Opportunity Title: Postbachelor Research Opportunity in Computational Biology and Bioinformatics
Opportunity Reference Code: ARS-VPRU-2018-980-0026

Organization	U.S. Department of Agriculture (USDA)
Reference Code	ARS-VPRU-2018-980-0026
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.
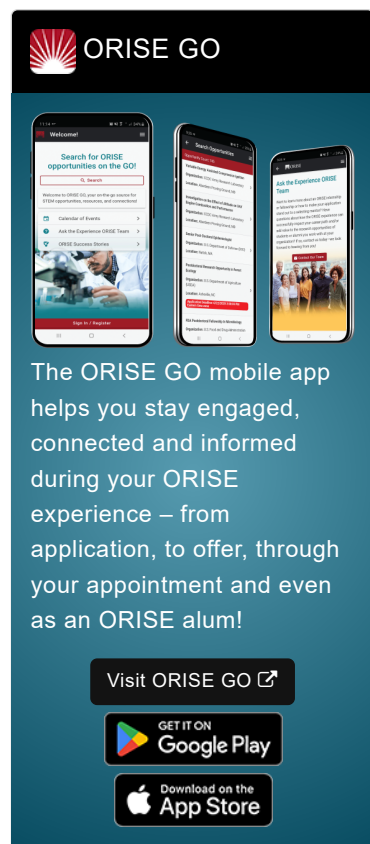
If you have questions, send an email to USDA-ARS@orau.org. Please include the reference code for this opportunity in your email.

OAK RIDGE INSTITUTE
FOR SCIENCE AND EDUCATION

ORISE GO

The ORISE GO mobile app helps you stay engaged, connected and informed during your ORISE experience – from application, to offer, through your appointment and even as an ORISE alum!

Visit ORISE GO

GET IT ON Google Play

Download on the App Store

Description	A postbachelor research opportunity in computational biology and bioinformatics 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 participant will conduct research to characterize the genetic evolution of influenza A viruses (IAV) in swine and to collect, analyze, and maintain physical and electronic data in support of the Intervention Strategies to Control Influenza A Virus (IAV) Infection in Swine project plan. The participant will collaborate with the scientist and other laboratory staff in all phases of the research process and assumes technical and operational responsibility for specific phases of the research. Specific goals are to quantify genetic evolution of IAV from swine and define the global relatedness of swine influenza viruses through computational analyses with IAV sequences in the context of contemporary and historical isolates for determination of phylogenetic relationships, interspecies transmission, epidemiologic patterns, and antigenic drift or shift. The incumbent will use databases for efficient management and analysis of swine IAV sequence data. The opportunity is within the Virus and Prion Research Unit. Scientists in this unit maintain a comprehensive IAV research program including investigation of virulence mechanisms, vaccinology, immunology, and virus evolution.

The participant will advance his or her knowledge in bioinformatic and sequence analysis techniques applied in a team-oriented, multi-disciplinary influenza A virus research environment.

The participant will also be involved in various levels of research, including conception, study design, data analysis, interpretation, and scientific

writing. The participant will have the opportunity to present at local meetings and the possibility of national meeting attendance and presentation upon acceptance of abstract, if warranted.

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and USDA ARS. The initial appointment is for one year, but may be renewed upon recommendation of USDA ARS contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time. Participants do not become employees of USDA, DOE or the program administrator, and there are no employment-related benefits.

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	Applicants should have a B.S. or M.S. degree with emphasis on the disciplines of computational biology and bioinformatics, and additional knowledge of genetics, evolution, molecular biology, research, and research techniques. Knowledge of molecular epidemiology, statistical inference methods, virology, and/or genetics are preferred.

Must have experience in the analysis of molecular sequence data and use of maximum likelihood and Bayesian phylogenetic methods (e.g., BEAST), the use of scripting languages (e.g. Python and R), and biologic databases and other bioinformatic tools are preferred. He or she must also possess good record keeping skills, the ability to troubleshoot problems, improve or develop new procedures, ability to locate and interpret peer-reviewed publications, and good interpersonal skills to work in a team environment. Skilled use of common computer software and skill with science-specific software is preferred.

Eligibility Requirements

- **Degree:** Currently pursuing a Bachelor's Degree or Master's Degree to be received by 8/1/2018 12:00:00 AM.
- **Discipline(s):**
  - **Communications and Graphics Design** (1 👁)
  - **Computer, Information, and Data Sciences** (3 👁)
  - **Life Health and Medical Sciences** (8 👁)