



United States Department of Agriculture
National Institute of Food and Agriculture



USDA National Needs PhD Fellowships: **Educating the Next Generation of Scientists in Animal Genomics**

Three PhD. Fellowships are available in the Department of Animal Sciences at University of Florida starting Fall 2019. The Fellowships will provide a stipend of \$24,500 per year for three years and 100% tuition. Applicants must be US citizens. Preferred qualifications are experience in the following areas: genetics, molecular biology, bioinformatics and statistical analysis. Students that have strong organization and communication skills are especially encouraged to apply.

Application Information: US citizens should contact Dr. Raluca Mateescu at raluca@ufl.edu and can apply through the UF Graduate School.

Program

A core group of faculties from Animal Sciences and Animal Molecular and Cellular Biology with highly successful and collaborative research programs will provide extensive and integrative mentoring and training for graduate students.

Course work will cover broad areas of genetics, animal breeding, genomics, bioinformatics and related topics. Emphasis will be placed on excellent research training including regular research meetings, student and faculty seminar series, internships with major organizations, Historically Black Colleges or other Universities. Graduating Fellows will be well trained for successful research or academic careers, to apply scientific methods and knowledge of animal genomics, computational biology and quantitative genetics in solving needs of the animal industries.

Our vision is to prepare graduates to be able to think critically and apply the scientific method and their new found knowledge of animal genomics, computational biology and quantitative genetics in conducting research aimed at solving the needs of the animal industries. This encompasses possession of field, laboratory and computer skills necessary to successfully carry out research, which includes the ability to plan, execute and interpret experiments.

Background

Recent revolutionary genomic advances like whole-genome sequencing, high-throughput SNP genotyping assays, global gene expression profiling, and RNA interference have transformed our ability to undertake gene discovery and functional genomics. Current advances in modern genome analysis hold exciting possibilities for another transition into the new era of systems biology, which will bring together genomic, transcriptomic, proteomic and metabolomic data using state-of-the-art statistical, biological, computational, and bioinformatics tools. To fulfill this promise, a new generation of scientists familiar with genomic technologies and trained to integrate the tools of molecular and quantitative genetics, computational biology and statistics across major disciplines in animal science is needed.

Purpose:

- 1) Develop a new **Domestic Animal Genomics Interdisciplinary Concentration** in the Animal Sciences Department (**ANS**) at the University of Florida (**UF**) focused on the application of animal genomics, computational biology and quantitative genetics in solving needs of the animal industries.
- 2) Educate doctoral students with the skills required to excel in the technologically advanced food and agricultural industry for successful research or academic careers.