

CAMSTRR 2012: Mentors and Projects

MENTOR /LABORATORY	CAMSTRR PROJECT DESCRIPTION
<p>Dr. desAnge's Cruiser For additional information about Dr. Cruiser's research interests please go to:</p> <p>http://www.hsc.unt.edu/MSI/index.cfm?pageName=The%20MSI%20Team#Cruiser</p>	<p>CAM for the Treatment of Depression and Stress: CAMSTRR students rotating through this laboratory will be researching the use of mindfulness, yoga and other CAM modalities on stress and depression in human subjects.</p> <p>Consumer use of CAM Modalities: Researchers in this laboratory are also interested in examining consumer use of CAM modalities using established data bases and evaluation of the literature.</p>
<p>Dr. Lisa Hodge For additional information on the Hodge Laboratory please go to:</p> <p>http://www.hsc.unt.edu/Sites/TheHodgeLab/index.cfm?pageName=Recent%20Publications</p>	<p>OMT and Immune Function: The long range research goal of this laboratory is to evaluate the effectiveness of osteopathic manipulative treatments (OMT) at modulating the immune response during infection, inflammatory diseases and cancer, using animal models. Studies conducted in this laboratory have shown that application of OMT to both dogs and rats increases lymph flow, leukocyte numbers, and mucosal derived lymphocytes in the thoracic duct. Furthermore, pilot studies indicate that OMT reduces pneumonia bacteria and tumors in the lungs of rats. It is likely that by enhancing the lymphatic redistribution of lymphocytes, OMT increases pulmonary trafficking of leukocytes with biological activities; however, the exact mechanism by which OMT is protective in our model still under investigation. CAMSTRR student (s) rotating through this laboratory will conduct research providing an evidence base for the use or contraindication of OMT in patients with infection, inflammatory disease or cancer.</p>
<p>Dr. Derek Schreihöfer For additional information about Dr. Schreihöfer please go to:</p> <p>https://profile.hsc.unt.edu/pr/filesystem/viewprofile.php?pid=10793800&onlyview=1</p>	<p>Phytoestrogens and Neuroprotection: The CAMSTRR student(s) will participate in the study of neuroprotective actions of the soy phytoestrogens genistein, daidzein and the daidzein metabolite equol. Phytoestrogens are used as alternatives to estrogen therapy and provide several beneficial effects to the body and brain, including protection from ischemic injury. Current studies in the laboratory are focused on the mechanisms of action of these compounds using complementary in vivo and in vitro approaches. Student(s) will approach this project through directed learning of the state of the field through assigned and self-initiated reading of the scientific literature and through laboratory experiments examining potential mediators of phytoestrogen neuroprotection. Through a better understanding of any of these mechanisms, we will be in a better position to inform the field as it relates to the safety and efficacy of phytoestrogens in treating/preventing neurodegeneration.</p>
<p>Dr. Meharvan Singh For additional information about Dr. Singh please go to:</p> <p>https://profile.hsc.unt.edu/pr/filesystem/viewprofile.php?pid=10050183&onlyview=1</p>	<p>Phytoestrogens and Neural Function: The CAMSTRR student(s) will participate in the study the neurobiology of phytoestrogen components, including genistein and daidzein. Phytoestrogens have been considered as alternatives to estrogen therapy; however, the precise mechanisms that may be involved in regulating brain function are not well understood. As such, the student(s) will approach this project through: 1) directed learning of the state of the field (through assigned and self-initiated reading of the scientific literature, 2) conducting experiments that address: a) the role of different estrogen receptors in mediating the effects of phytoestrogen components, b) the signaling pathways that are activated in response to phytoestrogens, and c) the regulation of neurotrophins by phytoestrogens. Through a better understanding of any of these mechanisms, we will be in a better position to inform the field as it relates to the safety and efficacy of phytoestrogens in treating/preventing neurodegeneration.</p>
<p>Dr. Michael Smith For additional information about Dr. Smith please go to:</p> <p>https://profile.hsc.unt.edu/pr/filesystem/viewprofile.php?pid=10047088&onlyview=1</p>	<p>Research efforts focus on the neural control of cardiovascular function relating to 1) OMM effects on pain-mediated sympathetic activation, 2) Pain-mediated sympathoexcitation in heart failure, The work is primarily in healthy humans and patients with disease (sleep apnea, heart failure or dysrhythmias) and involves the measurement of a variety of autonomic and cardiovascular parameters.</p>
<p>Dr. Jamboor Vishwanatha For additional information about Dr. Vishwanatha please go to:</p> <p>https://profile.hsc.unt.edu/pr/filesystem/viewprofile.php?pid=10469405&onlyview=1</p>	<p>Curry Derivatives and Cancer: Research over the last few decades has shown that curcumin, a curry derivative, is a potent anti-inflammatory agent with strong therapeutic potential against a variety of cancers. Curcumin has been found to be very efficacious against many different types of cancer cells. Curcumin has been shown to suppress transformation, proliferation, and metastasis of tumors. These effects are mediated through its regulation of various transcription factors, growth factors, inflammatory cytokines, protein kinases, and other enzymes. It also inhibits proliferation of cancer cells by arresting them in various phases of the cell cycle and by inducing apoptosis. However, the major disadvantage associated with the use of curcumin is its low systemic bioavailability when administered orally due to its poor aqueous solubility. The CAMSTRR student(s) rotating through this laboratory will be examining the efficiency of encapsulation of curcumin in poly (lactic-co-glycolic acid) (PLGA) nanoparticles (nanocurcumin) in cancer etiology.</p>