Mississippi State University
College of Veterinary Medicine
Potential SRE Mentors for 2020

Hossam Abdelhamed, DVM, Ph.D. (CVM Basic Sciences)
Research on my lab focuses on molecular mechanism of foodborne human pathogen, . We are currently investigating the role of transcription regulator in promoting intracellular replication and virulence. We are also interested in the molecular mechanisms associated with the development and persistence of antibiotic resistance in the aquatic environment.

Cooper Brookshire, DVM, MS, DACVPM (CVM Clinical Sciences)
My research primarily includes epidemiological studies involving antimicrobial resistance, One Health, wildlife, or clinical questions relevant to Shelter Medicine.

Russell Carr, PhD (Basic Sciences)
My research focuses on developmental neurotoxicity. Our current efforts are investigating the persistent effects on brain function, structure, and neurochemistry that results from developmental exposure to either low levels of pesticides or to marijuana.

Janice Chambers, PhD (CVM Basic Sciences)
Our main research focus is the development of novel antidotes for poisoning by organophosphates, a group of compounds that includes nerve agents and some insecticides. In laboratory animal tests, our novel antidotes, invented at MSU, are showing promise at entering the brain and protecting the brain, which the currently approved antidote cannot do.

Jesse Grady, DVM, MS (CVM Clinical Sciences) & Holli Seitz PhD, MPH (Dept Communication/SSRC)
Drs. Grady and Seitz research involves exploring the communication factors that affect how pet owners make decisions regarding their pet. Most recently they developed a survey instrument called the VAPI that measure's a pet owner's desire for

My research focuses on understanding the life cycles of trematode and myxozoan parasites, studying their impacts on aquaculture, & identifying potential management strategies.

Keun Seok Seo and Joo Youn Park, DVM, PhD (CVM Basic Sciences)
Our research interest is to understand pathogenesis of and translate basic knowledge to develop therapeutic approaches including vaccine, novel antimicrobial compounds, CRISPER-Cas9 phage, and antibiotics. Currently, we are performing several extramural funds including NIH COBRE and industry grants to evaluate new therapeutics using both in vivo and in vitro models.

David R Smith, DVM, PhD, DVCVPM (CVM Pathobiology and Population Medicine)
Dr. Smith is a veterinary epidemiologist with primary interest in how to design and manage cattle production systems to optimize cattle health and food safety. He is particularly interested in methods to keep cattle healthy to avoid the need for antimicrobial therapy. His research methods include system dynamics modeling, observational research, and randomized clinical trials.

Amelia Woolums, DVM, MVSc, PhD, DACVIM, DACVM (CVM Pathobiology and Population Medicine)
Respiratory disease in cattle, also known as "bovine respiratory disease (BRD)", is the research focus In the laboratory of Dr. Amelia Woolums. Dr. Woolums and her students and collaborators work to determine which vaccines and other management practices are most effective to prevent BRD, what characteristics of cattle best help them resist BRD, and how the use of antimicrobials influences antimicrobial resistance in BRD. Tools used in the Woolums lab include a variety of approaches related to immunology, virology, and bacteriology.