MSU-CVM VMRS Potential Mentors

The following faculty have served as mentors for the VMRS program over the past few years. Applicants are encouraged to contact those in whom they are interested to find out the mentor’s availability and potential projects.

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| **Mentor** | **Department** | **Research Area** | **E-mail** |
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| **Hossam Abdelhamed** **BVMS, MS, PhD** | MSU-CVM Comparative Biomedical Sciences | Bacterial pathogenesis, aquatic animal health, molecular microbiology, antimicrobial resistance | abdelhamed@cvm.msstate.edu |
| **Todd Archer MS, DVM** | MSU-CVMClinical Sciences | Small animal internal medicine; pharmacodynamic monitoring of T cells in response to immunosuppressive drugs | tarcher@cvm.msstate.edu |
| **Cooper Brookshire MS, DVM** | MSU-CVMClinical Sciences | Shelter medicine; wildlife/ecology; antimicrobial resistance | c.brookshire@msstate.edu |
| **Russell Carr, MS, PhD** | MSU-CVM Comparative Biomedical Sciences | Toxicology/behavior and cognitive function; effects of agricultural chemicals and endocrine disrupting chemicals on the developing nervous system with emphasis on effects on behavior and cognitive function and on appropriate neurotransmitter system development | rlcarr@cvm.msstate.edu |
| **Jan Chambers, PhD** | MSU-CVM Comparative Biomedical Sciences | Biochemical and environmental toxicology; mechanism of action and biotransformation of neurotoxicants; neurochemical and behavioral effects of anticholinesterase insecticides; metabolism of insecticides and other xenobiotics; pesticide exposure assessment; developmental neurotoxicity | chambers@cvm.msstate.edu |
| **Steven Elder, PhD** | MSU Ag and Biomedical Engineering | Tissue engineering, cell biomechanics, biotechnologies | selder@abe.msstate.edu |
| **William Epperson, DVM** | MSU-CVM Clinical Sciences | Epidemiology; tracking dolphin strandings and deaths in Gulf of Mexico | epperson@cvm.msstate.edu |
| **Jean M.N. Feugang, MS, PhD** | MSU Animal and Dairy Sciences | Large animal reproduction; biology of mammalian gametes and embryos; post-collection semen manipulation; non-invasive luminescence and fluorescence bioimaging; nanotechnology in animal production, reproduction and disease prevention | jn181@msstate.edu |
| **Nick Fitzkee, PhD** | MSU Chemistry | Protein structure and function; Specific projects include (1) determining protein-nanoparticle surface interactions as a model for bacterial biofilm formation, and (2) exploring elastin-like polypeptides (ELPs) as a drug delivery system | nfitzkee@chemistry.msstate.edu  |
| **Jesse Grady, MS, DVM** | MSU-CVM Clinical Sciences | Exploring the communication factors that affect how pet owners make decisions regarding their pet; use of surveys | jgrady@cvm.msstate.edu |
| **Matt Griffin, PhD** | MSU-CVMPathobiology and Population Medicine  | Aquatic animal health; molecular diagnostics, environmental pathogen detection, parasitology, microbiology | matt.griffin@msstate.edu |
| **Larry Hanson, PhD** | MSU-CVMComparative Biomedical Sciences | Molecular virology and the application of molecular biology to investigate fish health problems associated with aquaculture | hanson@cvm.msstate.edu |
| **Trey Howell, PhD** | MSU-CVMComparative Biomedical Sciences | Environmental toxicology; role of organochlorine bioaccumulation in development of type 2 diabetes; cardiovascular toxicology | howell@cvm.msstate.edu |
| **Michael Jaffe,**  **DVM, DVM, MS, CCRP** | MSU-CVM Clinical Sciences | Laser tissue welding is a sutureless method of tissue healing involving the use of a near-infrared laser and gold nanorod/collagen composites; research will focus on ex vivo (and possibly in vivo) work examining a variety of tissue sources treated in this manner | mhj95@msstate.edu |
| **Barbara Kaplan, PhD** | MSU-CVMComparative Biomedical Sciences  | Mechanisms of immunotoxicology;immune responsiveness in the nervous system and neuroimmune interactions using an autoimmune model of multiple sclerosis; mechanisms of immune response to environmental contaminants | bkaplan@cvm.msstate.edu |
| **Attila Karsi, MS, PhD** | MSU-CVMComparative Biomedical Sciences | Infectious diseases and functional genomics; bacterial pathogenesis; food safety | karsi@cvm.msstate.edu |
| **Jonas King, PhD** | MSU Biochemistry, Molecular Biology, Entomology and Plant Pathology | Host-pathogen interactions and arthropod disease vectors, primarily related to malaria (*Plasmodium*) parasites and mosquito vectors; development of novel molecular diagnostics for plant and animal diseases | jonas.king@msstate.edu |
| **Mark Lawrence, DVM, PhD** | MSU-CVMComparative Biomedical Sciences  | Bacterial pathogenesis; food safety; comparative genomics, functional genomics, molecular biology, and host models to study pathogenesis of fish bacterial pathogens (e.g. *Edwardsiella ictaluri, Aeromonas hydrophila, Flavobacterium columnare)*,as well as the food pathogen, *Listeria monocytogenes* | lawrence@cvm.msstate.edu |
| **Bindu Nanduri, MS, PhD** | MSU-CVM Comparative Biomedical Sciences | Bacterial pathogenesis and genomics; role of polyamines and iron responsive genes in pneumococcal (*Streptococcus pneumoniae)* pathogenesis and virulence; development of computational resources for host-pathogen interactions for agricultural species | bnanduri@cvm.msstate.edu |
| **Joo Youn Park, MS, DVM, PhD** | MSU-CVM Comparative Biomedical Sciences | *Staphylococcus aureus* (*S. aureus*) utilization and exploitation of host nutrient resources to regulate bacterial networks that impact metabolism and virulence during pathogenesis, especially in type 2 diabetes (T2D)  | jpark@cvm.msstate.edu |
| **Andy Perkins, PhD** | MSU Computer Science and Engineering | Computational biology; graph theory; high performance computing | perkins@cse.msstate.edu |
| **Lora Petrie-Hanson, MS, PhD** | MSU-CVMComparative Biomedical Sciences | Fish immunology; innate immunity in catfish | lora@cvm.sstate.edu |
| **Raj Prabhu, PhD** | MSU Ag and Biomedical Engineering | Bio-inspired design; targeted cancer drug delivery | rprabhu@abe.msstate.edu |
| **Lauren Priddy, PhD** | MSU Ag and Biomedical Engineering | Biomaterials for the delivery of antimicrobial therapeutics such as bacteriophage to combat osteomyelitis; *in vitro* and *in vivo* models; explore how biomaterial properties can encourage osseointegration and mitigate infection, and to use biomaterials to effectively co-deliver antimicrobial and osteoinductive factors for treating challenging cases of osteomyelitis | lbpriddy@abe.msstate.edu |
| **Stephen Pruett, PhD** | MSU-CVMComparative Biomedical Sciences | Mechanisms of immunomodulation by drugs and chemicals with particular emphasis on the role of neuroendocrine mediators; mathematical/statistical modeling of immune function | pruett@cvm.msstate.edu |
| **Matt Ross, PhD** | MSU-CVMComparative Biomedical Sciences | Biochemistry; role of carboxylesterases in xenobiotic and lipid metabolism, and in relation to inflammation and disease (specifically atherosclerosis) progression; characterization of serine hydrolases involved degradation of lipids, especially endocannabinoids | mross@cvm.msstate.edu |
| **T. Graham Rosser, PhD** | MSU-CVMComparative Biomedical Sciences | Characterization of parasites of farmed fish and selected wildlife specific using molecular and classical parasitology techniques; specific interests in fish myxozoan and trematode parasites | graham.rosser@msstate.edu |
| **Keun Seok Seo, DVM, PhD** | MSU-CVMComparative Biomedical Sciences | Bacteriology and host response; specific interests in *Staphylococcus aureus* superantigens  | seo@cvm.msstate.edu |
| **David Smith, DVM, PhD** | MSU-CVMPathobiology & Population Medicine | Epidemiology;Use of field epidemiology to discover how beef cattle production-systems can be modified to improve the health, well-being, and productivity of cattle, and benefit human and environmental health | Dsmith@cvm.msstate.edu |
| **Betsy Swanson, MS, DVM** | MSU-CVMClinical Sciences | Soft tissue surgery; wound care; minimally invasive surgery; chronic biofilm infections | eswanson@cvm.msstate.edu |
| **Justin Thornton, PhD** | MSU Biological Sciences | *Streptococcus pneumoniae*(pneumococcus); host-pathogen interactions of the innate immune response functions to prevent these types of infections and virulence mechanisms of *S. pneumoniae* enable disease | thornton@biology.msstate.edu |
| **Chinling Wang, MS, DVM, PhD** | MSU-CVMComparative Biomedical Sciences | Microbiology specifically related to food-borne pathogens, gut health in chickens, necrotic enteritis in chickens, probiotics, and bacterial pathogenesis | wang@cvm.msstate.edu |
| **Kimberly Woodruff, MS, DVM** | MSU-CVM Pathobiology and Population Medicine | Shelter medicine; epidemiology; disease control in shelter populations | kwoodruff@cvm.msstate.edu |
| **Amelia Woolums, DVM, PhD** | MSU-CVM Pathobiology and Population Medicine | Respiratory disease of cattle and calves; immunity and vaccinology in cattle and calves; infectious diseases of large animals | amelia.woolums@msstate.edu |