

## Teaching, Research and Extension Faculty

**Trish Berger** - Professor, [tberger@ucdavis.edu](mailto:tberger@ucdavis.edu), (530) 752-1267

**Research:** Fertilization and fertility; gamete membrane interaction at the molecular level, including species comparisons and species variation; effect of environmental stresses; Sertoli cell proliferation and testicular development.

**Graduate Groups:** Animal Biology

**Richard A. Blatchford** - Assistant Extension Specialist: Poultry, [rablatchford@ucdavis.edu](mailto:rablatchford@ucdavis.edu), (530) 752-8763

**Research:** Husbandry, behavior, and welfare of small to large scale poultry operations; effects of housing design and management techniques on laying hens and broilers; development of on-farm assessment tools.

**David Bunn** - Assistant Adjunct Professor, [dabunn@ucdavis.edu](mailto:dabunn@ucdavis.edu), (530) 752-3122

**Research:** Livelihoods and food security of the rural poor through intervention strategies for improving animal health and production in developing countries and improving small-scale poultry production systems. Research includes reducing wildlife-livestock conflicts, and wildlife conservation. Research and extension projects on village poultry health and production in Tanzania, Kenya, Uganda, Ghana and Nepal; Investigations of intervention strategies that include training women farmers, extension agents, village leaders, and primary school children.

**Graduate Groups:** International Agricultural Development

**Fred S. Conte** - Extension Specialist: Aquaculture; Lecturer, [fconte@ucdavis.edu](mailto:fconte@ucdavis.edu), (530) 752-7689

**Research:** Shellfish sanitation, computer sanitation modeling and computer simulation software; finfish and shellfish production systems, finfish slaughter technology for aquatic animal welfare, fish stress associated with aquatic animal welfare considerations.

**Extension Programs:** Marine and freshwater aquaculture systems management and production technology; aquaculture regulatory and public policy; computer decision support software for shellfish sanitation; aquatic animal welfare.

**Mary E. Delany** - Professor; Executive Associate Dean in CA&ES; Fiddymont Endowed Chair [medelany@ucdavis.edu](mailto:medelany@ucdavis.edu), (530) 754-9343

**Research:** Avian genetics and genome organization including projects in molecular cytogenetics, developmental genetics, vertebrate telomere biology. Main lab projects include: role of the telomere/telomerase pathway and virus-host genome interactions in oncogenic disease; genomic and developmental analysis of sequences and genes causing inherited limb and craniofacial malformations. Main organisms of study are chicken, turkey and Japanese quail.

**Graduate Groups:** Animal Biology; Avian Sciences; Integrative Genetics and Genomics

**Anna Denicol** – Assistant Professor [acdenicol@ucdavis.edu](mailto:acdenicol@ucdavis.edu) (352) 665-1909

**Research:** Reproductive and developmental biology. Paracrine and endocrine regulation of follicle and oocyte development and carry over effects of adverse environments during folliculogenesis on embryonic development. Biology of ovarian oocyte progenitor cells (oogonial stem cells) and their potential to improve and restore female fertility. Application of basic concepts of reproductive biology and assisted reproductive techniques to improve animal and human health and efficiency of agriculture worldwide.

**Graduate Groups:** Animal Biology, Molecular, Cellular and Integrative Physiology

**Edward J. DePeters** - Professor, [ejdepeters@ucdavis.edu](mailto:ejdepeters@ucdavis.edu), (530) 752-1263

**Research:** Ruminant nutrition of dairy cattle; mammary gland synthesis of milk protein and fat; nutrient digestion, absorption, and metabolism; evaluation of by-product feedstuffs and forage quality.

**Graduate Groups:** Animal Biology; Nutritional Biology

**John M. Eadie** - Professor, [jmeadie@ucdavis.edu](mailto:jmeadie@ucdavis.edu), (530) 754-0145

**Research:** Waterfowl; avian behavior and ecology; c population genetics; wetland and riparian ecology; molecular ecology.

**Graduate Groups:** Avian Sciences; Animal Behavior; Ecology; Population Biology

**James G. Fadel** - Professor, [jgfadel@ucdavis.edu](mailto:jgfadel@ucdavis.edu), (530) 752-1259

**Research:** Mathematical and statistical applications mainly in nutrition, environment, sustainability, and management systems. Research incorporates information from modeling, in vitro, and in vivo experiments and datasets.

**Graduate Groups:** Animal Biology; International Agricultural Development; Nutritional Biology

**Matthias Hess** - Assistant Professor, Wiley Research Fellow, [mhess@ucdavis.edu](mailto:mhess@ucdavis.edu), (530) 752-8809

**Research:** Application of cultivation-independent as well as cultivation-based techniques approaches to obtain a multi-scale (from molecule to cell to population to ecosystem) understanding of microbial systems. The Hess Laboratory is particularly interested in *a*) how microbial systems respond to environmental changes and how they affect their habitats and *b*) the identification of microbes and microbial proteins of industrial relevance. Biological systems studied in the Hess Lab include amongst others: ruminants, photosynthetic consortia and microbial communities associated with natural hydrocarbons.

**Graduate Groups:** Microbiology

**Kristina Horback** – Assistant Professor, [kmhorback@ucdavis.edu](mailto:kmhorback@ucdavis.edu), (530) 846-9037

**Research:** Identify consistent personality traits among domestic farm animals and evaluate the relationship between personality and the assessment of an animal's physical and psychological welfare (e.g., affective states); investigate whether species-specific personality traits influence an animal's coping with stress and expression of its internal state, such as pain or fear, in order to enhance animal-based measurements of welfare.

**Graduate Groups:** Animal Biology, Animal Behavior

**Russ Hovey** - Professor, [rchovey@ucdavis.edu](mailto:rchovey@ucdavis.edu), (530) 752-1682

**Research:** Hormonal regulation of mammary gland growth, lactation, and breast cancer with interests in ovarian and pituitary hormone functions; role of the stromal environment in cell function; and across-species differences in mammary gland biology and hormone function.

**Graduate Groups:** Animal Biology; Integrative Genetics and Genomics; International Agricultural Development

**Josh Hull** - Assistant Adjunct Professor, [jmhull@ucdavis.edu](mailto:jmhull@ucdavis.edu), (916) 414-6742

**Research:** Conservation ecology; population genetics; phylogeography; threatened and endangered species; migration ecology; raptor biology.

**Graduate Groups:** Avian Sciences, Ecology

**Silas S.O. Hung** - Professor, [sshung@ucdavis.edu](mailto:sshung@ucdavis.edu), (530) 752-3580

**Research:** Fish nutrition, toxicology, biochemistry, physiology, and ecology.

**Graduate Groups:** Animal Biology; Pharmacology and Toxicology

**Ermias Kebreab** - Professor, Sesnon Endowed Chair, [ekebreab@ucdavis.edu](mailto:ekebreab@ucdavis.edu), (530) 752-5907

**Research:** Sustainable animal agriculture; energy and nutrient requirement/utilization of farm animals; environmental impact of animal agriculture including modeling greenhouse gas emissions from livestock; tropical animal agriculture.

**Graduate Groups:** Animal Biology; Ecology; International Agriculture and Development

**Annie J. King** - Professor, [ajking@ucdavis.edu](mailto:ajking@ucdavis.edu), (530) 752-3530

**Research:** prevention of lipid oxidation in poultry muscle, eggs and their products; effects of environmental systems on lipid oxidation; reduction and determination of cholesterol oxides in poultry meat, eggs and their products; use of horticultural by-products and their antioxidants as nutrient sources, especially to retard lipid oxidation in poultry meat; and safe and economical reclamation and use of horticultural by-products as feed ingredients.

**Graduate Groups:** Agricultural and Food Chemistry; Avian Sciences; Food Science

**Kirk C. Klasing** - Professor, [kcklasing@ucdavis.edu](mailto:kcklasing@ucdavis.edu), (530) 752-1901

**Research:** Impact of nutrition on immunobiology and disease resistance; immunologic basis of stress; nutrition and metabolic adaptation required by carnivorous, granivorous, and nectivorous birds.

**Graduate Groups:** Animal Biology; Avian Sciences; Nutritional Biology; Immunology

**Dietmar Kueltz** - Professor, [dkueltz@ucdavis.edu](mailto:dkueltz@ucdavis.edu), (530) 752-2991

**Research:** Animal Systems Biology with emphasis on fish and marine invertebrates and functional systems conferring environmental stress tolerance; effects of environmental/ climate change on the proteomes of three-spined sticklebacks and mountain-colored tilapia species complexes; mechanisms of physiological plasticity and genetic adaptation that confer high environmental stress tolerance to aquatic organisms; identification/ characterization of biochemical networks that control environmental stress responses based on very large proteome datasets; mechanisms of osmosensing and osmoregulation in euryhaline sticklebacks and tilapia.

**Graduate Groups:** Animal Biology; Genetics; Ecology; Molecular, Cellular and Integrative Physiology

**Yanhong Liu** - Assistant Professor, [yahliu@ucdavis.edu](mailto:yahliu@ucdavis.edu)

**Research:** Feed ingredient evaluation for pigs and/or poultry; Dietary strategies on prevention and control of pig diseases; Swine nutrition on gut health and immunology; Alternatives to in-feed antibiotics.

**Elizabeth A. Maga** – Adjunct Professor, [eamaga@ucdavis.edu](mailto:eamaga@ucdavis.edu), (530) 752-5930

**Research:** Applied genetic engineering; development and use of animal models of disease, translation of the use of genetically engineered ruminant milk to improve animal and human health, health and well-being of transgenic animals, role of intestinal microbiota on health and resistance to infection; relationship between casein genotypes and milk quality.

**Graduate Groups:** Animal Biology; Food Science

**Maja M. Makagon** – Assistant Professor, [mmakagon@ucdavis.edu](mailto:mmakagon@ucdavis.edu), (530) 752-9419

**Research:** Animal behavior, animal welfare assessment, optimization of housing systems for poultry

**Graduate Groups:** Animal Biology; Animal Behavior

**Bernie May** - Research Professor; Emeritus Adjunct Professor; CFO, Genomic Variation Laboratory; [bpmay@ucdavis.edu](mailto:bpmay@ucdavis.edu)

**Research:** Conservation biology; population genetics of natural populations, threatened and endangered species; genetic mapping of quantitative trait loci; effect of environmental stressors on natural gene pools.

**Graduate Groups:** Ecology; Integrative Genetics and Genomics

**Juan F. Medrano** - Professor, [jfmedrano@ucdavis.edu](mailto:jfmedrano@ucdavis.edu), (530) 752-6786

**Research:** Applications of next generation sequencing and systems biology approaches to study genetic variation of complex traits. Development of a new cow genome reference assembly - Optical Mapping and long-read de-novo assembly. Genetics of milk composition – study of health and nutritional properties of cow and human milk, and application of genetic markers to improve manufacturing properties of milk. Molecular phylogeny and SNP variation of wild populations of bears, wolves and coyotes. Coffee Genomics -Developments of a Coffea arabica genome reference assembly and annotation and examination of gene expression differences between coffees grown at different altitudes.

**Graduate Groups:** Animal Biology; Integrative Genetics and Genomics

**Deanne Meyer** - Extension Specialist: Livestock Waste Management; Lecturer, [dmeyer@ucdavis.edu](mailto:dmeyer@ucdavis.edu), (530) 752-9391

**Research:** Analyses of production, collection, storage, transportation, and utilization of manure management waste stream(s) on dairies. Research has focused on nutrient flows through dairy operations including: content of manure solids and liquids, milk parlor water use, efficiency of mechanical and gravity flow separator devices, analyses of other treatment technologies, nutrient distribution during land applications, and ammonia volatilization.

**Graduate Groups:** Animal Biology

**Extension Programs:** Environmental Stewardship Module Coordinator for the California Dairy Quality Assurance Program; develop and disseminate technical information on nutrient flows into and through dairy facilities; provide input to environmental regulatory policy developed for livestock and poultry operations.

**Michael J. Mienaltowski** - Assistant Professor, [mjmienaltowski@ucdavis.edu](mailto:mjmienaltowski@ucdavis.edu), (530) 207-3226

**Research:** Physiology; musculoskeletal biology; development, maturation, and repair; extracellular matrix/niche organization; tissue engineering; functional genomics; mouse model; equine; poultry; livestock.

**Graduate Groups:** Animal Biology, Integrative Genetics and Genomics, Integrative Pathobiology

**Michael R. Miller** - Assistant Professor, [micmilller@ucdavis.edu](mailto:micmilller@ucdavis.edu), (530) 304-4719

**Research:** Animal genetics and genomics; conservation and ecological genetics and genomics; genomics and bioinformatics technology development; salmonid fishes.

**Graduate Groups:** Animal Biology; Ecology; Integrative Genetics and Genomics

**Frank M. Mitloehner** - Professor & Air Quality Extension Specialist, [fmmiltoehner@ucdavis.edu](mailto:fmmiltoehner@ucdavis.edu), (530) 752-3936

**Research:** Air quality research related to livestock production, especially quantification and mitigation of air pollutants on dairies, beef feedlots, and poultry operations; environmental physiology research, focusing on effects of air emissions on animal- and human health and welfare.

**Graduate Groups:** Animal Biology; Animal Behavior; Ecology, Agricultural Chemistry

**James D. Murray** - Professor, [jdmurray@ucdavis.edu](mailto:jdmurray@ucdavis.edu), (530) 752-3179

**Research:** Genetic engineering of animals for use in agriculture, improving the technologies associated with cloning and the production of transgenic animals, modification of anti-microbial, functional and lipid characteristics of milk, equine genomics.

**Graduate Groups:** Animal Biology; Integrative Genetics and Genomics

**Anita M. Oberbauer** - Professor and Chair, [amoberbauer@ucdavis.edu](mailto:amoberbauer@ucdavis.edu), (530) 752-1252

**Research:** Cell and molecular control of animal growth, particularly bone and the impact on animal function; investigation of the genetic causes of canine traits, especially disease.

**Graduate Groups:** Animal Biology; Integrative Genetics and Genomics; Molecular, Cellular and Integrative Physiology

**James W. Oltjen** - Extension Specialist: Animal Management Systems; Lecturer, [jwoltjen@ucdavis.edu](mailto:jwoltjen@ucdavis.edu), (530) 752-5650

**Research:** Animal management systems; resource use in animal agriculture; beef cattle growth.

**Graduate Groups:** Animal Biology; Nutritional Biology

**Extension Programs:** Computer decision support software; beef quality assurance; standardized performance analysis for cattle and sheep ranches.

**L. Allen Pettey** - Lecturer (PSOE), Director of Animal Science Curriculum Development/Assessment, [lapettey@ucdavis.edu](mailto:lapettey@ucdavis.edu), (530) 752-8924

**Research:** Effectiveness of teaching methodologies and technologies as they apply to animal science courses; pedagogically sound approaches to curriculum and course development for traditional and non-traditional animal science students; applied livestock nutrition focusing on use of alternative feed ingredients.

**Peter H. Robinson** - Extension Specialist: Dairy Nutrition and Management, [phrobinson@ucdavis.edu](mailto:phrobinson@ucdavis.edu), (530) 754-7565

**Research:** On-farm animal management systems; on-farm implementation of strategies to reduce the environmental impact of cows.

**Graduate Groups:** Animal Biology

**Pablo J. Ross** - Associate Professor, [pross@ucdavis.edu](mailto:pross@ucdavis.edu), (530) 771-7225

**Research:** Epigenetic mechanisms controlling early embryonic development and pluripotency. Functional genomics of preimplantation development using next generation sequencing. Application of assisted reproductive technologies in animal production systems. Embryo genetic engineering and blastocyst complementation. Embryonic stem cell biology and induction of pluripotency by defined factors (iPSC).

**Graduate Groups:** Animal Biology; Integrative Genetics and Genomics

**Roberto D. Sainz** - Professor, [rsainz@ucdavis.edu](mailto:rsainz@ucdavis.edu), (530) 752-6293

**Research:** Beef cattle nutrition, growth, body composition; genetic and nutritional determinants of energy metabolism; international (tropical) animal agriculture; mathematical modeling of animal function and production systems; ecological footprint

**Graduate Groups:** Animal Biology; International Agricultural Development; Nutritional Biology

**Andrea Schreier** - Assistant Adjunct Professor, Director, Genomic Variation Laboratory, [amdrauch@ucdavis.edu](mailto:amdrauch@ucdavis.edu), (530) 752-0664

**Research:** Applying genetic and genomic techniques to answer ecological or evolutionary questions about wild populations, conservation of threatened and endangered species, genetic management of conservation and commercial aquaculture, animal polyploidy.

**Graduate Groups:** Ecology, Integrative Genetics and Genomics

**Anne E. Todgham** - Assistant Professor, [todgham@ucdavis.edu](mailto:todgham@ucdavis.edu), (530) 752-1897

**Research:** Ecological Physiology; Integrative Stress Biology; Environmental Genomics; Climate Change Biology. Molecular, biochemical and physiological mechanisms that underlie an animal's capacity to cope with multiple environmental stressors.

**Graduate Groups:** Animal Biology; Ecology

**Cassandra B. Tucker** - Associate Professor, [cbtucker@ucdavis.edu](mailto:cbtucker@ucdavis.edu), (530) 754-5750

*Research:* Animal welfare, animal behavior, effects of housing design and environmental conditions on dairy and beef cattle

*Graduate Groups:* Animal Biology; Animal Behavior

**Alison Van Eenennaam** - Extension Specialist: Animal Biotechnology and Genomics, [alvaneennaam@ucdavis.edu](mailto:alvaneennaam@ucdavis.edu), (530) 752-7942

*Research:* Use of biotechnologies in animal agriculture, marker-assisted selection in cattle, cloned and transgenic or genetically engineered animals, bovine respiratory disease complex coordinated agricultural project.

*Graduate Groups:* Animal Biology; Integrative Genetics and Genomics

**Jason V. Watters** - Associate Adjunct Professor, [jasonw@sfzoo.org](mailto:jasonw@sfzoo.org), (415) 213-8128

*Research:* Animal behavior, animal welfare, conservation behavior; behavioral assays of animal welfare, environmental enrichment for zoo and aquarium animals; zoo animal behavior and its impact on zoo-goers.

*Graduate Groups:* Animal Biology

**Xiang "Crystal" Yang** – Meat Scientist, [xcryang@ucavis.edu](mailto:xcryang@ucavis.edu)

*Research:* Focuses on the use of next generation sequencing technologies and metagenomics to detect pathogens and the degree to which bacteria harboring antimicrobial resistance genes are present in all steps of the food production chain

**Huaijun Zhou** - Associate Professor, Chancellor's Fellow, poultry genetics and genomics, host-pathogen interaction, bioinformatics.

[hzhou@ucdavis.edu](mailto:hzhou@ucdavis.edu), (530) 752-1034

*Research:* Investigation of molecular and cellular mechanisms of host-pathogen interaction using genetic, genomic and bioinformatic approaches in poultry. Functional annotation of animal genomes.

*Graduate Groups:* Animal Biology; Integrative Genetics and Genomics; Immunology; Microbiology; Avian Sciences

**Richard A. Zinn** - Professor (Desert Research and Extension Center), [razinn@ucdavis.edu](mailto:razinn@ucdavis.edu), (760) 756-3068

*Research:* Nutrition, health, and management of feedlot cattle.

*Graduate Groups:* Animal Biology