

**Student Abstracts**  
**Fall 2014 Research Training Symposium**

Adebayo, Moses. Mentor: Ian Dorward, MD. A detailed investigation of the role of the vestibular system in idiopathic scoliosis

Al-Khalil, Bilal. Mentor: Timothy Ley, MD. The patterns of DNA methylation and chromatin accessibility caused by the R882H mutation associated with AML

Altenhofen, Brannon. Mentor: Hiram Gay, MD. Does tonsillectomy offer any protection against HPV p16 positive cancers arising from the tonsils?

Aum, Diane. Mentor: Albert Kim, MD, PhD. Effects of NamPT inhibition on tumor initiating cells of Glioblastoma Multiforme

Bacorn, Colin. Mentor: Todd Druley, MD, PhD. Improving minimal residual disease detection by error-corrected sequencing

Badu, Asante. Mentor: Max Witzel, MD. A novel mutation in SWI/SNF complex as a potential candidate in severe congenital neutropenia

Bala, David. Mentor: Christopher Carpenter, MD. Reducing CMS-defined preventable readmissions: A comparative study of three geriatric friendly emergency department healthcare models

Beleckas, Casey. Mentor: David Gutmann, MD, PhD. Novel mouse models with unique NF1 germline mutations affect phenotype in a Ras-independent fashion

Ben Abdallah, Miriam. Mentor: Mark Manary, MD. Evaluating the effectiveness of a post-recovery intervention for pediatric moderate acute malnutrition

Bliss, Laura. Mentor: Indira Mysorekar, PhD. Cytological analysis of urinary biomarkers may be useful in distinguishing between bladder conditions

Bruck, Brent. Mentor: Gregory Zipfel, MD. Vascular Kir6.1-GOF mutations attenuate neurological deficits and vasospasm in subarachnoid hemorrhage

Burton, Lindsay. Mentor: Tessa Madden, MD, MPH. Frequencies of adverse events in teen LARC users

Chang, Jodie. Mentor: James Duncan, MD, PhD. Improving patient safety: Marginal return on investment

Cheng, Jenny Zhao. Mentor: Wendy Schaffer, MD, PhD. Cardiac stress testing is a poor prognostic indicator for outcomes in allogeneic hematopoietic stem cell transplantation

Chi, Tingying. Mentor: Corey Deeken, PhD. Biaxial analysis of synthetic scaffolds for hernia repair in 90-degree and 45-degree orientation

Chiu, Ami. Mentor: Jeffrey Peipert, MD, PhD. Prior use of DMPA and increased amenorrhea in the 3-6 months following LNG-IUS insertion

Coddington, Nathaniel. Mentor: Eric Leuthardt, MD. Phase-power coupling in complex partial neocortical seizures

Cole, Jordan. Mentor: Kelly Botteron, MD. Thickness of the anterior cingulate cortex in preschool-onset major depressive disorder and its relationship to emotional regulation skills

Cole, Lyndsey. Mentor: John Constantino, MD. Changes in reciprocal social behavior between 18 and 24 months

Corbin, Rachel. Mentors: Shengbo Fang, MBBS; Carolyn Sargent, PhD. Analysis of the cesarean section rate in Tunxi, Anhui, China

Cross, Kevin. Mentor: David Gutmann, MD, PhD. Met-RANTES exacerbates retinal pathology in a mouse model of NF1 optic pathway glioma

D'Amelio, Giuseppe. Mentor: Anne Glowinski, MD, MPE. Preliminary examination of M-CHAT performance in an English-speaking twin sample

Das, Jyotirmoy. Mentor: Kelly Botteron, MD. Diffusivity and anisotropy comparisons between amygdala subregions in health and depressed children

Demaree, Devyn. Mentor: Alison Cahill, MD, MSCI. Do neonatal outcomes after spontaneous versus indicated preterm birth differ?

Duong, Jennifer. Mentor: Robyn Klein, MD, PhD. M1 and M2 microglial activation in West Nile viral encephalitis

Fan, Jessica. Mentor: Kimberly Kaphingst, ScD. Predictors of intentional and unintentional medication nonadherence in patients with type 2 diabetes

Fernández Maldonado, Amarilys. Mentor: Rami Tadros, MD. A retrospective study on the effects of an elective or urgent indication on the outcomes of endovascular thoracic aortic aneurysm repair

Fuest, Stephen. Mentor: John DiPersio, MD, PhD. Novel bi-specific therapeutics in AML

Garrett, Tasha. Mentor: Varun Puri, MD. Importance of timing in surgical treatment of clinical stage I non-small cell lung cancer: A retrospective study

Gartland, Rachel. Mentor: David Rudnick, MD, PhD. Investigating the mechanisms that regulate liver regeneration

Ge, Tianjia. Mentor: Sanjiv Gambhir, MD, PhD. Toward real-time in vivo detection of circulating biomarkers: Antibody-gold nanoparticle conjugates for in vivo homogeneous immunoassays

Geisman, Taylor. Mentor: Steven Edmundowicz, MD. Efficacy of wide field endoscopic mucosal resection in the treatment of high grade dysplasia and intramucosal adenocarcinoma in patients with Barrett's Esophagus: Results from a tertiary care referral center

Gokhale, Arjun. Mentor: Joseph Gaut, MD, PhD. Investigation of MIOX as a potential biomarker for acute kidney injury

Guniganti, Ridhima. Mentor: Gregory Zipfel, MD. HSPG-mediated A $\beta$  uptake in rat vascular endothelial cells

Han, Rowland. Mentor: Luigi Maccotta, MD, PhD. Neuropsychological correlates of rsfMRI connectivity modulations in unilateral TLE

Hanson, Eric. Mentor: Shalini Shenoy, MD. Outcomes of stem cell transplantation using reduced intensity conditioning for non-malignant disorders

Harris, Kathryn. Mentor: Ari Cedars, MD. Care burden of patients with a single ventricle

Heningburg, Avory. Mentors: Steven Brandes, MD; Gerald Andriole, MD. Physician decision impact study of stone patients' nutritional intake

Holttum, Jessica. Mentor: Susan Collins, PhD. Extended-release naltrexone and harm-reduction counseling: Perception of treatment among chronically homeless patients with alcohol dependence

Howdeshell, Seth. Mentor: Angela Lumba-Brown, MD. Discrepancy between head CT and acute brain MRI following closed head injury in children: A case series

Hritz, Shannon. Mentor: Laura Parks, MD. Survey of the perceptions and knowledge of breastfeeding among adolescents and young adults in an urban setting

Huang, Lingling. Mentor: Daniel Kreisel, MD, PhD. IRF3 is dispensable in polyI:C-induced transcriptional activation of CXCL-2

Ibibebe, Abiye. Mentor: Laura Bierut, MD. A return of genetic ancestry results to a smoking population

Jacquez, Jordan. Mentor: Chyi-Song Hsieh, MD, PhD. Improving the stool collection process for microbiota research studies—a case study in patient enrollment

James, Michael. Mentor: John Clohisy, MD. A novel model for the induction of hip dysplasia in the developing murine hip

Khan, Taleef. Mentor: Lukas Zebala, MD. Long-term outcomes of transforaminal lumbar interbody fusion in spine surgery

Krishnan, Sangitha. Mentor: Joaquin Barnoya, MD, MPH. Newspaper advertising and consumer promotions of fast-food chain restaurants with delivery service in Guatemala

Kronen, Alyssa. Mentor: Graham Colditz, MD, DrPH. Identifying barriers to care and unmet needs of women with gestational diabetes through patient perspectives

Lange, Julia. Mentor: David Eisenberg, MD, MPH. Investigating outcomes of unplanned pregnancies in the CHOICE Project

Li, Kevin. Mentor: Denis Nam, MD. Patient reported metal allergies as a potential risk factor for poor outcomes in total joint arthroplasty

Liang, Zhe. Mentor: Michael Awad, MD, PhD. The effect of patient obesity on minimally invasive surgeon's muscle fatigue

Lin, Angela. Mentor: Christopher Carpenter, MD, MSc. Predicting one-month ED returns in undifferentiated geriatric patients: Derivation of a clinical decision rule

Linkugel, Andrew. Mentor: Amy Cyr, MD. Staging studies are of limited utility for newly diagnosed clinical stage I-II breast cancer

Liu, Carol. Mentor: Jennifer Wambach, MD, MS. The heritability of respiratory distress syndrome in late pre-term and term infants

Macneal, Kenneth. Mentor: Dan Goldberg, MD, PhD. Functional characterization and substrate identification of a metalloprotease required for the intra-erythrocytic growth of Plasmodium falciparum

Marinshaw, Jeffrey. Mentor: Shadmehr Demehri, MD, PhD. Characterizing the immune microenvironment along progression to skin cancer

Mehta, Nehali. Mentor: Rafael Galindo, MD, PhD. Neuroprotective role of nicotinamide mononucleotide adenylyl transferase 3 in a mouse model of term-equivalent birth asphyxia

Meyer, Melissa. Mentor: Emily Jungheim, MD, MSCI. BMI and cumulative live birth rates after IVF

Milman, Kelly. Mentor: Jeffrey Peipert, MD, PhD. Changes in insurance status in CHOICE Project participants

Moseley, Anna. Mentor: Garry Fathman, MD. Dysregulated Reg: New clues to the etiology of type 1 diabetes

Moseley, Emily. Mentor: Lawrence Lewis, MD. Preliminary analysis of insurance status and other factors as predictive characteristics of frequent utilization of emergency department services

Mulvey, Bernard. Mentor: Andrey Anokhin, PhD. Adolescent history of ADHD traits predicts ERP impairments in adulthood

Ochieng, Peter. Mentor: Corey Deeken, PhD. Novel scaffold development via electrospinning and 3-D printing

Oh, Moo. Mentor: Jie Zheng, PhD. Whole-heart cardiac perfusion imaging protocol using PET-MRI system for the diagnosis of coronary heart disease

Osborne, Ashley. Mentor: Charles Canter, MD. Variation in surveillance biopsy protocols for pediatric heart transplant recipients

Padovano, Alexander. Mentor: Ralph Dacey, MD. Transsphenoidal surgery instrument

Patel, Parth. Mentor: Deborah Rubin, MD. Understanding the mechanisms by which *tis7* and Hedgehog signaling interact to regulate crypt cell proliferation

Pizzorno, Galen. Mentor: Bradley Evanoff, MD, MPH. Worksite influences on obesogenic behaviors in low-wage workers

Porcelli, Bree. Mentor: Kimberly Johnson, PhD. Brain tumors and atopy in neurofibromatosis type 1

Rivera, Ana. Mentor: Mary Politi, PhD. Adapting a health literacy intervention for informed consent for cancer clinical trials and comparing it to usual care in a randomized experiment

Rogalski, Brandon. Mentor: Robert Brophy, MD. Descriptive epidemiology of surgical patients at the Orthopedic Outpatient Center - a retrospective review

Rosenberg, Elizabeth. Mentor: Albert Woo, MD. Lay assessment of deformity as related to facial asymmetry and scarring after post cleft lip repair

Roubakha, Mikhail. Mentor: Ian Dorward, MD. Determinants of costs and complications in long-segment spinal fusion procedures in adults

Schelble, Allison. Mentor: Michael Avidan, MBBCh. Assessment of preoperative falls

Schloemann, Derek. Mentor: Graham Colditz, MD, DrPH. Accelerated partial breast irradiation through brachytherapy for ductal carcinoma in situ: Observational study of influencing factors and risks of second breast tumors

Schoer, Morgan. Mentor: Abby Hollander, MD. Declining rate of clitoroplasty in females with CAH: a retrospective chart review

Scott-Wittenborn, Nicholas. Mentor: Christopher Holthaus, MD. Sepsis in the emergency department: an over looked diagnosis

Segura, Abraham "Abe". Mentor: David Clapham, MD, PhD. Carvacrol and hydroquinone reveal distinct but interacting desensitization mechanisms in TRPA1

Shen, Tony. Mentors: Susan Mackinnon, MD; Matthew Wood, PhD. Effect of nerve allografts supplemented with temporally controlled GDNF-expressing Schwann cells on functional recovery after peripheral nerve injury

Shen, Ching-Chieh. Mentors: Li-Ming Huang, MD, PhD; Chi-Song Hsieh, MD, PhD. Early Palivizumab treatment on cells infected with respiratory syncytial virus can reduce the adherence of *Streptococcus pneumoniae*

Standlee, Jordan. Mentor: John Morris, MD. Neurofibrillary burden is the neuropathological correlate of subjective cognitive decline

Sung, Abby. Mentor: F. Sessions Cole, MD. Cellular and secreted phospholipid profiles of A549 and differentiated human fetal alveolar type II cells

Taiwo, Rukayat. Mentor: Tom Wileman, PhD. Utilizing the CRISPR/Cas9 Genome Editing System to engineer silenced MEKK4 cell lines

Tanakit, Alisa. Mentor: Mark Manary, MD. Learning from the St. Louis Nutrition Project in Malawi summer of 2014

Tang, Mengxuan. Mentor: Randall Bateman, MD. Phenotypic variability in autosomal dominant Alzheimer's disease

Tang, Rosie (Diandian). Mentor: Michael Avidan, MBBCh. Assessment of preoperative falls

Tobias, Ethan. Mentor: Matthew Ellis, MB, Mchir, PhD. Characterizing the activity of estrogen-receptor alpha fusions found in endocrine therapy resistant estrogen-receptor positive breast cancer

Vakkalagadda, Chetan. Mentor: Graham Colditz, MD, DrPH. Integrating a health risk assessment mobile app into a federally qualified health center setting – a pilot project

Varman, Rahul. Mentor: Gregory Zipfel, MD. Impact of management options on development of delayed cerebral ischemia following treatment of aneurysmal subarachnoid hemorrhage

Vryhof, Nicholas. Mentor: Carla Siegfried, MD. Minimally invasive glaucoma surgery: Ab interno trabeculotomy vs. endoscopic cyclophotocoagulation

Wang, Robert. Mentor: Michael Awad, MD, PhD. The effect of patient obesity on minimally invasive surgeon's muscle fatigue

Weisel, Daniel. Mentor: Joaquin Barnoya, MD, MPH. Newspaper advertising and consumer promotions of fast food chain restaurants with delivery service in Guatemala

Wondmeneh, Sarah. Mentor: Robert Hayashi, MD. Knowledge and perceptions of infertility in adolescent female cancer survivors and parents

Wu, Francis. Mentor: Brian Nussenbaum, MD. Auditing adherence to pre-procedure checklists to preserve patient wellness

Xiao, Qi. Mentor: Michael Gross, PhD. New methodology of data analysis for fast photochemical oxidation of protein (FPOP)

Yang, Michael. Mentor: Alison Cahill, MD, MSCI. Does baseline change influence neonatal outcomes?

Yen, Debra. Mentor: Albert Woo, MD. Evaluation of direct surgical remodeling of frontal bossing in patients with sagittal synostosis

Yu, Lulu. Mentor: Graham Colditz, MD, DrPH. Predictors of medication adherence in diabetic patients

Zhang, Lily. Mentor: Randall Bateman, MD. Amyloid-beta stable-isotope labeling kinetics in iPSC-derived neurons

Zou, James. Mentor: Marco Colonna, MD. Generation of monoclonal antibodies against human IL-26, Pyhin1, and Reg3G

Zuckerman, Aaron. Mentor: Matthew Ciorba, MD. The probiotic LGG does not reduce tumor radiosensitivity in syngeneic tumor model