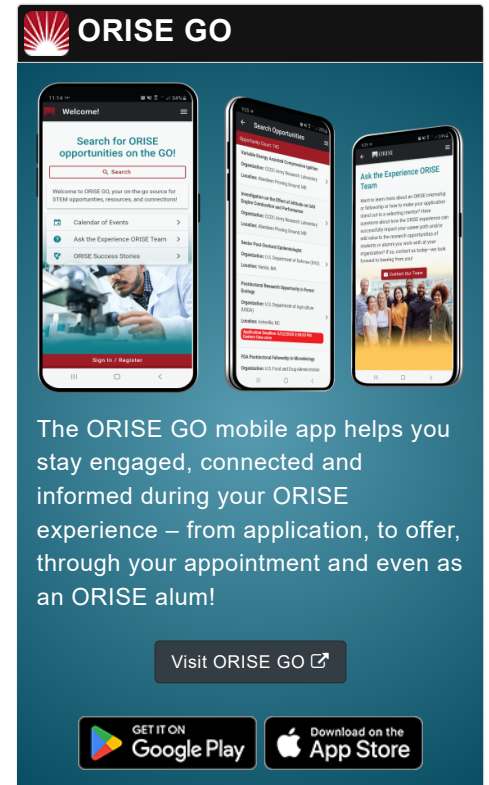**Opportunity Title:** Postdoctoral Research Opportunity in Computational Biology and Bioinformatics
Opportunity Reference Code: ARS-IIBBL-2018-981-0061

Organization	U.S. Department of Agriculture (USDA)
Reference Code	ARS-IIBBL-2018-981-0061
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. Click **Here** for detailed information about acceptable transcripts.
- A current resume/CV
- Two references – While two references are requested, applications will be considered without reference information. It is preferred that a complete application package contains a minimum of one reference.

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 in in computational biology and bioinformatics is available with the the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Beltsville Agricultural Research Center (BARC), Invasive Insect Biocontrol and Behavior Laboratory (IIBBL) in Beltsville, Maryland.

The Invasive Insect Biocontrol and Behavior Laboratory's Computational Biology unit analyzes biological sequences associated with invasive insects and their associated pathogens. This postdoctoral research opportunity offers training for the incumbent to demonstrate and refine existing bioinformatics skills and to develop new capabilities and professional experience. The participant will be a motivated, adaptable and responsible bioinformatics practitioner with a genuine interest in tackling crucial challenges to modern agricultural production enterprises.

Bioinformatics activities may include assembly and annotation of eukaryotic, prokaryotic and/or viral genome sequences; transcriptome (i.e., RNA-seq) analysis; molecular phylogenetics; molecular evolution; development of novel statistical learning methodologies; modifications of current process workflows; bioinformatics software tool and/or pipeline development (using C/C++, Perl, Python, Bash, etc.); effective utilization of existing

bioinformatics software infrastructure (e.g., SAMtools, Diamond, Trinity, SMRT-Analysis, CANU); database design and implementation (SQL, XML, NoSQL); data analysis and visualization (R, Excel VBA); as well as routine Linux and OS X system administration.

The appointment is full-time for approximately 12 months, and may be renewed based upon recommendation of the ARS and availability of funding. The selected applicant will receive a yearly stipend in the range of $55,000-$57,000 as support for their living and other expenses during this appointment as well as a health insurance stipend supplement. Stipend rates are determined by ARS officials, and are based on the applicant's academic and professional background. The participant must show proof of health and medical insurance. Health insurance can be obtained through ORISE.

The participant will not enter into an employee/employer relationship with ORISE, ORAU, USDA, ARS, 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-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 a Ph.D., in the last 5 years, in the area of bioinformatics, computational biology, biology, biochemistry, genetics, computer science, statistics and/or mathematics.

Preferred Skills: Proficiency working in a Linux command line environment, as well as scripting abilities in either Python or Perl, is highly desired. A working knowledge of common bioinformatics algorithms and associated software is also preferred. Familiarity with the R environment for statistical computing is a plus. Although not necessary, familiarity with declarative and functional programming paradigms, as well as associated languages (e.g., Prolog, Lisp and Haskell), is highly appreciated.

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Preferred Experience: Experience will ideally be directly related to the position, and may include work performed in a bioinformatics 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 using LAMP (or MEAN) stacks. In general, computational projects should have been conducted with the intent to derive novel biological knowledge.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (4 👁)
  - **Life Health and Medical Sciences** (7 👁)
  - **Mathematics and Statistics** (1 👁)