

Opportunity Title: ARS Postdoctoral Research Opportunity – Animal

Biosciences and Biotechnology Laboratory

Opportunity Reference Code: ARS-ABBL-2016-0151

Organization U.S. Department of Agriculture (USDA)

Reference Code ARS-ABBL-2016-0151

How to Apply A complete application package consists of:

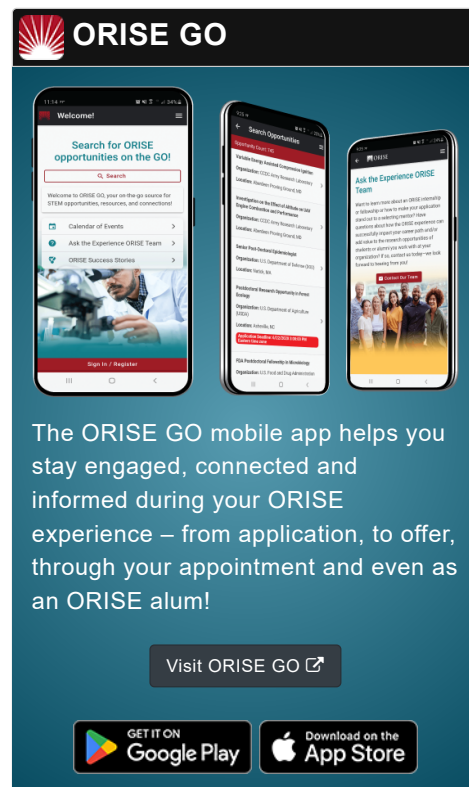
- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Selected candidate must provide proof of completion of the degree before the appointment 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 A Postdoctoral Research Opportunity is available with the Animal Biosciences and Biotechnology Laboratory (ABBL) in Beltsville, Maryland.

The objective of the project is to use the chicken and turkey genome and proteome resources to search for differential proteins and/or genes that can be used to predict the success of germplasm preservation among different lines of poultry. Previous semen cryopreservation experiments with 8 pedigreed chicken layer lines and 4 turkey lines and have found differences in cryosurvival among those lines. The project will involve screening poultry lines with known differences in sperm cryosurvival for candidate genes and/or proteins that are associated with superior or inferior fertility from frozen/thawed sperm. The chicken and turkey genomes and SNP arrays will be used to interrogate candidate genes, while a state of the art Orbitrap Fusion Lumos mass spectrophotometer will be used to delineate differentially expressed proteins. Other research activities will involve assisting the PI with: PCR to confirm phenotypes of a specialized chicken line; plasmid transfection of primordial germ cells; and evaluating differential gene expression in male poultry expressing either the high or low sperm mobility phenotype.

The appointment is full-time for one year and may be renewed based upon recommendation of the ARS and availability of funding. The selected applicant will receive a stipend as support for their living and other expenses during this appointment. Stipend rates are determined by ARS officials, and are based on the applicant's academic and professional background. The



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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.

This is an equal opportunity program open to all qualified individuals without regard to race, color, age, religion, sex, sexual orientation, gender identity, national origin, mental or physical disability, covered veteran's status or genetic information.

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 a biological or agricultural science within five years of the desired starting date. Experience with molecular biology laboratory techniques and experimental design is highly desirable.


The successful candidate will possess a combination of some or all of the following skills/experience:

- DNA/RNA and/or protein extraction/quantification
- PCR/primer design
- SDS gel electrophoresis
- plasmid transfection
- ability to manage large/complex datasets
- excellent communication (written and oral) skills
- good publication record
- ability to work independently

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**Eligibility
Requirements**

- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Life Health and Medical Sciences** (6 )