



DEPARTMENT OF

# ANIMAL SCIENCES



## Research Overview

Animal Sciences focuses on research and technology transfer for efficient and sustainable production of high quality animal products optimizing animal well-being, enhancement of the human diet, and advancement of sound environmental practices.

Our faculty has expertise in the disciplines of growth and development, nutrition, breeding and genetics, physiology, management, and animal well-being and behavior.



## Research Areas

### ANIMAL PRODUCTION & MANAGEMENT SYSTEMS

- Nutrient Utilization
- Environmental Stewardship
- Efficiency Production
- Food Animal Product Development
- Animal Health and Well-Being
- Improvement in Reproduction
- Genomic Selection
- Physiology
- Facility Design

### MOLECULAR ANIMAL PHYSIOLOGY & METABOLISM

- Nutrient Utilization & Partitioning
- Digestive Physiology & Absorption
- Obesity/Diabetes
- Tissue Growth Regulation
- Physiology of Reproduction & Lactation
- Meat Science and Muscle Biology



### FOOD QUALITY & FOOD SAFETY

- Pre-harvest Intervention Strategies
- Microbime Systems
- Stress and Immunology
- Enhanced Nutrient Profiling

### GENE REGULATION, STEM CELL & DEVELOPMENTAL BIOLOGY

- Quantitative Genetics
- Genomics
- Transgenic Biology
- Comparative Animal Health & Disease



*Pictured at left from top:*  
*Dr. Shihuan Kuang, Dr. Luiz Brito, Dr. Kola Ajuwon, Dr. Marisa Erasmus and Dr. Paul Ebner.*

**PAUL EBNER**  
INTERIM DEPARTMENT HEAD

pebner@purdue.edu | 765.494.4806

270 S. Russell Street, West Lafayette, IN 47907  
Purdue University College of Agriculture

## Faculty by Research Area

Adeola, Olayiwola  
ladeola@purdue.edu  
Nutrition (non-ruminant)

Ajuwon, Kolapo  
kajuwon@purdue.edu  
Adipose Biology/  
Nutritional Physiology

Allrich, Rodney D  
rallrich@purdue.edu  
Reproduction Physiology

Boerman, Jacquelyn  
jboerma@purdue.edu  
Dairy Nutrition and Management

Brito, Luiz F  
britol@purdue.edu  
Quantitative Genetics and  
Genomics

Cabot, Ryan A  
rcabot@purdue.edu  
Molecular Biology and  
Reproductive Physiology

Casey, Theresa M  
theresa-casey@purdue.edu  
Mammary Development and  
Neoplasia, Regulation of Lactation

Cheng, Heng-wei  
Heng-Wei.Cheng@usda.gov  
Animal Behavior and Well-Being

Croney, Candace C  
ccroney@purdue.edu  
Animal Behavior and Well-Being

Ebner, Paul D  
pebner@purdue.edu  
Microbiology, Microbiology, Pre-  
harvest Food Safety

Erasmus, Marisa A  
merasmus@purdue.edu  
Animal Behavior and Well-Being

Fernandez, Marcos  
mfernandez@purdue.edu  
Small Ruminant Nutrition and  
Management

Forsyth, Dale M  
dforsyth@purdue.edu  
Nutrition (non-ruminant)

Fraley, Greg  
gfraley@purdue.edu  
Poultry Neuroendocrinology and  
Welfare

Johnson, Jay S  
jay.johnson2@usda.gov  
Stress and Nutritional Physiology

Johnson, Timothy  
john2185@purdue.edu  
Food Animal Microbiome,  
Microbial Ecology

Karcher, Darrin M  
dkarcher@purdue.edu  
Poultry Management

Karcher, Elizabeth L  
ekarcher@purdue.edu  
Undergraduate Coordinator,  
Immunobiology and Nutrition  
Science (dairy)

Kim, Yuan "Brad"  
bradkim@purdue.edu  
Muscle Biology and Meat Science

Kuang, Shihuan  
skuang@purdue.edu  
Developmental Biology

Lemenager, Ronald P  
rpl@purdue.edu  
Ruminant Nutrition and  
Management, Beef

Machaty, Zoltan  
zmachaty@purdue.edu  
Graduate Coordinator  
Reproductive Physiology and  
Developmental Biology

Markworth, James  
jmarkwor@purdue.edu.  
Muscle Biology

Minton, Nicholas  
nminton@purdue.edu  
Beef Cattle Systems and Beef  
Evaluation

Neary, Mike  
mneary@purdue.edu  
Ruminant Nutrition, Sheep

Pempek, Jessica  
jessica.pempek@usda.gov  
Animal Behavior and Well-Being

Pasternak, Alex  
jpastern@purdue.edu  
Reproductive Biology

Plaut, Karen I  
kplaut@purdue.edu  
Endocrinology, Cell and  
Molecular Biology

Richert, Brian T  
brichert@purdue.edu  
Swine Nutrition and Management

Rojas, Hinayah  
hrojasde@purdue.edu  
Genomics & Animal Breeding

Schinckel, Allan P  
aschinck@purdue.edu  
Breeding and Genetics (swine)

Schoonmaker, Jon P  
jschoonm@purdue.edu  
Beef Cattle Nutrition