Opportunity Title: USDA-ARS Postdoctoral Fellowship in Computational Biology and Bioinformatics

Opportunity Reference Code: USDA-ARS-2022-0385

Organization	U.S. Department of Agriculture (USDA)
Reference Code	USDA-ARS-2022-0385
How to Apply	***Connect with ORISE...on the GO!*** Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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.

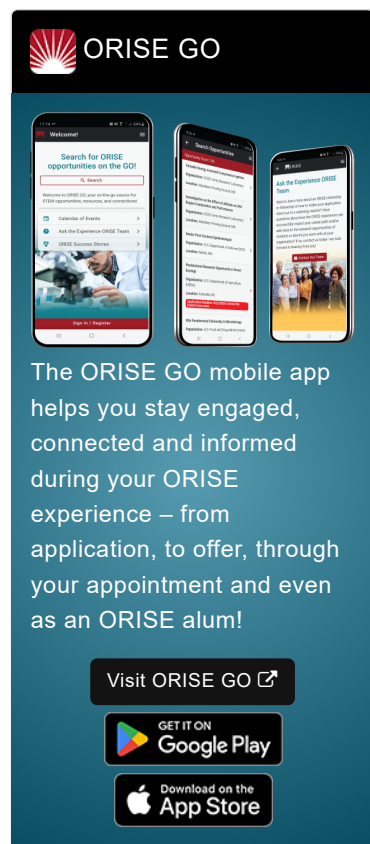|	
Application Deadline	1/31/2023 3:00:00 PM Eastern Time Zone
Description	***Applications may be reviewed on a rolling-basis.**

ARS Office/Lab and Location: A postdoctoral research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Invasive Insect Biocontrol and Behavior Laboratory located in Beltsville, Maryland.

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 Invasive Insect Biocontrol and Behavior Laboratory's Computational Biology Unit analyzes biological sequences from invasive insects and their associated pathogens.

Bioinformatics research activities will include assembly and annotation of agriculturally important hemipteran insect pests. Research activities may also include assembly and annotation of prokaryotic and/or viral genome sequences; transcriptome analysis; molecular phylogenetics; molecular evolution analyses; development of novel statistical learning methodologies; modifications of current process workflows; bioinformatics software tool and/or pipeline development; effective utilization of existing bioinformatics software infrastructure; database design and implementation; data analysis and visualization; as well as routine operating system administration.

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Learning Objectives: This postdoctoral appointment offers a training opportunity for the incumbent to demonstrate and refine existing bioinformatics skills and to develop new capabilities and professional experience.

Mentor(s): The mentor for this opportunity is Michael Sparks (michael.sparks2@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: Late 2022 / Early 2023. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be renewed upon recommendation of ARS and is contingent on the availability of funds.

Level of Participation: The appointment is full-time. **Flexible scheduling is possible, but incumbent's tour must generally occur during ordinary operating hours: M-F (8:00AM-5:00PM)**

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. **The current stipend for this opportunity is ~$74,950 per year.**

Citizenship Requirements: 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.

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.

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

Questions: Please visit our Program Website. After reading, if you have additional questions about the application process, please email ORISE.ARS.Northeast@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 five years.

Candidates who are motivated, adaptable and responsible bioinformatics practitioners with a genuine interest in tackling crucial challenges to modern agriculture are encouraged to apply.

Preferred Skills/Experience:

- Experience will ideally be directly related to the appointment and may include work performed in a research laboratory setting involving manipulation of large data sets (e.g., ETL operations and/or quality control manipulations of sequencer output); analysis of data and interpretation of information; development of software to support scientific computing (e.g., MATLAB/Octave projects and/or high-performance, parallel computing projects), as well as bioinformatics-specific web development. In general, computational projects that have been conducted with the intent to derive novel biological knowledge are preferred.
- Proficiency working in a Linux command line environment, as well as scripting abilities in either Python or Perl
- A working knowledge of common bioinformatics algorithms and associated software
- Familiarity with the R environment for statistical computing is a plus.
- Although not necessary, familiarity with functional and declarative programming paradigms, as well as associated languages (e.g., Haskell, Prolog and Lisp), is especially appreciated.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Life Health and Medical Sciences** (6 👁)
  - **Mathematics and Statistics** (2 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).