Opportunity Title: Computational Biologist Research Opportunity
Opportunity Reference Code: ARS-NADC-2013-0011-02

Organization	U.S. Department of Agriculture (USDA)
Reference Code	ARS-NADC-2013-0011-02
How to Apply	A complete application package 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. Please include the reference code for this opportunity in your email.

Description A Computational Biologist Research Opportunity is available with the U.S. Department of Agriculture (USDA) Agricultural Research Service (ARS) National Animal Disease Center (NADC) in Ames, Iowa. The primary responsibility of the selected applicant will be conducting research on swine viral disease (e.g., porcine epidemic diarrhea virus, swine influenza A virus, porcine deltacoronavirus) which will include development and analysis of sequence data from available sources and past and future experimental studies for use in studying the pathogenesis, ecology, vaccinology, and protective immune response of these viruses in swine. Specifically, the selected applicant will evaluate the genetic evolution of swine viruses by sequence analysis and work as part of a team to select and characterize viruses with in vivo and vitro experiments.

Activities will include: 1) The use of genetic sequence data to assess evolutionary history, phylogenetic lineage dynamics, interspecies transmission episodes, and/or reassortment events; 2) the generation of time-calibrated phylogenetic trees to estimate evolutionary rates of swine viruses and how they change through space and time and what processes determine these changes; 3) the assembly, validation, and deposition to appropriate databases of genetic data derived from the next generation sequence techniques and/or traditional Sanger sequencing; and 4) The development of computational tools to objectively define and describe genetic diversity to aid vaccination strategies and control programs.

The appointment is full-time for one year and may be renewed upon recommendation of the ARS and availability of funding. The annual stipend will range from $60,000 - $80,000 and will be commensurate with experience. A stipend supplement 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 may be reimbursed, with prior approval. Travel-related expenses to scientific and professional development activities may be provided. **The participant does not become an employee of ARS or ORISE.**

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

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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.

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

Qualifications Eligible applicants must have received an advanced degree (doctorate or equivalent). Specialty degrees in related fields are desirable.

The ideal candidate will have:

- knowledge on pathogenesis and molecular epidemiology of veterinary diseases.
- a Ph.D with emphasis on evolutionary biology or a closely related field.
- a track record of publication in leading peer-reviewed journals.
- experience with phylogenetic analysis of RNA viruses.
- experience with genetic epidemiological analysis of RNA viruses.
- demonstrated proficiency using maximum likelihood and Bayesian (beast, MRBAYES) methods.
- demonstrated proficiency in multivariate statistical modeling and database management.
- the capacity to work independently and in a team.

Eligibility Requirements
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Life Health and Medical Sciences** (7 👁)