

**Opportunity Title:** Computational Biologist (Metagenomics) Research Opportunity

**Opportunity Reference Code:** ARS-FSEPRU-2015-0080-01

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

**Reference Code** ARS-FSEPRU-2015-0080-01

**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](mailto:USDA-ARS@orau.org). Please include the reference code for this opportunity in your email.

**Description** A Postdoctoral Research Opportunity is available with the Food Safety Enteric Pathogens Research Unit (FSEPRU) at the National Animal Disease Center (NADC) in Ames, Iowa.

We are looking for an outstanding scientist who is proactive, independent and motivated to use advanced computational software to solve complex biological problems.

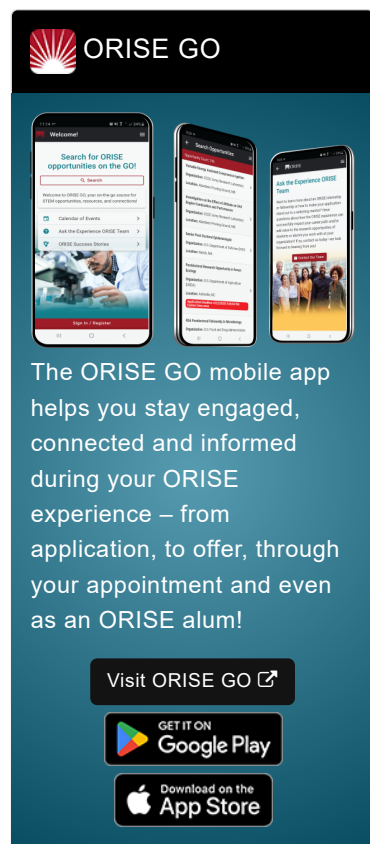
A team of microbiologists and immunologists are conducting research to monitor the activities of mucosal and immunological tissues in the swine and avian intestinal tract. The appointee will be responsible for conducting bioinformatics analyses of this data as part of the project goals. Methods include but are not limited to host and bacterial transcriptomics, genomics, and microbial community analyses. Current research focuses on: reducing colonization of foodborne pathogens (notably *Salmonella* and *Campylobacter*); exploiting interactions among the host, its commensal bacteria, and foodborne pathogens; understanding environmental stressors (e.g. heat) on intestinal tissue functions and foodborne pathogen colonization; and establishing links between microbial membership and metabolic function in the gut.

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 opportunity is \$58,562. A health insurance allowance will be 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 can be obtained through ORISE. Relocation expenses, up to \$500, may be reimbursed. An allowance of \$3,000 is available for travel-related expenses to scientific and professional development activities. **The participant does not become an employee of the ARS or ORISE.**

NADC is the premier research institute within the USDA for studying diseases of large animals, and is located in Ames Iowa. At the NADC, scientists are able to investigate microbe-host interactions from every perspective—molecular, microbe, and natural host.

Recent publications of team members and collaborators:

Proc Natl Acad Sci ([www.pnas.org/cgi/doi/10.1073/pnas.1120238109](http://www.pnas.org/cgi/doi/10.1073/pnas.1120238109))



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mBio (<http://mbio.asm.org/content/2/6/e00260-11>)

Appl Environ Microbiol (<http://aem.asm.org/content/76/24/8026>)

Infect, Genet, Evol (<http://www.ncbi.nlm.nih.gov/pubmed/23535116>)

ISME (<http://www.nature.com/ismej/journal/v8/n8/full/ismej201412a.html>)

Front Microbiol (<http://www.ncbi.nlm.nih.gov/pubmed/24959163>)

While participants will not enter into an employment relationship with ARS, this position may require 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 physical disability, genetic information, sexual orientation, or covered veteran's status.

Ames, home of Iowa State University, was recently ranked ninth on CNNMoney.com's "Best Places to Live" list.

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

**Qualifications** The ideal candidate will be skilled in: use of Linux operating systems; analyses of large datasets, particularly of nucleic acid sequences; fluency in at least one scripting language is required; use of biological databases and various bioinformatics tools; and technical writing for peer-reviewed publications.

Additional knowledge of statistical inference methods, scripting language(s) such as Java or Python, microbial ecology, molecular biology, and/or genetics, and good interpersonal and public speaking skills is preferred.

Demonstrated skills and research ability investigating microbial-host interactions, including computational analysis of transcriptomic and population-scale metagenomic data, is ideal.

- Eligibility Requirements**
- **Degree:** Doctoral Degree.
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** ([2](#) )
    - **Computer, Information, and Data Sciences** ([16](#) )
    - **Engineering** ([3](#) )
    - **Environmental and Marine Sciences** ([13](#) )
    - **Life Health and Medical Sciences** ([45](#) )
    - **Mathematics and Statistics** ([10](#) )