Opportunity Title: ARS Research Geneticist/Computational Biologist Postdoctoral Research
Opportunity Reference Code: ARS-NCCCWA-2016-0091-02

Organization U.S. Department of Agriculture (USDA)

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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 This Research Geneticist/Computational Biologist Postdoctoral research opportunity affords the opportunity to be a team member in the research project entitled “Integrated Research Approaches for Improving Production Efficiency in Salmonids”, in collaboration with ARS scientists located in the USDA-ARS National Center for Cool and Cold Water Aquaculture (NCCCWA), Leetown, West Virginia and scientists from the Department of Animal and Dairy Science, University of Georgia, Athens, Georgia. The selected applicant will conduct quantitative genetics analyses and genome-wide association studies (GWAS) for commercially important disease resistance traits in rainbow trout aquaculture such as bacterial cold water disease (BCWD) resistance and columnaris disease (CD) resistance. Large datasets of pedigrees, phenotypes and genotypes from the new rainbow trout 57K SNP chip are available for this project from the NCCCWA selective breeding program population and from commercial partners who are working closely with the NCCCWA. In addition, the selected applicant will work with the mentor and other members of the animal breeding, genetics and genomics team at the University of Georgia on developing refined genomic selection models for salmonids aquaculture using real genotype/phenotype data relevant to rainbow trout aquaculture and taking advantage of the emerging rainbow trout genome resources from research conducted at the NCCCWA. Options for follow-up studies based on the results of the GWAS include designing focused SNP assays and validation of the marker association information on additional commercial populations and/or use of the SNP association information and the rapidly emerging reference genome of rainbow trout to identify candidate genes for disease resistance in trout and to conduct analyses of the candidate genes through gene-expression and functional genomics studies. The successful candidate will participate as a multi-disciplinary team member in the selection and development of appropriate methodologies and experimental procedures.

The appointment is full-time for 12 months and may be renewed based

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upon recommendation of the ARS and availability of funding. The annual stipend rate for this position is $64,650. The participant must show proof of health and medical insurance. Health insurance can be obtained through ORISE. Relocation expenses in the amount of $2,000 will be reimbursed, with prior approval. 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 received a doctorate degree in Genetics, Mathematics and Statistics, Computer Sciences, Molecular Biology, Animal Science, Life Sciences or a related field is required within five years of the desired starting date. Knowledge and experience in analyzing large genome data-sets for conducting genome-wide association studies (GWAS) and/or genome selection (GS) analyses and/or in quantitative and statistical genetics are desirable as well as professional knowledge in Fish Biology, Fish Genetics, Molecular Biology, Genomics, and/or Aquaculture Research. Strong computer programming and analytical skills are valuable. Applicants must meet all requirements for the position including completion of the Ph.D. prior to start date.

Eligibility Requirements

- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (1)
  - **Environmental and Marine Sciences** (13)
  - **Life Health and Medical Sciences** (7)
  - **Mathematics and Statistics** (2)