

UT FACULTY RESEARCH INTERESTS - 2006

| NAME | DIVISION-DEPARTMENT | RESEARCH INTERESTS |
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| Anthony, Thomas | Oncology | Research focuses on the interaction between therapy and quality of life outcomes for patients undergoing surgery for gastrointestinal malignancy and peripheral arterial insufficiency. Also interested in defining the effects of computerized records on medical errors in the surgical intensive care unit. |
| Arko, Frank | Vascular Surgery | Research interests include the evaluation of new medical devices in treatment of vascular disease. Use of IVUS to study aortic biomechanics and endovascular aneurysm repair, and new clinical treatments for deep vein thrombosis |
| Barber, Robert | BTCC | Research efforts address resolution of the genetic contribution to variability in patient response, particularly the development of sepsis, following traumatic injury. |
| Brekken, Rolf | Oncology | Tumor-host interactions in pancreatic cancer as an avenue for the development of novel therapy. |
| Carlson, Deborah | General Surgery/CORE laboratory | Research Interests include determining the role of caspase activation and apoptosis in the development of cardiac dysfunction following thermal injury or septic insult. |
| Eberhart, Robert C. | GI Endocrine | Bioengineering of medical devices and instrumentation. Bioresorbable stents for vascular and cancer applications. Magnetic anchoring system for lap surgery. Biomechanics and ultrastructure of aged tissue (vaginal prolapse). Biomaterials for surgical meshes, nanoparticles, nanoporous membranes. Applications of heat and mass transfer analysis in surgery. |
| Euhus, David | Oncology | Biomarkers in breast epithelial cells as a measure of breast cancer risk. DNA damage and repair responses in relation to breast cancer risk |
| Fleming, Jason | Oncology | Anti-angiogenic therapy in pancreatic cancer as an avenue for the development of novel therapy for this disease. |
| Grinnell, Frederick | Cell Biology | Research in the Grinnell laboratory examines regulation of cell migration and proliferation by the interaction of growth factors and extracellular matrix. |

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| Hilgemann, Donald | Physiology | The Hilgemann laboratory studies ion channels and transporters that regulate a wide range of cell functions, from cardiac contraction to vision to secretion. |
| Hill, Joseph | Internal Medicine | Dr. Hill's research examines molecular mechanisms of structural and electrophysiological remodeling in cardiac hypertrophy and failure. |
| Horton, Jureta | BTCC | Dr. Horton's research interests include cardiac contractile responses to burn injury and to burn complicated by sepsis. |
| Idris, Ahamed | Emergency Medicine | Lab investigations of ventilation in shock, traumatic brain injury, and cardiac arrest. PI for NIH Resuscitation Outcomes Consortium focused on pre-hospital clinical trials in severe traumatic injury and cardiac arrest; epidemiological database for cardiac arrest and severe injury. |
| Jessen, Michael | Thoracic Surgery | This research has ongoing projects that investigate myocardial metabolism under conditions that are encountered during cardiac surgical procedures. |
| Johnson, Jane | Cell Biology, Genetics & Development & Neuroscience | The development and survival of neurons depends upon an intricate network of interactions between cells. |
| Kernie, Steven | Pediatrics | The Kernie lab utilizes two genetic systems to study adult neural stem cells. |
| Maxson, Todd | Pediatric Surgery | Traumatic brain injury. |
| Modrall, J. Gregory | Vascular Surgery | Dr. Modrall and his colleagues are dedicated to understanding the molecular pathophysiology of renovascular hypertension (RVH) and specifically, regulation of the intrarenal renin-angiotensin-aldosterone system (RAAS) in the non-ischemic kidney during renovascular hypertension. Current investigations include: the role of AT1 receptor-mediated uptake of circulating angiotensin II by the kidney and the mechanisms by which intracrine production of angiotensin II is activated in proximal tubules of the kidney. |
| Nwariaku, Fiemu | GI Endocrine | Endothelial Signaling during Tissue Injury, Angiogenic Mechanisms of Metastases in Thyroid Cancer |
| Provost, David | General Surgery/GI | Research focusing on the metabolic syndrome (insulin resistance, hyperlipidemia) in morbid obesity, and the impact of weight loss surgery on |

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| | | the syndrome. |
| Rivera, Fernando | BTCC | Research interest is patient oriented research which includes: genetics of the innate immune response after injury and infection, predictors, markers, and mediators of multiple organ dysfunction and sepsis, and hemorrhagic shock & blood substitutes. |
| Roppolo, Lynn | Emergency Medicine | Prehospital care, CPR education, chest pain protocols in the ED, emergency ultrasonography, airway. |
| Sarosi, George | GI/Endocrine | Lab examines the role of reflux components as a growth signal in Barrett's esophagus and studies the signaling mechanisms activated by bile salts in Barrett's esophagus. In addition, we are interested in elucidating the role of stem cells in the origin of Barrett's esophagus. |
| Scott, Daniel | Minimally Invasive Surgery | Dr. Scott's research focuses on the development of new curricula, validation of new curricula (often in terms of transferability to a real operation, human or animal lab), improvement of training methods, development of strategies to improve skill maintenance, methods for assessment of operative performance, and methods for verifying proficiency. |
| Shahid, Shafi | BTCC | Trauma Systems and Outcomes Research, Injury Prevention. |
| Shaul, Philip | Pediatrics | Studies in Shaul's laboratory have indicated that the endothelial isoform of NOS (eNOS) is expressed in a cell-specific manner in vascular endothelium and airway epithelium. |
| Stull, James | Physiology | The research in his laboratory addresses two general aspects of actin cytoskeleton regulation: acute and chronic adaptive. |
| Thomas, James | Pediatric | The Thomas lab has genetically inactivated IRAK in mice and characterized the defects in host responses to numerous pathogens at the biochemical, cellular and in vivo levels. |
| Yin, Helen | Physiology | The Yin lab has several major research interests: (1) PIP2 regulation cellular functions, (2) Phosphoinositide regulation of Golgi functions, (3) The effect of burn trauma on phosphoinositide homeostasis and the rationale design of therapeutic targets to decrease the morbidity and mortality associated with burn and burn/sepsis. |