

Student Abstracts
Fall 2017 Research Training Symposium

Arrington, Brianna. Mentor: Michael Avidan, MD. Acute Postoperative Pain and Confusion in Patients with Obstructive Sleep Apnea

Austin, Curtis. Mentors: David Clifford, MD; Eugene Koon, MD. Characterizing Acute HIV Infection in High Risk Populations

Bai, Louisa. Mentor: Muhammad Masood, MD. Long term outcomes and predictors of mortality in patients after valve operations for infective endocarditis

Behlke, Lauren. Mentor: Cynthia Rogers, MD. Psychosocial Factors Affecting Obstetric Complications and Outcomes

Bhat, Trisha. Mentor: Carrie Coughlin, MD. Cutaneous Microbiome of Pediatric Solid Organ Transplant Recipients (POTRs)

Blachut, Basia. Mentor: Susan Murphy, MD. The Role of lncRNA MEG3 in Ovarian Cancer Development and Progression

Black, River. Mentor: Robert Figenshau, MD. Complications after Image Guided Renal Cryoablation

Brady, Brian. Mentor: Kerry Kornfeld, MD. The effect of aging on population dynamics in a computer simulation of *C. elegans*

Braun, Emma. Mentor: Camaryn Chrisman Robbins, MD. Whose advice matters most in post-partum birth control counseling?

Broughton, James. Mentor: Charles Goldfarb, MD. Proximal radioulnar synostosis following non-operatively treated radial neck fractures in children

Buckley, Elizabeth. Mentor: Michele Hacker, MD. Spontaneous Prematurity and the Epigenetics of the Cervix

Buse, Bradley. Mentor: Wilson Ray, MD. Application of dissolvable electronics in the setting of acute spinal cord injury

Chiang, I-Ling. Mentor: Thaddeus Stappenbeck, MD. IL-17-induced Tissue Plasminogen Activator Exhibits Protective Effects Against Inflammation in the Intestinal Tract

Chung, Michelle. Mentor: Peter Nagele, MD. Inhaled Nitrous Oxide for Treatment-Resistant Depression: Optimizing Dosing Strategies

Clark, Kevin. Mentor: Scott Luhmann, MD. Preoperative labs and pediatric spinal surgery outcomes

Cyr, Peppar. Mentor: Christopher Smyser, MD. Assessing the Predictive Value of Term-Equivalent Amygdala Connectivity on the Preterm Behavioral Phenotype at Five Years

Davies, McLean. Mentor: Wilson Ray, MD. Sensory feedback utilizing chronically implanted high-specificity regenerative electrodes

Dibble, Taylor. Mentor: Kristen Mueller, MD. Outcomes in patients presenting to the Emergency Department with Firearm Related Injuries

Douglas, Katherine. Mentors: Laura Iannotti, MD; William Waters, MD. Lulun Project II: follow-up study to egg intervention RCT among young children in Ecuador

Drubin, Casey. Mentor: Don Conrad, MD. Analysis of Transcriptome-Wide Tissue Sequence Data: Discovering New Oncogene and Tumor Suppressor Candidates

Eby, Noah. Mentor: David Gutmann, MD. The neuropsychological profiles of children with Neurofibromatosis Type 1 and their relationship to T2-hyperintensities

Fatima, Shahroz. Mentor: Alison Cahill, MD. Effects of nonsteroidal analgesics on post-partum blood pressures

Florea, Ioana. Mentor: Albert Kim, MD. Characterization and inhibition of NAMPT-E2F2-ID axis in glioblastoma

Fowler, Lucas. Mentor: Jeffrey Nepple, MD. Three-dimensional characterization of acetabular morphology in borderline acetabular dysplasia: variable deformity patterns

Furdock, Ryan. Mentor: Scott Luhmann, MD. Congenital Scoliosis Severity and its Association with Other Organ Defects

Gerull, William. Mentor: Ryan Calfee, MD. Utility of PROMIS in Predicting Increased Post-Operative Resource Use

Gerull, Katherine. Mentor: Jay Piccirillo, MD. OtoT32: Ecological Momentary Assessment of Personalized Tinnitus Experiences

Greaney, Samantha. Mentor: Aimee James, MD. Disparities in Breast Cancer Treatment and Care Among Women Treated at a Hospital in North St. Louis

Gross, James. Mentor: Eric Leuthardt, MD. Analysis of resting state fMRI use in predicting brain tumor patient outcomes

Guillaume, Georges. Mentor: Andria Ford, MD. Cerebral ischemic vulnerability and cognitive impairment in Sickle Cell trait

Gupte, Gaurang. Mentor: Lukas Zebala, MD. Reliability of the Neck Disability Index and the JOA Cervical Myelopathy Questionnaire in adult cervical radiculopathy and myelopathy patients when administered by telephone or via online format

Hamilton, Owen. Mentor: Ebony Carter, MD. Comparing early vs late screening of women with Gestational Diabetes (GDM)

Harrison, Nichelle. Mentor: Scott Luhmann, MD. Impact of Surgical Treatment of Scheuermann's Kyphosis on Pulmonary Function

He, Jimmy. Mentor: Mark Manary, MD. Use of supplementary food and measures to control inflammation in malnourished women to improve birth outcomes

Herbosa, Christina. Mentor: Amy Musiek, MD. Investigating the concordance of pathology and cell culture results of cutaneous lesions

Humes III, Hascal. Mentor: Deborah Rubin, MD. Role of Wnt Signaling in Myofibroblast Epimorphin's Effects on the Stem Cell Niche

Jensen, Leah. Mentor: Timothy Miller, MD. PEGylated anti-miR-218 antisense oligonucleotides as a therapeutic strategy in ALS

Jiang, Linda. Mentor: Richard Wahl. The Impact of Reconstruction and Delineation on the Repeatability of Radiomic Features in [¹⁸F]FDG-Avid Tumor on [¹⁸F]FDG-PET/CT and PET/MRI Studies

Kazarian, Gregory. Mentor: Robert Barrack, MD. Assessing surgeon and institution-based factors that impact implant alignment following total joint arthroplasty

Kesavan, Preethi. Mentors: Susan Mackinnon, MD; Matthew Wood, MD. The Effect of Elevated Notch Signaling in Schwann Cells on Nerve Regeneration

Kitchin, Spencer. Mentor: Kamlesh Patel, MD. Scalp blocks for craniosynostosis

Kuo, Jessica. Mentor: Rithwick Rajagopal, MD. Effects of same-day, automated screening for diabetic retinopathy using nonmydriatic fundus photography on patient compliance to ophthalmic referral and treatment

Lancaster, James. Mentors: Robert Brophy, MD; Matthew Smith, MD. Comparison of shoulder activity level in shoulder arthroplasty patients to health controls

Latimore, Charles. Mentor: Allison King, MD. Optimizing Essential Healthcare and Education Attainment for Adolescents and Young Adults with Sickle Cells Disease: A Qualitative Approach

Lee, Edward. Mentor: Timothy McBride, MD. Effect of internet access on utilization of and spending on healthcare services

Lui, Matthew. Mentors: Philip Payne, MD; David Gutmann, MD. Using PheWAS and GWAS methods to identify Neurofibromatosis type 1 clinical features

Lynn, Mitchell. Mentor: Katherine Weilbaeher, MD. Characterizing the spatiotemporal regulation of TGF- β and integrin B3 in Breast Cancer Bone Metastases

Mayer, Sarah. Mentor: Ana Maria Arbelaez, MD. Effects of Malnutrition on Brain Development

Mendoza, Joshua. Mentor: Joseph Bradley, MD. A prospective random study examining pain control after rigid laryngoscopy

Miller, Derek. Mentor: Nico Dosenbach, MD. Delineation of individual human motor circuits using resting state functional connectivity (RSFC) and task functional MRI (fMRI) scanning

Moon, Tyler. Mentor: Hong Cheng, MD. UltraSpine: Ultrasound-Enabled Minimally Invasive Disc Replacement

Munn, Kaylha. Mentor: Mark Manary, MD. Project Peanut Butter

Natarajan, Divya. Mentor: Rohit Pappu, MD. Toward rational design of Huntington's Disease therapeutics using profilin as a model of Huntingtin aggregation suppression via multivalent interactions

Nikitas, John. Mentor: Clifford Robinson, MD. SBRT in the Treatment of Synchronous and Metachronous Early Stage Lung Cancers

Nkemeh, Gabriel. Mentor: Jie Zheng, MD. Microstructure Change in Skeletal Muscle of Diabetes

Osula, Augustine. Mentor: Kelle Moley, MD. Long-term effects of Zika virus infection on the female reproductive tract

Park, Christine. Mentor: Martha Laurin Council, MD. Microcystic Adnexal Carcinoma: a 35-year retrospective case series at a single institution

Paturu, Mounica. Mentor: Albert Kim, MD. Engineering 3D in vitro microenvironments to examine stem-like cell state and therapeutic response in Glioblastoma Multiforme (GBM)

Peterson, Erin. Mentor: Kamlesh Patel, MD. Differences in cranial vault volume due to treatment modality in patients with deformational plagiocephaly

Phillips, Tarik. Mentor: David Spencer, MD. An approach in recognizing gene regulation through analysis of RNA sequencing data in AML

Pittman, Kelyn. Mentor: Varun Puri, MD. Natural History of the Indeterminate Pulmonary Nodule: A Single Institution Report SPIN (Solitary Pulmonary Indeterminate Nodule) Management

Plattner, Griffin. Mentor: Gary Silverman, MD. Characterization of a novel regulated cell death pathway

Pohl, Alexa. Mentor: John Constantino, MD. Do gender and visual social engagement (VSE) predict the trajectory of reciprocal social development in children with and without autism?

Prasad, Niyathi. Mentor: Devyani Hunt, MD. The Effect an Anti-Inflammatory Diet has on Pain and Inflammatory Biomarkers in Patients with Osteoarthritis of the Knee

Richardson, Ashley. Mentors: Michael Avidan, MD; Amrita Aranake, MD. Association between postoperative delirium and changes in quality of life

Rubin, Alexandra. Mentor: Hilary Reno, MD. Caring for transgender women living with HIV

Scannell, Madeline. Mentor: Patrick Dillon, MD. Retrospective review of the surgical management of ovarian neoplasms in girls and outcomes of sutured and sutureless gastroschisis closure: a multi-institutional retrospective review

Schlaepfer, Charles. Mentor: Kristen Mueller, MD. Outcomes in patients presenting to the Emergency Department with firearm related injuries

Schroeder, Anna. Mentor: Kory Lavine, MD. Resident macrophage subsets orchestrate inflammatory responses following myocardial ischemia

Shivakumar, Nishkala. Mentors: Melanie Meister, MD; Jerry Lowder, MD. Characterization of pelvic floor and obturator internus myofascial pain and its role in pelvic floor symptoms: systematic review and metaanalysis

Silverman, Richard. Mentor: Regis O'Keefe, MD. Mechanism of chondrocyte death in osteoarthritis (OA)

Simmerman, Andrew. Mentor: Timothy Ley, MD. The role of DNA hypomethylation in AML Mediated by DNMT3A mutations

Stokes, Carl. Mentor: Babak Razani, MD. p62 effects on autophagy

Strong, Avery. Mentor: Milan G. Chheda, MD. Synthetic Lethal Vulnerabilities in Isocitrate Dehydrogenase 1 mutant astrocytomas

Suggs, Julia. Mentor: Gregory Zipfel, MD. SIR1 and protection of Delayed Cerebral Ischemia

Tay, Shir. Mentor: Brad Warner, MD. Investigating the mechanism of body weight loss in enterocyte-specific Raptor null mice

Taylor, Amal. Mentor: Joseph Bradley, MD. A Systematic Review of the Treatment of Globus Pharyngeus

Thornton, Melissa. Mentor: Terrence Myckatyn, MD. A prospective trial to assess tumor: breast ratio and patient satisfaction in following lumpectomy versus mastectomy with reconstruction

Tin, Stephanie. Mentors: Joseph Rizzo, MD; Gregory Stavern, MD. Static Ocular Alignment vs. Dynamic Range of a Paretic Eye

Tompkins, William. Mentor: Robert Brophy, MD. Characterization and Comparison of Osteoarthritis Markers in Knee Synovial Fluid from Patients with Osteoarthritis and Patients with ACL Tears

Turpeau, Micah. Mentor: Laura Bierut, MD. African American Women: Breast Cancer Genetics

Tzeng, William. Mentor: Michael Avidan, MD. Obstructive sleep apnea and incidence of postoperative acute pain

Upadhyaya, Anand. Mentor: Timothy Ley, MD. Using Crispr/Cas9 to investigate redundancy between cold-shock-domain proteins MSY-4 and YBX-1 in hematopoiesis

Vannucci, Bianca. Mentor: Alison Snyder-Warwick, MD. The Role of Macrophages in Reinnervation at the Neuromuscular Junction

Veshkini, Michael. Mentor: Jay Piccirillo, MD. The Role of a Computer-Based Brain Training Program in Perception of Tinnitus

Vuong, Linh. Mentor: Gerald Brandacher, MD. Regulatory T cells as an immunomodulatory agent in vascularized composite allotransplantation

Wang, Jane. Mentor: Amy Moore, MD. The effect acellularized nerve allograft capping on pain after nerve transection

Wang, Danny. Mentors: Susan Mackinnon, MD; Matthew Wood, MD. Cell Migration Patterns Across a Cellular Nerve Allografts Using a Fibrin Gel and Growth Factor

Wasserman, Noah. Mentor: Richard Wahl, MD. Radiomics of immune checkpoint therapy

Watkins, Mariel. Mentor: Jay Piccirillo, MD. Steroid Nasal Irrigation for Flavor Evaluation and Detection (SNIFFED)

Wiafe, Stephanie. Mentor: Cynthia Rogers, MD. Perinatal Inflammation and Autism in Preterm Infants

Wong, Gregory. Mentors: Jeffrey Saver, MD; Jin-Moo Lee, MD. SWI-based examination of distal emboli in acute ischemic stroke

Xu, Ran. Mentor: Kelle Moley, MD. Testing the efficacy of autophagy inhibitors in impairing uterine decidualization and ovulation in mice - a novel contraceptive method

Yahanda, Alexander. Mentor: Michael Chicoine, MD. Surgical outcomes in low-grade gliomas with and without the use of intraoperative MRI

Yu, Laina. Mentor: Michael Avidan, MD. Effects of post-operative delirium on intermediate term cognition

Zhang, Felicia. Mentor: John Welch, MD. RXRA as a tumor suppressor and therapeutic target in MLL-AF9 leukemia

Zhong, Qiaonan. Mentor: Joel Perlmutter, MD. Differential responses to levodopa in the clinical diagnosis of parkinsonism

Zhou, Minerva. Mentor: Akash Kansagra, MD. Radiology.