University of Maryland School of Medicine
42nd Annual Medical Student Research Day

Preliminary Presentation Titles List

Oral Presentations
Time Block: 1:30-2:45 p.m.

Theme – Spinal and Neurobiology Research

- **Therapeutic drug-induced hypothermia in traumatic spinal cord injury**
  Presenters: Kevin Kim and Amrita Sarkar, Mentor: Dr. J. Marc Simard

- **Predictors of Increased Length of Stay After Spine Surgery for Thoracic and Lumbar Trauma**
  Presenter: Justin Kung, Mentors: Drs. Steven Ludwig and Jael Camacho

- **Early Predictors of spinal injury from near-shore aquatic trauma**
  Presenter: Tucker Lurie, Mentor: Dr. Quincy Tran

- **Gene expression correlates of Gulf War Illness in lateral amygdala**
  Presenter: Stephen Semick, Mentors: Drs. J. Marc Simard and Vladimir Gerzanich

- **Next Generation Sequencing and Clinicopathologic Analysis of 135 Pulmonary Invasive Mucinous Adenocarcinomas**
  Presenter: Sharon Amir, Mentor: Dr. Charles Rudin

Theme – Pediatric Epidemiology, Cardiovascular and Muscle Myopathy Research

- **Global Pediatric Burns: Epidemiology and Risk Factors (tentative title)**
  Presenter: Joseph Puthumana, Mentor: Dr. Yvonne Rasko

- **Playground safety and playground injuries that present to urban pediatric emergency departments**
  Presenter: Mary Melati, Mentor: Dr. Michael Tunik

- **Elucidating the role of GDF-15 in intramyocardial cell-based therapy for Hypoplastic Left Heart Syndrome**
  Presenter: Lauren Levy, Mentor: Dr. Sunjay Kaushal

- **Dynamic Regulation of sMyBP-C via Phosphorylation and Subsequent Effects on Myosin Binding**
  Presenter: Aishwarya Iyer, Mentor: Dr. Aikaterini Kontogianni-Konstantopoulos
• **Association of feeding patterns with intestinal barrier function in premature neonates**
  Presenter: Lisa Roskes, Mentors: Drs. Sripriya Sundararajan, Rose Viscardi, and Alexandre Medina de Jesus

**Theme – Cancer Research: Brain Tumors, Immunotherapy, Radiation Oncology**

• **How dexamethasone impacts glioblastoma immunotherapy and strategies to avoid steroid-induced T-cell suppression**
  Presenter: Huanwen Chen, Mentor: Dr. Mark Gilbert

• **Evaluating Neuro-QOL short form as a tool for detecting neurocognitive functional decline among patients who have undergone brain tumor radiotherapy**
  Presenter: Sung Choi, Mentors: Drs. Mark Mishra and Emily Kowalski

• **Identifying psychosocial, demographic, and economic disparities for cancer patients undergoing radiation therapy in an urban underserved population**
  Presenter: Dahlia Kronfli, Mentors: Drs. Melissa Vyfhuis and Pranshu Mohindra

• **Primary Tumor Clearance vs. Nodal Clearance as a Predictor of Oncologic Outcomes in Esophageal and Gastroesophageal Junction Malignancies**
  Presenter: Melanie Berger, Mentors: Drs. Jason Molitoris and Cristina DeCesaris

• **Dosimetric analyses in patients undergoing Total Body Irradiation (TBI)**
  Presenter: Philip Damron, Mentors: Drs. Pranshu Mohindra and Santanu Samanta

**Theme – Bioinformatics, Microbiome, Microbial Pathogenesis, Pharmacogenomics, Diabetes**

• **Characterizing the relationship between the vaginal microbiome, the metabolome, and adverse symptoms in women**
  Presenter: Madeline Alizadeh, Mentor: Dr. Jacques Ravel

• **Salmonella Outer Membrane Vesicle Lipid A Structure is Influenced by BamA and PagL**
  Presenter: Casey Hofstaedter, Mentor: Dr. Robert Ernst

• **Pharmacogenomics of GLP1 Receptor Agonists in Type 2 Diabetes**
  Presenter: Ashley Yuen, Mentors: Drs. Simeon Taylor and Amber Beitelshees

• **Comparison of Early Pregnancy Diabetes Screening Methods**
  Presenter: Lucille Martin, Mentor: Dr. Sarah Crimmins

• **Factors Influencing Women’s Perceptions of Shared Decision Making During Prenatal Care**
  Presenter: Sarah Vogel, Mentors: Drs. Sarah Crimmins and Jenifer Fahey
Theme – Surgery: Eye, Plastic, Pain Management

- *Structural changes after angle surgery compared to tube shunt placement in infants and children*
  Presenter: Jennifer Drechsler, Mentor: Dr. Janet Alexander

- *Identifying and Reducing Errors in Perioperative Anesthesia Medication Delivery: The Role of Technology*
  Presenter: Caroline Schlee, Mentor: Dr. Ken Catchpole

- *Academic Productivity Across Plastic Surgery Sub-specialty Fellows*
  Presenter: Katie McGlone, Mentors: Drs. Yvonne Rasko and LediBabari Ngaage

- *Longevity of Outcomes Following Reduction Mammoplasty*
  Presenter: Carly Rosen, Mentors: Drs. Yvonne Rasko and Millie Ngaage

- *Post-Transplant Hernia: What are the Risks?*
  Presenter: Brooks Knighton, Mentors: Drs. Yvonne Rasko and Millie Ngaage

Poster Presentations
Time Block: 2:55-3:55 p.m.

Theme – Brain Research: Epilepsy, Neuroinflammation, Stroke

- *Expanding Access to Medication Assisted Treatment for Opioid Use Disorder via Telemedicine in Rural Maryland*
  Presenter: Alexandra Berthiaume, Mentor: Dr. Eric Weintraub

- *Implementation of Epilepsy Guidelines for Mood Screening Utilizing the EMR*
  Presenter: Jonathan Popham, Mentor: Dr. Jennifer Hopp

- *Evaluating peri-ictal changes in mood in patients with epileptic seizures*
  Presenter: Cristiana Salvatori, Mentor: Dr. Jennifer Hopp

- *The Effect of Glibenclamide on Macrophage and Microglia Internalization of & Graphics Group Hemoglobin in Intracerebral Hemorrhage*
  Presenter: Serban Negoita, Mentor: Dr. Marc Simard

- *The clinical role of corticosteroids on pain after subarachnoid hemorrhage*
  Presenter: Arshom Foroutan, Mentor: Dr. Matthew Jaffa
• **Hemorrhagic Progression of Contusion after Decompressive Craniectomy: A Retrospective, Propensity-Score Matched Study**
  Presenter: Stephen Semick, Mentors: Drs. J. Marc Simard and Matthew Kole

• **ABCC8 Polymorphisms and Cerebral Edema in Non-Lacunar Stroke**
  Presenter: Arlinda Deng, Mentor: Dr. Steven Kittner

• **Obesity Phenotype among African American and White Breast Cancer Survivors: Exploring Differences by Tumor Characteristics and Treatment Type**
  Presenter: Rohan Singh, Mentors: Drs. Cher Dallal, Katherine Tkaczuk, and Paula Rosenblatt

**Theme – Cancer Research: Prostate, Breast, Radiation Oncology, Gastrointestinal, Lung, Facial**

• **Pyruvate in prostate cancer leads to increased activation of mitochondrial enzymes mTOR and AMPK**
  Presenter: Aidan Kennedy, Mentor: Dr. Mohummad Siddiqui

• **MRI and Ultrasound Characterization of Prostate Anatomic Features to Optimize Targeted Biopsy Prostate Cancer Detection**
  Presenter: Alexa Van Besien, Mentor: Dr. Minhaj Siddiqui

• **Pyruvate and androgens regulate mitochondrial metabolic functions of prostate cancer tissue**
  Presenter: Ian Qian, Mentor: Dr. Mohummad Minhaj Siddiqui

• **Testicular cancer outcomes following dependent coverage and Medicaid expansion: A national retrospective cohort study**
  Presenter: Stephen Jan, Mentors: Drs. Shilajit Kundu and Adam Weiner

• **Assessing the time course of proton pump inhibitor use and Clostridioides difficile infection**
  Presenter: Katherine Panagos, Mentor: Dr. Emily Heil

• **Limited Role for Preoperative Restaging After Neoadjuvant Therapy in Locally Advanced Rectal Cancer**
  Presenter: Ilaria Caturegli, Mentor: Dr. Andrea Bafford

• **Comparison Study of Radioembolization Therapy versus Proton Beam Therapy for Hepatocellular Carcinoma**
  Presenter: Hee Bae, Mentors: Drs. Jason Molitoris and Osman Siddiqui

• **Repurposing and Characterization of HDAC and Proteasomal Inhibitors to Circumvent EGFR TKI Resistance in Human Lung Adenocarcinoma**
  Presenter: Lavanya Garnepudi, Mentors: Drs. Udayan Guha and Tapan Maity
• **Death Agonist Antibody against TRAILR2/TNFRSF10B/DR5 Enhances Birinapant Anti-Tumor Activity in HPV-Positive Head and Neck Squamous Cell Carcinomas**
  Presenter: Yi An, Mentor: Dr. Zhong Chen

• **Predictors of Recurrence of Advanced Temporal Bone Malignancies Following Temporal Bone Resection**
  Presenters: Kavita Bhatnagar and Nelia Kline, Mentors: Drs. Rodney Taylor and David Eisenman

**Theme – Cardiovascular Research: Arrhythmia, Pediatric Perfusion, Congenital Heart Defects**

• **Echocardiogram Findings in Morbidly Obese Pregnant Women and the Association with Obstetric Outcomes**
  Presenter: Andrea Lin, Mentors: Drs. Megan Anders and Bhavani Kodali

• **A novel method of calculating stroke volume using point-of-care echocardiography**
  Presenter: Ehson Aligholizadeh, Mentor: Dr. Sarah Murthi

• **Prevalence of Secondary Causes Among Those Diagnosed with Postural Orthostatic Tachycardia Syndrome (POTS)**
  Presenter: Michael Gould, Mentor: Dr. Geoffrey Rosenthal

• **The effects of process changes in management for infants with hypoxic ischemic encephalopathy**
  Presenter: Hannah Smith, Mentor: Dr. Colleen Driscoll

**Theme – Health and Care Education Research: Humanism, Women's Health, Epidemiology**

• **Flaws in AV Valve Formation Associate With Small Placentas in Chromosomally Normal Fetuses**
  Presenter: Mary Mangione, Mentor: Dr. Shifa Turan

• **Evaluating Parent Engagement in a Web-based Component of a Child Care-based Obesity Prevention Program**
  Presenter: Marie Ezran, Mentor: Dr. Maureen Black

• **The Benefits of Early Enrollment in HealthySteps**
  Presenter: Rebecca Weinstein, Mentor: Dr. Sarah Edwards

• **Impact of Perceived Patient-Provider Information Sharing on Contraceptive Use Among Baltimore Latinas.**
  Presenter: Gaia Cicerchia, Mentor: Dr. Diana Carvajal
Poster Presentations  
Time Block: 4:25-5:25 p.m.

Theme – Immunology and Inflammation, Infection Control

• **Evaluation of Diagnosis and Management of Non-Tuberculosis Mycobacterium in Lung Transplant Recipients**  
  Presenter: Ellen Moore, Mentor: Dr. Kapil Saharia  

• **Overdiagnosis and Overtreatment of Urinary Tract Infection (UTI) in non-catheterized patients in comparison to those with an indwelling catheter**  
  Presenter: Waqar Khan, Mentor: Dr. Surbhi Leekha  

• **Tri-Segmental Trigeminal Herpes Zoster: importance of timely diagnosis and treatment**  
  Presenter: Aloise Diedrich, Mentor: Dr. Hena Cheema  

• **The First Antimicrobial Stewardship Program in Tanzania: Determining Antibiotic Resistance at Muhimbili National Hospital in Dar es Salaam, Tanzania**  
  Presenter: Roger Lin, Mentor: Dr. Brenna Roth  

• **Patient-to-healthcare worker transmission of MRSA in the non-intensive care unit setting**  
  Presenter: Karly Lebherz, Mentor: Dr. Harris Anthony  

• **Inflammatory signals and their effects on the development of dendritic cell subsets**  
  Presenter: Huanwen Chen, Mentor: Dr. Chozha Rathinam  

• **Effect of severe insulin resistance and hyperinsulinemia on inflammation and fibrinolysis**  
  Presenter: Nevin Varghese, Mentors: Drs. Marissa Lightbourne and Rebecca Brown  

Theme – Ophthalmology

• **Anterior segment structural changes following pediatric cataract surgery**  
  Presenter: Libby Wei, Mentor: Dr. Janet Alexander  

• **Repeatability and Reproducibility of Manual Anterior Segment-OCT Image Grading in Keratoconus**  
  Presenter: Anna Lin, Mentor: Dr. Janet Alexander  

• **Evaluating the Efficacy of Targeted Patient Education Materials in the Understanding and Perceived Importance of Retinopathy of Prematurity**  
  Presenter: Haleigh Bass, Mentor: Dr. Moran Levin
Theme – Psychiatry and Addiction Research

- *Neuroactive steroids and perinatal depression: are women with PCOS at increased risk?*
  Presenter: Elizabeth Olson, Mentor: Dr. Lindsay Standeven

Theme – Health Education and Epidemiology Research: Metabolism, Diabetes, Kidney, Hepato-Gastric Diseases

- *Perceived Barriers to Dietary Intake of Maryland Elementary Middle School Teachers and Associations with Dietary Quality*
  Presenter: Yixuan Wang, Mentors: Drs. Elizabeth Parker and Erin Hager

- *PROMIS for Characterizing Health-Related Quality of Life in Adults with Autosomal Dominant Polycystic Kidney Disease*
  Presenter: Boyan Xia, Mentor: Dr. Stephen Seliger

- *Sonic Hedgehog Pathway Inhibition for the Treatment of Autosomal Dominant Polycystic Kidney Disease*
  Presenter: Mark Wieland, Mentors: Drs. Patricia Outeda Garcia and Terry Watnick

- *Outcome prediction using volumetric analysis of liver injury in blunt trauma*
  Presenter: Tina Chen, Mentor: Dr. David Dreizin

- *Postural Orthostatic Tachycardia Syndrome (POTS): Lack of Diagnostic Consistency and Predictive Value*
  Presenter: Michael Gould, Mentor: Dr. Geoffrey Rosenthal

- *The Effects of University of Maryland Baltimore: Health Alliance (UMBHA) Participation on Interprofessional Education*
  Presenter: Patricia Tyson, Mentor: Dr. Lori Edwards

Theme – Urology Research: Independent

- *Contemporary Use of Anticholinergic Medications for Neurogenic Bladder*
  Presenter: Aidan Kennedy, Mentor: Dr. Rena Malik

Theme – Clinical Musculoskeletal Research and Orthopaedic Research

- *Orbital Injuries from Self-inflicted Gunshots: Patterns, Management and Visual Outcomes*
  Presenter: Carolyn Drogt, Mentors: Drs. Adekunle Elegbede and Michael Grant

- *Analysis of Muscle Architecture and Fatty Infiltration after Tendon Tear*
  Presenter: Amil Sahai, Mentor: Dr. Mohit Gilotra
• **Predictors of Postoperative Pain Two Years following Orthopaedic Knee Surgery**  
  Presenter: Moli Karsalia, Mentor: Dr. Frank Henn

• **Predictors of 2-Year Patient Satisfaction Following Orthopaedic Knee Surgery**  
  Presenter: Justin Kung, Mentors: Drs. R. Frank Henn, III and Tina Zhang

• **Does the Use of a Parent’s Cell Phone Reduce Anxiety During Cast Removal?**  
  Presenter: Serge Tzeuton, Mentor: Dr. Joshua Abzug

• **PROMIS Physical Function Two Years Following Elective Knee Surgery**  
  Presenter: Darius Hunt, Mentor: Dr. Frank Henn

• **Factors Associated with Two-Year Postoperative Survey Completion in Orthopaedic Knee Surgery Patients**  
  Presenter: Jagannath Kadiyala, Mentor: Dr. Ralph F. Henn

• **Is MRI being over-utilized for the evaluation of knee pain?: A look at a single Veteran’s Administration facility**  
  Presenter: George Morcos, Mentors: Drs. Natalie Leong, Frank Henn, and Scott Koenig

• **Perioperative Opioid Use in Anterior Cruciate Ligament Reconstruction Patients**  
  Presenters: Leah Henry and Gregory Perraut, Mentor: Dr. R. Frank Henn