

**Student Abstracts**  
**Fall 2011 Research Training Symposium**

Akhtar, Usman. Mentor: David Limbrick, MD, PhD. Neurosurgical treatment of refractory post-traumatic epilepsy in children

Annor, Afua H. Mentor: Corey R. Deeken, PhD. Effect of enzymatic degradation on the mechanical properties of biologic scaffold materials

Askin, Elisabeth. Mentor: William Peck, MD. The Askin-Moore Guide to the US health care system

Atkins, Jordan. Mentor: Julie A. Margenthaler, MD. Assessment of imaging modalities in the prediction of response to neoadjuvant chemotherapy in patients with triple negative breast cancer

Baker, Alexandra H. Mentor: David Haslam, MD. The role of MK2 in response to *Clostridium difficile* infection

Bery, Amit. Mentor: Susan Mackinnon, MD. Injury related to extrafascicular and intrafascicular injection of three local anesthetics (1% lidocaine, 0.5% bupivacaine, and 0.5% ropivacaine) into the rat sciatic nerve model

Betti, Francesca. Mentors: Joshua Shimony, MD, PhD; Joel Garbow, PhD. Joint estimation of AIF and perfusion parameters from dynamic susceptibility contrast MRI in mouse gliomas and comparison to tumor histopathology

Beyer, Alexander. Mentors: Haemish Crawford, MD; Matthew Dobbs, MD. Multifocal osteomyelitis in pediatric patients in New Zealand

Bokshan, Steven. Mentor: William Chapman, MD. Investigation of the utility of three-dimensional intraoperative navigation during hepatic resection: A data registry design

Broersma, Brittanie. Mentor: Scott Silvestry, MD. The role of body morphology in the occurrence of driveline infections in LVAD patients

Charshafian, Stephanie. Mentor: Christopher Holthaus, MD. Stroke volume changes in ED patients with shock undergoing serial passive leg raising and fluid challenges

Chen, Athena L. Mentor: Timothy E. Hullar, MD. Audio-vestibular temporal binding window in healthy, elderly subjects

Chen, Chris. Mentors: William Peck, MD; Cindy Chen. The impact of biosimilar drugs on access, cost, and innovation in the European Union

Chen, Jacqueline. Mentor: Neill Wright, MD. Evaluation of dizziness in cervical spine patients

Chen, Lu. Mentor: Kerry Kornfeld, MD, PhD. Population dynamics of *C. elegans*

Chen, Sara. Mentor: Katherine Weilbaecher, MD. Role of Smoothed inhibitors on osteoclast activity in bone metastasis

Chiang, Leslie Y. Mentor: Timothy E. Hullar, MD. Audio-vestibular temporal binding window in healthy, young subjects

Chu, Jennifer. Mentor: Ryan Calfee, MD. The impact of comorbidities and thumb osteoarthritis on patient rated hand function

Cooks, Tammi. Mentors: Aimee James, Ph.D; Kristen Massey, MPH, CHES; Graham Colditz, MD, DrPH. Routes to care: Mapping out colorectal cancer care for un/under-insured in St. Louis

Cortez, Sarah. Mentor: Alison G. Cahill, MD, MSCI. Why Wait: The effect of passive descent on length of second stage labor and maternal and neonatal outcomes.

DeSanto, Cori. Mentors: Nikkilina R. Crouch, PhD; David H. Gutmann, MD, PhD. Differential activation and composition of the mTOR complex in *Nf1*, *Pten*, and *Tsc1*-deficient astrocytes

Donaldson, Sarah E. J. Mentors: Neal S. Young, MD; Allison King, MD. Serum sickness in the treatment of severe aplastic anemia with horse or rabbit antithymocyte globulin

Dornfeld, Jarrod. Mentors: Tom Wileman, PhD; Barry Sleckman, MD, PhD. Murine gut organoid culture and examination of autophagy in mouse fibroblasts

Dvoracek, Lucas. Mentor: Jianxin Bao, PhD. A method for analyzing the spatial distribution of ribbon synapses in cochlear hair cells

Ebersole, Gregory C. Mentor: Corey R. Deeken, PhD. Development of novel electrospun absorbable polycaprolactone (PCL) scaffolds for hernia repair applications

Escallier, Krisztina. Mentor: Sharon Cresci, MD. Understanding phenotypic variability in hypertrophic cardiomyopathy

Feng, Daniel. Mentor: Christopher Carpenter, MD, MSc. Validity of the triage risk screening tool (TRST) and identification of seniors at risk (ISAR) instrument as predictors for mortality, ED revisit, hospital readmission, nursing home admission, and functional decline in geriatric ED patients

Fjeldstad, Heidi E. Mentors: Leiv Ose, MD; Anne C Goldberg, MD, FACP. 10-year follow-up of adolescents with familial hypercholesterolemia following participation in statin trials

Fohtung, Bamvi Raymond. Mentor: Brent D. Matthews, MD. Pre-operative predictors and post-operative outcomes in laparoscopic converted to open ventral hernia repair

Fritz, Bradley A. Mentor: Michael Avidan, MD. Recovery in the post-anesthesia care unit (PACU) in the BAG-RECALL and B-Unaware randomized control trials

Gammon, Harrison. Mentor: Anjali Bhorade, MD. On-road driving performance of visually impaired glaucoma patients

Gershuni, Victoria, MS. Mentor: L. Michael Brunt, MD. Improving senior medical student suturing and knot tying skills through proficiency-based training

Greenberg, Jacob K. Mentor: Gregory J. Zipfel, MD. The role of endogenous protection against subarachnoid hemorrhage

Harris, David C. Mentor: Rick W. Wright, MD. Radiographic analysis of revision ACL reconstruction

Hartzell, Georgina. Mentor: Kathleen Wolin, ScD. Physical activity and gastric cancer risk: A meta-analysis

He, Yizheng. Mentors: David Van Essen, PhD; Matthew Glasser. Construction and registration of post-mortem macaque brain's white-matter surface

Henke, Lauren. Mentor: Perry Grigsby, MD. Clinical and clinicopathological outcomes of papillary thyroid carcinoma in relation to the presence of the BRAF V600E mutation

Hoerter, Nicholas. Mentors: Joel Perlmutter, MD; Meghan Campbell, PhD; Samer Tabbal, MD. Correspondence of microelectrode recordings and fiducial-based atlas registration for localization of deep brain stimulation contacts in the subthalamic nucleus

Hong, Charles R. Mentor: Dennis Hallahan, MD. *In vivo* optical imaging of antibodies to radiation inducible antigens on tumors

Humbert, Matthew. Mentor: Mark Manary, MD. Observational study of stool bacterial populations in children at risk for malnutrition

Jacobsen, Kyle. Mentor: Varun Puri, MD. Hiatal hernia repair with or without esophageal lengthening: Is there a difference?

Jin, Linda. Mentors: Kristin Chrouser MD; David Clifford, MD. Male circumcision campaign in Iringa, Tanzania: Matching demand, quality and efficiency in a high volume setting

Joshi, Neel. Mentors: Jason D Weber PhD; Michael J Kuchenreuthe. Differences in miRNA expression across varying grades of gliomas

Judd, Andrew W. Mentor: Scott C. Silvestry, MD. Effect of anticoagulation status on stroke in patients with continuous flow implantable left ventricular assist devices

Juengel, Braden N. Mentor: John C. Morris, MD. CDR 0.5/uncertain as a distinct diagnostic group

Jupitz, Jennifer. Mentors: Michael P. Kelly, MD; Lawrence G. Lenke, MD. Assessment of outcomes following revision surgery in pediatric spinal deformity patients

Kim, Aram. Mentors: Tae-il Kim, MD, PhD; Steven Edmundowicz, MD. The effect of Metformin on the recurrence of polyps after colorectal polypectomy in DM patients

Kim, David H. Mentors: Gregory Zipfel, MD; Henry Han, PhD. Characterization of phenoxazine derivatives for cerebral amyloid angiopathy imaging

Kim, Jenna M. Mentor: Anjali Bhorade, MD. On-road driving performance of visually impaired glaucoma patients compared to normal control participants

Klemisch, Rob. Mentor: Daniel Theodoro, MD. Comparing emergency medicine practices for central venous catheter placement to existing ICU checklists

Kyllo, Rachel. Mentor: Sam Bhayani, MD. Multi-center intermediate-term oncologic outcomes of robot assisted partial nephrectomy for pT1 renal cell cancer

Laurido-Soto, Osvaldo J. Mentors: Daniel A. Hunter, RA; Philip Johnson, PhD; Susan E. Mackinnon, MD. Evaluation of nerve injection injury with 3 common anesthetics using quantitative histomorphometry

Letvin, Adam. Mentor: Stephen Kornfeld, MD, PhD. Inducing delayed reproductive senescence with small molecules

Li, Sophia. Mentor: Christopher Carpenter, MD, MSc. Validity of the triage risk screening tool (TRST) and identification of seniors at risk (ISAR) instrument as predictors for mortality, ED revisit, hospital readmission, nursing home admission, and functional decline in geriatric ED patients

Liu, Lucy. Mentor: Timothy Miller, MD, PhD. Half-life of human SOD1

Marshall, Brigid. Mentors: William Checkley, MD, PhD; Douglas Berg, PhD. Validation of non-invasive hemoglobin measurement at high altitude in Puno, Peru

McAllister, Jared. Mentors: Jeffrey Leonard, MD; Devon Haydon, MD. Clinical importance of nucleolin in pediatric astrocytoma patients

McGuiness, Phillip A. Mentor: Mark J. Manary, MD. Correlation in mid-upper arm circumference and change in weight-for-height z-score among children treated for moderate acute malnutrition in Malawi

McNair, Paul. Mentor: Michael Avidan, MD. Anesthetic management of patients with natural red hair

Mityul, Marina. Mentor: Tammie Benzinger, MD, PhD. Biomarkers of pre-clinical Alzheimer's disease using MRI and PET

Morris, Hallie. Mentors: Kevin Baszis, MD; Andrew White, MD. Drug regimen and outcomes in juvenile dermatomyositis

Nojan, Miriam. Mentors: Reza Jarrahy; Gregory Polites, MD. Negative pressure wound therapy in the management of open tibia fractures necessitating flap reconstruction

Orth, Heather N. Mentors: William Checkley, MD, PhD; Cynthia Wichelman, MD. Using the 6 minute walk test to investigate chronic mountain sickness severity in Puno, Peru

Ostendorf, Katelyn. Mentor: Mark Manary, MD. Comparing milk fortified corn/soy blend, soy/peanut fortified spread, and supplementary plumpy® in the treatment of moderate acute malnutrition in rural Malawian children. Long term follow up of children treated for moderate acute malnutrition in Malawi

Padhye, Leena V. Mentors: Gregory P. Van Stavern, MD; Aseem Sharma, MD. Correlation of visual parameters and papilledema neuroimaging features, and the reversibility of papilledema neuroimaging features

Perez, Philip. Mentor: Jianxin Bao, PhD. The aging inner ear: a role for glucocorticoid receptors and related enzymes

Perlin, Lauren. Mentors: Karen Mestan, MD; Jennifer Cole, MD. Determinants of early childhood obesity/overweight in preterm infants with bronchopulmonary dysplasia

Prendergast, Niall. Mentor: Timothy Graubert, MD. Regulatory effects of caspase-9 knockdown on a gene set Identified in AML-susceptible mouse strains

Pui, Chi Lun. Mentor: Corey R. Deeken, PhD. Effect of repetitive loading on the mechanical properties of biologic scaffold materials

Purusothaman, Vaishnavi. Mentors: Robyn S. Klein, MD, PhD; Lillian Cruz-Orengo, PhD. CXCL13 neutralization in relapsing and remitting experimental autoimmune encephalitis

Reinhardt, Samuel. Mentors: James McCarthy, MD; Cynthia Wichelman, MD. Characterization of the Strongyloides ratti excretory/secretory product

Rose, Alexander B. Mentor: Peter Lukasiewicz, PhD. Pattern ERG as an indicator of RGC loss in mouse glaucoma models

Rubins, David M. Mentor: Beau Ances, MD, PhD. Comparison of CSF lab values and functional connectivity as biomarkers for Alzheimer's disease

Salman, Rabia. Mentor: Milan Anadkat, MD. Clinical characteristics predictive of superinfection in patients with EGFR-inhibitor associated eruptions

Skala, Stephanie. Mentors: Gina M. Secura, PhD, MPH; Jeffrey F. Peipert, MD, PhD. Annual STI screening among young women enrolled in the Contraceptive CHOICE Project

Smith, Katherine H. Mentor: Tamara Hershey, PhD. Decreased microstructural integrity of white matter in children with PKU: a DTI study

Steinhorn, Rachel. Mentor: Terrie Inder, MD. The impact of morphine exposure in the preterm infant on brain development in childhood

Steinmetz, Allison. Mentor: Jason Weber, PhD. Functionalizing RNA helicases mutated in estrogen receptor positive breast cancer

Stoker, Geoffrey E. Mentor: Jacob Buchowski, MD. Intervertebral disc disease in vitamin D-deficient spine surgery patients

Strother, Marshall C. Mentor: James Duncan, MD, PhD. Radiation use during fluoroscopic procedures as a quality measure

Tang, Michael E. Mentor: Corey R. Deeken, PhD. Development of novel electrospun absorbable polycaprolactone (PCL) scaffolds for hernia repair applications

Thomas, Stephanie. Mentor: Kenneth Murphy, MD, PhD. Notch2 signaling regulates the development of a distinct subset of CD24- dendritic cells

Wong, Kristine. Mentor: Timothy Hullar, MD. Recalibration of auditory-vestibular simultaneity

Wright, Melissa A. Mentor: John A Curci, MD, FACS. Effect of lipid exposure on matrix metalloproteinase activity in AAA derived smooth muscle cells

Yang, Zao. Mentor: Traves Crabtree, MD. Comparison of patterns of recurrence of clinical stage 1 non small cell lung cancer treated with surgery versus stereotactic body radiation therapy

Yang, Lauren. Mentors: Sarah K Brown, MD; Barry Sleckman, MD, PhD. Characterization of anti-GM-CSF autoantibody associated cryptococcal meningitis

Yen, Peter. Mentor: Alexandre Carter, MD, PhD. Differences in inter-hemispheric functional brain connectivity among regions of the primary motor cortex

Yozamp, Nicholas. Mentor: Steven Brody, MD. Role of c-Myb in airway epithelial cell differentiation

Yuan, Kevin Z. Mentor: Paul Kotzbauer, MD, PhD. Regulatory effects of alpha-synuclein on long chain Acyl-CoA synthetases

Zhang, May. Mentors: Anne-Marie Wills, MD, MPH; Brad Racette, MD. Gastrointestinal malabsorption contributes to weight loss in amyotrophic lateral sclerosis

Zhao, Peter. Mentors: Gerald Dorn, MD; Casey Jowdy, PhD. *Drosophila melanogaster* as a model organism for studying mitochondrial fusion and cardiac function

Zieske, Lawrence. Mentor: Susan Mackinnon, MD. Evaluation of nerve injection injury