



**Food Animal
Fellowships**

USDA-National Needs Fellowships in Food Animal Functional Genomics at NC State University

WHAT?

This program is designed to meet the national need for animal/poultry scientists trained in the emerging functional genomics discipline. Food Animal Fellowship (PhD) awardees will receive integrated graduate training in interdisciplinary research, including industry outreach, and academic professional training, with a focus on online learning. Agricultural productivity is a foundational component of the US economy. With the completion of several food-animal genomes, attention must now be placed on how to translate genomic information into practical applications.

WHO SHOULD APPLY?

Undergraduate students in their senior year with demonstrated interest in functional genomics or students who have completed a MS program.

Students from underrepresented groups are especially encouraged to apply.

This program is only open to US citizens and permanent residents.

DATES

The deadline for all applicants is January 15, 2010.

FINANCIAL SUPPORT

In addition to professional development and travel opportunities, this training grant covers tuition and fees, providing a yearly stipend of \$24,500.

SAMPLE PROJECTS

- Nutritional biochemistry of the developing neonate including the ontogeny of lipid metabolism as well as intestinal growth and development in early life.
- Functional genomics of reproduction, disease resistance, and production efficiency in livestock species having a dual benefit in human medicine.
- Epigenetics and nutritional conditioning of poultry species for enhanced nutrient utilization.
- Functional genomics of host gene expression and how virus-mediated changes are involved in both pathology and disease resolution.
- Quantitative genetics of pigs and cattle production through improved nutrient utilization, behavior, growth, and survival.
- Cell biology of molecular mechanisms governing skeletal muscle growth and muscle adaptation to changes in functional demands.
- Proteomics of factors involved in resistance to infectious disease and discerning how they contribute towards pathogenesis of viruses.
- Molecular and cellular biology of transgenic poultry, avian stem cells, and germ cells.

APPLICATIONS

For application and more information:
<http://genomics.ncsu.edu/function.html>
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