Opportunity Title: Postdoctoral Research Opportunity in Molecular Microbiology
Opportunity Reference Code: ARS-VPRU-2018-980-0031

Organization U.S. Department of Agriculture (USDA)

Reference Code ARS-VPRU-2018-980-0031

How to Apply 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 references

All documents must be in English or include an official English translation.

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 molecular microbiology postdoctoral research opportunity is available with the U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS) National Animal Disease Center (NADC), Virus and Prion Research Unit (VPRU) in Ames, Iowa. The selected applicant will conduct basic and applied research on swine bacterial pathogens. Projects include identifying virulence factors and evaluating the molecular mechanisms used by swine bacterial pathogens, such as Bordetella bronchiseptica, Haemophilus parasuis, and Streptococcus suis, to colonize and cause disease.

The selected applicant's main activities will include genetic modification of bacterial strains, performing biofilm assays, measuring swine immune responses, analyzing RNA and DNA sequencing data to identify genetic elements of diversity that contribute to disease outcomes, and evaluating pathogenesis using molecular tools both in cell culture and in swine infection studies. Secondary activities may include working with the swine bacterial pathogens team on ongoing projects. Selected applicant will present research findings in laboratory meetings and seminars and will write scientific manuscripts and publish them in peer-reviewed scientific journals.

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 in the range of $59,246-71,012 as well as a monthly health insurance stipend supplement. Proof of health insurance is required for participation in this program. Full or partial reimbursement for travel expenses to conferences, scientific meetings, or training may be provided.The appointment is full-time. Participants do not become employees of USDA, ARS, DOE or the program administrator, and there are no employment-related benefits.

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

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.

For more information about the ARS Research Participation Program, please visit the **Program Website**.

Qualifications

To be eligible, applicants must have received a doctorate degree in Microbiology, Immunology, Molecular Biology or equivalent degree, within five years of the desired starting date. Relevant fields include microbiology, molecular biology, bioinformatics, and infectious diseases.

Preferred skills include:

- Strong molecular biology skills: PCR, cloning, sequencing, western blot, DNA / RNA isolation.
- Experience with animal models for infectious disease study.
- Experience with cell culture assays: mammalian cell culture maintenance, culture of pathogens.
- Knowledge of standard immunological techniques.
- Experience with next generation sequencing platforms, genomics or metagenomics, and using computational methods to manage, analyze, and visualize biological data sets is desired.
- Excellent verbal and written communication skills.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Life Health and Medical Sciences** (12 👁)