

Individual faculty members can be contacted by email or through their office numbers.

PHYSICIAN NAME	RESEARCH PROJECTS FOR RESIDENTS
ADAMS & BAUER	Accuracy of EUS in predicting malignancy in cystic lesions of the pancreas
ADAMS & BAUER	Change in frequency and indications for left-sided pancreatectomy
ADAMS & BAUER	Series of lymphoepithelial cysts of the pancreas
ADAMS & BAUER	Multiple different case reports in pancreatic surgery
ADAMS & BAUER	Outcomes and importance of margin status following resection for non-colorectal, non-neuroendocrine liver metastases
ADAMS & BAUER	Recurrence pattern and survival following resection of HCC in patients without cirrhosis or viral hepatitis
ADAMS & BAUER	Infectious complications after liver resection (NSQIP database)
ADAMS & BAUER	Multiple different case reports in liver surgery
AILAWADI, Gorav	Outcomes and Cost of Cardiac Surgery in Octogenarians
AILAWADI, Gorav	Influence of Urgent and Emergent Status on Mitral Valve Operations
AILAWADI, Gorav	Influence of Duration of Preoperative Antibiotic Therapy in Valve Surgery for Endocarditis
AILAWADI, Gorav	Influence of Operative Volume on Reoperative Cardiac Operations
AILAWADI, Gorav	Influence of Preoperative Glycemic Control in Cardiac Operations
AILAWADI, Gorav	Outcomes of Off pump Coronary Artery Bypass Grafting (CABG) operations
AILAWADI, Gorav	Influence of Coronary Endarterectomy on Coronary Artery Bypass Grafting (CABG) operations
AILAWADI, Gorav	Outcomes and Fate of Aortic Root in Ascending Aortic Aneurysm Replacements
AILAWADI, Gorav	Quantitative analysis via quantitative-PCR of chemokines, metalloproteinases, and smooth muscle cell marker gene expression in human aortic aneurysm samples compared to control aortic tissue. The goal is to determine the underlying pathogenesis of human aortic aneurysms
AILAWADI, Gorav	Develop novel treatment strategies for small aortic aneurysms: Once aortic aneurysms are greater than 5cm, they are treated by open surgery or endovascular repair. However, smaller aneurysms are managed conservatively till they warrant intervention. Biodegradable treatment options are ideal for the treatment of aortic aneurysms. Nano-particles and scaffolds are utilized as a novel treatment strategy for small aortic aneurysms.
AILAWADI, Gorav	Evaluate the role of adenosine receptors in aortic aneurysm formation: The evolution and progression of aortic aneurysms is due to matrix metalloproteinases, inflammation and oxidative stress. The role of the adenosine receptor in the inflammatory cascade remains unclear. The murine elastase aortic aneurysm model offers an ideal vehicle to evaluate, define, and characterize

	the adenosine receptors and their role in the pathogenesis of aortic aneurysms.
AILAWADI, Gorav	Phenotypic modulation in AAA progression. Preliminary results have indicated that SMC phenotype is altered in both human AAAs and experimental models and occurs in concert with increases several known repressors of SMC phenotype. We are currently exploring the functional role of several of these effector molecules using conditional and SMC targeted KO in murine models.
BAUER, Todd W.	One or two year laboratory research fellowship: Multiple projects are on-going: 1) Role of growth factor receptor and adhesion signaling in human pancreatic cancer cell migration, invasion, intravasation and metastasis, 2) Development of personalized targeted therapy for pancreatic cancer, 3) Development of novel plectin-1-based early detection technique for pancreatic cancer. (Experience will be broad-based opportunity to learn protein techniques, cell signaling, and in vitro assays of migration and invasion, as well as an orthotopic model of human pancreatic cancer.)
BRAYMAN, Kenneth L	The Brayman lab is dedicated to improving the outcomes of pancreatic islet transplantation. With the first cGMP clean room facility on campus, residents can get experience with the requirements of good manufacturing practices and cellular isolation. Residents can also participate in IND preparations as this new program becomes better established.
BRAYMAN, Kenneth L	Finding alternatives sources of pancreatic islets. One project involves the culture of adult fat stem cells, optimizing conditions for formation of insulin producing cells. Another source could be pancreatic ductal cells encouraged to produce new insulin producing islets clusters.
BRAYMAN, Kenneth L	Improving the survivability of transplanted islet cells. Several compounds are being used to reduce inflammation, induce tolerance to transplanted cells and/or reduce toxic immunosuppression.
BRAYMAN, Kenneth L	The role of short course antithymocyte globulin induction in renal transplantation
BRAYMAN, Kenneth L	The use of Hepatitis C positive allografts to expand the donor pool for renal transplantation
BRAYMAN, Kenneth L	Improving elderly ESRD treatment and predictive model development
BRAYMAN, Kenneth L	This project will evaluate the effects of graft site preconditioning by PLGA biomatrices on islet engraftment. We have already begun to develop the antiinflammatory drug-containing PLGA scaffolds using nanofiber electrospinning technology for use in islet cell transplantation strategies as well as protocols that will permit in situ imaging of vascular remodeling events that are critical to islet function and survival. Experiments include transplanting islet-seeded biomatrices at different transplant sites in diabetic mice using a minimal islet model and assessing recipient glycemic state, graft neovascularization, apoptosis, and graft viability and function.

BRENIN, David R.	Protein content of ductal lavage and nipple aspiration fluid determined by proteomic analysis: Identification of new biomarkers for breast cancer and breast cancer risk screening and assessment.
BRENIN, David R.	Impact of 6month mammography interval for the first two years post-op in breast cancer patients who have undergone breast conserving surgery.
BRENIN, David R.	Phase I breast cancer tumor vaccine trial.
BRENIN, David R.	Impact of decision making tools on patient stress related to choices between breast cancer treatment options
HARTHUN, Nancy	Vascular surgery research: Most of the work I do is looking at large databases to answer questions related to outcomes. Most recently, I have examined outcomes related to carotid endarterectomy, endovascular AAA repair and renal artery revascularization. These projects are nice because the data is already collected and just needs to be analyzed and written up. Most of these analyses are ready for presentation at regional/national meetings and eventual publication.
HARTHUN, Nancy	Clinical series of minimally invasive treatment of splenic artery aneurysm. This is just sitting on my desk waiting to be written up.
HARTHUN, Nancy	Resident communication through sign-out
HARTHUN, Nancy	Changes caused by the 80 hour work week (survey to be filled out by the residents' spouse/cohabitant)
HARTHUN, Nancy	Outcomes of venous interventions.
KERN, John	Thoracic outlet syndrome: what is the optimal treatment paradigm for venous TOS
KERN, John	Thoracic aortic stent grafts and their use to treat aortic dissections
KERN, John	Minimally invasive vein harvesting for the use in peripheral bypass surgery and how outcomes compare to angioplasty and stenting
KERN, John	The use of closed suction drains in vascular surgery
KERN, John	Outcomes after LVAD surgery
KERN, John	The utility of CT scanning prior to re-do heart surgery
MCGAHREN, Eugene	Spontaneous intestinal perforation in extreme premature babies. Examining outcomes of treatment-particularly assessing results from peritoneal drainage and laparotomy. Subtopics include but are not limited to neurologic outcomes, instances of bacterial or fungal sepsis, intestinal/nutritional outcomes as they relate to treatment choices and courses. There is the potential for multiple papers and for collaboration with NICU colleagues as well. See references: Rovin, J.D., Rodgers, B.M., Burns, R.C., McGahren, E.D. The role of peritoneal drainage for intestinal perforation in infants with and without necrotizing enterocolitis. J Pediatr Surg 34(1):143-146, 1999. - Attridge, J.T., Herman, A.C., Gurka, M.J., Griffin, M.P., McGahren, E.D., Gordon PV. Discharge outcomes of extremely low birth weight infants with spontaneous intestinal perforations. Journal of Perinatology 26: 49-54, 2006.

MCGAHREN, Eugene	Update our experience/outcomes of babies with congenital diaphragmatic hernia. See references: Mallik, K., Rodgers, B.M., McGahren, E.D. Congenital diaphragmatic hernia: Experience in a single institution. Ann Thor Surg 60:1331-1336, 1995. - McGahren, E.D., Mallik, K., Rodgers, B.M. Neurologic outcome is diminished in survivors of congenital diaphragmatic hernia requiring extracorporeal membrane oxygenation. J Pediatr Surg 32:1216-1220, 1997.
MCGAHREN, Eugene	Investigate outcomes in trauma management in pediatric population.
MCGAHREN, Eugene	There are a variety of case reports or small series that would be possible using pediatric surgical patients.
RODGERS, Bradley	Long Term Outcome of Infants Undergoing Repair of TEF Anomalies – Uva has an uncommonly stable patient population and the majority of the patients on whom we have performed correction in the past 30 years have had at least 15-20 year follow-up in our clinics. This provides an unusually rich database to look at long-term complications.
RODGERS, Bradley	Intermediate Outcomes in Children Undergoing Thoracoscopic Debridement for Empyema - We were the first Pediatric Surgeons in the United States to begin treating children with Empyema with the thoracoscope and published our first report of our experience with this technique in 1993 (J Pediatr Surg 28:1128, 1993). We have acquired a large experience with this technique over the years and this experience should be updated. In addition, the potential for a prospective, randomized trial of the use of Tpa in these patients might help to solve the uncertainty of the efficacy of this expensive therapy for Empyema in children.
RODGERS, Bradley	Airway Endoscopy in the Neonate - There is very little literature on the indications and safety of airway endoscopy (especially rigid bronchoscopy) in the small neonate. We have a large experience with these procedures which would suggest that it is safe and efficacious. A review of the clinical indications and results of these procedures would provide considerable contemporary information.
SAWYER, Robert G.	Does it really matter what antibiotic you receive for intraabdominal infection?
SAWYER, Robert G.	Experience with 1000+ bloodstream infections in surgical patients
SAWYER, Robert G.	What is the site-specific mortality for infections in the SICU?
SAWYER, Robert G.	Changes in flora based on cycling in the SICU
SCHIRMER, Bruce D.	Review of our experience of lap versus open ventral hernia repairs
SCHENK, W. G.	Long-term patency of dialysis fistulas
SCHENK, W. G.	Impact of type of anesthesia on hemodialysis access options
SCHENK, W. G.	Clinical trials of several hemostatic agents
SCHIRMER, Bruce D.	Write up our experience with bowel obstruction after gastric bypass.
SCHIRMER, Bruce D.	Review our experience with open and laparoscopic ventral hernia repairs.

SCHIRMER, Bruce D.	Prospective randomized trial using vagotomy vs no vagotomy as an adjunct to laparoscopic gastric bypass.
SCHROEN, Anneke T.	Oncology Clinical Trial Accrual Study - Large study examining clinical trial accrual in the national oncology cooperative group setting with objectives to determine predictors of poor accrual. Resident could carve out subset of study.
SCHROEN, Anneke T.	I have experience in physician surveys and secondary data analysis of large datasets. If a resident had an idea of his/her own using either of these methodologies, I'd be happy to help mentor.
SCHROEN, Anneke T.	Barriers to clinical trial participation in Appalachian Southwestern Virginia. Resident would assist in development and conduct of a survey identifying specific patient and physician barriers to trial participation
SLINGLUFF, Craig	Melanoma vaccines. We have administered experimental melanoma vaccines to about 600 patients on about 10 clinical trials and have a wealth of data available on clinical outcome (10 year followup) and on immune response. Available projects include evaluation of the impact of clinical and laboratory factors on immune response and clinical outcome with vaccines. Extensive specialized databases are available.
SLINGLUFF, Craig	Melanoma immunobiology. We are studying molecular and cellular features of the tumor microenvironment and their role in immune escape and immune destruction, with a particular focus on factors controlling T cell infiltration of tumors and their impact on clinical outcome. A resource includes a large bank of melanoma tissues and a 200-sample melanoma tissue microarray. Collaboration/interaction with pathologists is integral to this work.
SLINGLUFF, Craig	Mechanisms of immune adjuvants in vaccine function. This project evaluates how vaccines affect immune function and will define new optimal ways to induce T cell immune responses to cancer antigens. This work has implications broadly for vaccine development.
SLINGLUFF, Craig	New technology development for melanoma screening - Dermagram – rapid acquisition total body photography for melanoma screening. In collaboration with Scott Acton (Engineering), David Chen (biomedical engineering), and Lynn Dengel (surgery).
SLINGLUFF, Craig	New technology development for detection of sentinel nodes – mobile gamma camera, and new camera development for multiparameter imaging of sentinel nodes. In collaboration with Mark Williams (Radiology), and Lynn Dengel.
SLINGLUFF, Craig	Device development – new instrument for laparoscopic cholecystectomy/appy, and other ideas for new devices for use in surgical practice (new area of research)
SLINGLUFF, Craig	Effect of targeted molecular therapies on immune response to melanoma; preclinical studies on developing combination therapies for melanoma
SLINGLUFF, Craig	Autocrine and paracrine growth factors as mediators of metastatic melanoma progression, and their inhibition with antibodies and small molecule inhibitors.

SLINGLUFF, Craig	Outcomes in melanoma: numerous questions evaluable using a database of about 2000 melanoma patients over 16 years.
SLINGLUFF, Craig	Translational research training. The overarching goal of a two-year research fellowship in my laboratory is to learn an array of skills related to melanoma management, ranging from laboratory studies to clinical trials and outcomes studies. This includes learning about writing clinical trial protocols and grants, and IRB and FDA submissions.
TURRENTINE, Beth E.	The American College of Surgeon's National Surgical Quality Improvement Program. Trained Surgical Nurse Reviewers collect numerous preoperative, intraoperative and postoperative variables for adult general surgery, vascular and thoracic populations. Data has been collected from 2/02 through present and we have several complete datasets that would be excellent resources for a variety of projects.
YOUNG, Jeffrey S.	Medical Decision Making in Residents and Students: We examine the process of medical decision making in my laboratory. Students and residents are given simulated acute and critical care cases and asked to proceed through the cases as if they were caring for the patient. The transcripts are scored and analyzed. We are investigating methods to: 1) improve the cognitive performance of residents and students in clinical situations, 2) decrease the time needed to reach a level of competence in acute and critical care medicine, and 3) design educational processes and tools to improve performance in the care of patients. There is a great opportunity to: design cases to improve performance and replicate interesting clinical situations, become involved in medical education research, and improve their own clinical skills through the research projects.