Opportunity Title: Computational Biologist Postdoctoral Research Opportunity
Opportunity Reference Code: ARS-FSEPRU-2015-0137-01

Organization	U.S. Department of Agriculture (USDA)
Reference Code	ARS-FSEPRU-2015-0137-01
How to Apply	A complete application package 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. Selected candidate must provide proof of completion of the degree before the appointment can start. Proof must be sent to ORISE directly from the academic institution including graduation date and degree awarded. All transcripts must be in English or include an official English translation.
- 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 postdoctoral research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), National Animal Disease Center (NADC) in Ames, Iowa for a motivated and independent scientist to use advanced computational methods to solve complex biological questions.

The selected applicant will work with a team of microbiologists and immunologists investigating host-microbe interactions for the discovery of antibiotic alternatives that will improve animal health and food safety. Specifically, the appointee will conduct bioinformatic analyses on the effects of antibiotic treatment on multidrug-resistant Salmonella in swine. Studies would include the use of host and bacterial transcriptomics and genomics, as well as microbial community analyses. Access to a 32-CPU server running RHEL 7.0 will be available to the appointee.

The NADC is the premiere research institute within the USDA for studying the role of commensal bacteria in health and disease of food-producing animals.

The following are recent manuscripts that are representative of the Salmonella research being performed by team members and collaborators in our unit:
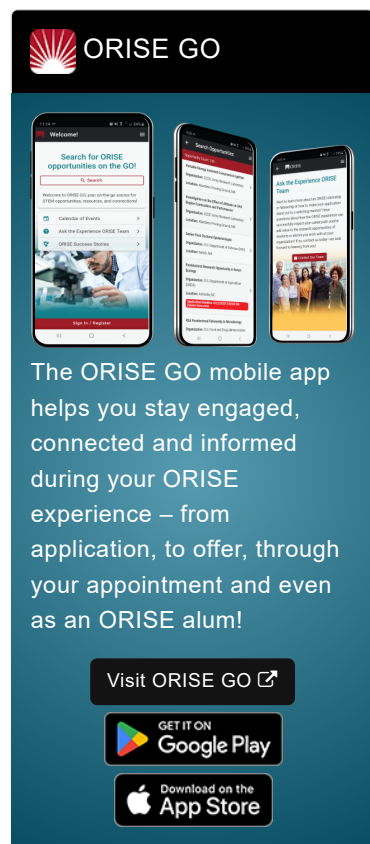
Frontiers in Microbiology:
http://journal.frontiersin.org/article/10.3389/fmicb.2014.00801/abstract

Innate Immunity: http://ini.sagepub.com/content/21/3/227.long

International Journal of Antimicrobial Agents:
http://www.sciencedirect.com/science/article/pii/S0924857915001831

BMC Microbiology: http://www.biomedcentral.com/1471-2180/13/202

Infection, Genetics and Evolution:
http://www.sciencedirect.com/science/article/pii/S1567134813000956

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The appointment is full-time for one year and may be renewed based upon recommendation of the ARS and availability of funding. The annual stipend rate for this position is $ 58,562. A stipend supplement is available to offset the cost of a health insurance plan. The participant must show proof of health and medical insurance. Health insurance can be obtained through ORISE. Relocation expenses in the amount of $ 500 will be reimbursed, with prior approval. An annual allowance of $ 3,000 is available to reimburse travel-related expenses to scientific and professional development activities. The participant will not enter into an employee/employer relationship with ORISE, ORAU, USDA, or any other office or agency. Instead, the participant will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment.

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. 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.

This is an equal opportunity program open to all qualified individuals without regard to race, color, age, religion, sex, sexual orientation, gender identity, national origin, mental or physical disability, covered veteran's status or genetic information.

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 Bioinformatics, Computational Biology, Microbiology, or a related field within five years prior to the desired starting date.

The ideal candidate will be skilled in: analyses of Next-Generation sequencing datasets (DNA and RNA); use of biological databases and various bioinformatics tools; use of Linux operating systems; fluency in at least one scripting language; and technical writing in English for peer-reviewed publications.

Demonstrated skills and research utilizing genomic (sequence assembly, annotation, etc.) and transcriptomic (differential gene expression of functional groups, etc.) analyses are ideal.

Additional knowledge of microbial ecology and community analyses (16S and metagenomics), statistical inference methods, scripting language(s) such as Java or Python, molecular biology and/or microbiology, and good interpersonal skills are preferred.

Outstanding candidates will be enthusiastic and self-motivated with good

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communication skills and a strong work ethic.

Eligibility
Requirements

- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (2 👁)
  - **Life Health and Medical Sciences** (14 👁)
  - **Mathematics and Statistics** (2 👁)