly and completely document experiment planning, data collection, data analysis, and overall result evaluation.
- Ability to independently develop competence in new topics of moderate complexity, such as the operation of a new instrument, and to transfer their new knowledge to other group members.
- Ability to locate information in scientific, government, and commercial documents, to compile and summarize the information found, and cite the sources of the information.
- Ability to self-regulate and maintain high work productivity with moderate supervision.

- Eligibility Requirements**
- **Degree:** Master's Degree.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([5](#) )
 - **Earth and Geosciences** ([1](#) )
 - **Engineering** ([6](#) )
 - **Environmental and Marine Sciences** ([2](#) )
 - **Life Health and Medical Sciences** ([6](#) )