Conference Program

Medical Student Research Conference September 15 – 16, 2021

University of Iowa Roy J. & Lucille A. Carver College of Medicine

> Sponsored by: Medical Student Research Council

> > Free to University of Iowa Students

Medical Student Research Conference

Welcome to the 58th Annual Carver College of Medicine Student Medical Research Conference. This Conference provides an opportunity for medical students who have conducted research to present their results, receive feedback, and compete for awards.

September 15, 2021

8:00 - 10:00 AM	Concurrent Oral Presentations						
	1117, 2117, 2123, 2135, 2155, 2156, 2165, 2189 MERF						

12:00 - 12:50 PM Poster Session #1 Medical Student Poster Presentations in MERF Atrium

September 16, 2021

12:00 - 12:50 PM Poster Session #2 Medical Student Poster Presentations in MERF Atrium

September 20, 2021

Awards Social

5:30 - 7:30 PM Keynote Speaker, Award Presentations and Courtyard Social MERF Atrium and Courtyard

Keynote Speaker

Marlan Hansen, MD

Professor of Otolaryngology Professor of Neurosurgery Co-Director for Institute for Clinical and Translational Science

For student presenters and research mentors

Awards

There are several Research Day awards, including five Foundation Awards given to outstanding oral and outstanding poster presentations, and departmental and college sponsored general awards given to the top oral and poster presentations in eligible categories.

Foundation Awards

The Borts Award

The Borts Award was established by the Alpha Psi Chapter of Alpha Kappa Kappa Medical Fraternity in 1974 to honor I.H. Borts, a graduate of the University of Iowa College of Medicine and long-time supporter of the AKK. He is a distinguished scientist who has long been associated with the State Hygienic Laboratory. As a student he was influential in founding the Alpha Psi Chapter and for over thirty years remained one of their most loyal alumni. This award is open to all students.

The Edward Heath Award

In honor of Edward Heath, this award recognizes outstanding medical research. As Professor and Chairman of the Biochemistry Department at the University of Iowa, Heath was an outstanding example of a physician-scientist and supported excellence in research. His commitment to excellence was exemplified by the quality of research done in his laboratory as well as the many years spent teaching students. This award recognizes the student whose performance best represents outstanding achievement in the laboratory and the ability to communicate that achievement. All students will automatically be considered for this award.

Melvin Marcus Clinical Research Award

This award was originally established as the Iowa Student Medical Research Club (ISMRC) Award in 1989. We are honored to dedicate this award to the memory of Melvin L. Marcus, faculty supervisor of the ISMRC for over a decade. Marcus was instrumental in maintaining the club as an integral part of the University of Iowa research community. Marcus was also actively involved in clinical research and teaching of students, both in the laboratory and on the wards. He was frequently honored by his colleagues for his achievements. In keeping with this tradition, the Marcus Clinical Research Award is presented to the student whose presentation reflects outstanding work performed within a clinical area involving intact organ physiology. This prize is open to students involved in such research.

François M. Abboud Prize for Best Platform Presentation

This award was established in 2017 to honor Dr. François Abboud for his overall contributions as a research mentor and scholar. Abboud was instrumental in creating the research mentorship environment for medical students in the Carver College of Medicine from the time he joined the faculty in 1960. Abboud is known for his excellence in guiding students and colleagues in in the principles of research. This award recognizes the student whose performance best represents outstanding communication in a podium presentation.

Donald D. Heistad Prize for Best Poster Presentation

This award was established in 2017 to honor Donald Heistad who, along with Abboud, established the collaborative research and mentorship environment that has become a hallmark of the Carver College of Medicine and medical student experience. Heistad took the mentorship experience he received working with Abboud and developed his own style, always making time to work with students and discuss research ideas. This award recognizes the student whose performance best represents outstanding communication in a poster presentation.

Global Health Programs

The Global Health Program will sponsor an award for Excellence in Global Health research. The award will be designated for the best poster or oral presentation by a medical student in the field of Global Health.

Departmental Awards

ANESTHESIA

The Department of Anesthesia will sponsor two awards; the *Margaret V. Lunsford Award for Research in Anesthesia* and the *Excellence in Basic Science Research* for the best oral or poster presentation by a medical student doing research in anesthesia.

BIOCHEMISTRY

The Department of Biochemistry will sponsor The *Arthur A. Spector Award in Basic Biomedical Research* for the best oral or poster presentation by a medical student doing research in biochemistry.

CARDIOTHORACIC SURGERY

The Department of Cardiothoracic Surgery will sponsor the Nicholas P. Rossi Award for Cardiothoracic Surgery Research designated for the best poster or oral presentation by a medical student in the discipline of cardiothoracic surgery.

DERMATOLOGY

The Department of Dermatology will sponsor the *Excellence in Dermatology Research* award, designated for the best poster or oral presentation by a medical student in the discipline of dermatology.

EMERGENCY MEDICINE

The Department of Emergency Medicine will sponsor an award for *Excellence in Emergency Medicine Research* for the best poster or oral presentation by a medical student in the discipline of emergency medicine.

FAMILY MEDICINE

The Department of Family Medicine will sponsor an award for *Excellence in Family Medicine Research* designated for the best oral or poster presentation by a medical student in family medicine research.

HEALTH & HUMAN PHYSIOLOGY

The Department of Human Physiology will sponsor the *Carl V. Gisolfi Research Award for Excellence in Health and Human Physiology*. The award will be designated for the best poster or oral presentation by a medical student in the discipline of human physiology.

INTERNAL MEDICINE

The Department of Internal Medicine will sponsor three awards for outstanding student presentations. *The John Stokes Award for Research in Internal Medicine* is designated for the best poster or oral presentation by a medical student in the discipline of internal medicine. Two additional awards for *Excellence in Internal Medicine Research* are for best oral or poster presentation by a medical student for research in any division and in any project area.

MICROBIOLOGY & IMMUNOLOGY

The Department of Microbiology and Immunology will sponsor the *William Johnson Award for Research in Microbiology and Immunology,* designated for the best oral or poster presentation by a medical student in microbiology research.

MOLECULAR PHYSIOLOGY & BIOPHYSICS

The Department of Molecular Physiology and Biophysics will sponsor the *Research Excellence in Molecular Physiology and Biophysics* award, designated for the best poster or oral presentation by a medical student in the discipline of physiology and biophysics.

NEUROLOGY and NEUROSURGERY

The Departments of Neurosurgery and Neurology will sponsor three awards for the best poster or oral presentation by a medical student designated as *Excellence in Basic Neuroscience Research, Excellence in Clinical Neuroscience Research,* and *Excellence in Translational Neuroscience Research.*

OBSTETRICS/GYNECOLOGY

The Department of Obstetrics and Gynecology will sponsor two awards for *Excellence in Clinical Research in Obstetrics & Gynecology* and *Excellence in Obstetrics & Gynecology Research,* each designated for the best poster or oral presentation by a medical student in Ob-Gyn research.

OPHTHALMOLOGY

The Department of Ophthalmology will sponsor three awards for the best oral or poster presentations by a medical student in eye research named in honor of former physicians; the *Thomas A. Weingeist Award in Ophthalmology*, the *William E. Scott Research Award in Ophthalmology*, and the *Hansjoerg E. Kolder Award for Ophthalmology Research*.

ORTHOPAEDICS

The Department of Orthopaedics will sponsor two awards; the *Research Excellence in Orthopaedics* award, and the *Ponseti Prize in Orthopaedic Research*. The awards will be designated for the best poster or oral presentation by a medical student in basic, biomedical or clinical musculoskeletal/orthopaedic research.

OTOLARYNGOLOGY

The Department of Otolaryngology will sponsor an award for *Excellence in Otolaryngology Research* designated for the best oral or poster presentation by a medical student in otolaryngology research.

PATHOLOGY

The Department of Pathology will sponsor two awards to honor *Richard G. Lynch, MD*, for the best poster or oral presentation by a medical student. The award will be open to student research in any project area.

PEDIATRICS

The Department of Pediatrics will sponsor two awards designated for the best oral or poster presentation by a medical student for *Excellence in Pediatric Clinical Research* and *Excellence in Pediatric Basic Science Research*.

NEUROSCIENCE AND PHARMACOLOGY

The Department of Neuroscience and Pharmacology will sponsor an award in *Pharmacological and Toxicological Sciences*. The award will be designated for the best poster or oral presentation by a medical student in the discipline of pharmacology or toxicology, either basic science or clinical investigation.

PSYCHIATRY

The Department of Psychiatry will sponsor three awards, the *George Winokur Research Award*, the *Bob Robinson Research Award* and the *Lauretta Bender Research Award*. The awards will be designated for the best poster or oral presentations by a medical student for research in psychiatry.

RADIOLOGY

The Department of Radiology will sponsor the Jason Martin, MD- Medical Student Research Award. The award will be designated for the best poster or oral presentation by a medical student in image-based research. Martin graduated from the University of Iowa Carver College of Medicine and participated in medical research in the Radiology department as a medical student.

RADIATION ONCOLOGY

The Department of Radiation Oncology will sponsor the *Larry W. Oberley Award in Radiation Oncology*. The award will be designated for the best poster or oral presentation by a medical student in the discipline of radiation oncology, for either basic science or clinical investigation.

SURGERY

The Department of Surgery will sponsor the *Kimberly Ephgrave Medical Student Award for Research in Surgery* designated for the best poster or oral presentation by a medical student in the discipline of surgery.

UROLOGY

The Department of Urology will sponsor an award for *Excellence in Urology Research* designated for the best oral or poster presentation by a medical student in urology research.

Outstanding Mentorship Awards

Students from the Summer Research Fellowship (SRF) began nominating outstanding research mentors in 2016. These award winners are selected from among nominations submitted by medical student research students at the completion of their summer research experience. This year we are awarding *Outstanding Mentorship in Clinical Research, Outstanding Mentorship in Translational Research*, and *Outstanding Mentorship in Basic Research*.

Acknowledgements

Judges

Bryan Allen, MD, PhD Don Anderson, PHD Carryn Anderson, MD Kelly Baker, PhD Erin Beasley, DVM, MPH David Bedell, MD Gail Bishop, PhD Jennifer Bermick, MD Catherine Bradley, MD Carlos Chan, MD, PhD Mitchell Coleman, PhD Marcelo Correia, MD, PHD Cesar de Cesar Netto, MD, PhD Karen Cyndari, MD, PhD Natalie Denburg, PhD Prakash Doddapattar, PHD Arlene Drack, MD Alina Dumitrescu, MD Martine Dunnwald, PharmD, PhD Christine Petersen, DMV, PhD Anthony Fischer, MD, PHD Colette Galet, PhD Joel Geerling, MD, PHD Kevin Glenn, MD

Oliver Gramlich, PhD Chad Grueter, Phd Abbey Hardey-Fairbanks, MD Sarah Haskell, DO Hans House, MD Daniel Livorsi, MD Kelly Messingham, PHD Manasa Nayak, PHD Carla Nester, MD Robin Paetzold, MBA Ajay Patel, MD Ana-Monica Racila, PhD Robert Roghair, MD Danielle Rios, MD Antonio Sanchez, MD Mark Santillan, MD, PHD Donna Santillan, PHD Sarah Shaffer, DO Dionne Skeete, MD Hanna Stevens, MD, PhD Nicholas Trapp, MD Brad Van Voorhis, MD Mary Weber, PhD Michael Willey, MD Mary Wilson, MD

A special thank you to:

The Iowa Medical Student Research Council - Robert Roghair, Director CCOM Office of Student Affairs and Curriculum staff; the Departments of Anesthesiology, Biochemistry, Dermatology, Emergency Medicine, Family Medicine, Health and Human Physiology, Internal Medicine, Microbiology & Immunology, Molecular Physiology & Biophysics, Neurology, Neurosurgery, Obstetrics & Gynecology, Ophthalmology, Orthopaedics, Otolaryngology, Pathology, Pediatrics, Pharmacology, Psychiatry, Radiology, Radiation Oncology, Surgery and Cardiothoracic Surgery, and Urology; Institute for Clinical and Translational Science

Samuel Ahrenholz, M2, Oral Presentation Room 2189 at 9:00

Title: Semiautomatic Area Analysys Of The Distal Tibiofibular Syndesmotic Incisura In Subtle Chronic Syndesmotic Instability. A Prospective Weightbearing Ct Case-Control Study. **Mentor:** Cesar de Cesar Netto, Orthopaedics and Rehabilitation

Maya Altemeier, M2, Poster Presentation Wednesday #36

Title: Rural or Micropolitan Perceptions and Beliefs on Perinatal Mood Disorders Mentor: Stephanie Radke, Obstetrics & Gynecology

Fiona Armstrong-Pavlik, M2, Oral Presentation Room 2135 at 9:15

Title: Hemodialysis and Surgical Applications of a Povidone-Iodine Nasal Decolonization Strategy Mentor: Marin Schweizer, Internal Medicine

Nabeel Baig, M2, Oral Presentation Room 2117 at 8:30

Title: Point of Care Gastric Antral Ultrasonography to Assess Gastric Content in NPO Patients. **Mentor:** Rakesh Sondekoppam, Anesthesia

Uma Balakrishnan, M4, Oral Presentation Room 2189 at 9:30

Title: Correlation of foveal cone density and retinal function in albinism **Mentor:** Arlene Drack, Ophthalmology & Visual Sciences

Emma Barr, M4, Virtual Presentation Tuesday 9/21 at 12:30

Title: A Guided Near-Peer Mentorship Program for Transitioning into Clinical Clerkships at a Regional Medical Campus **Mentor:** Steven Craig, Unity Point

Lisa Bell, M4, Oral Presentation Room 2156 at 8:45

Title: Impact and Utilization of the ED Chest Pain Guideline: Assessing provider attitudes regarding a newly implemented diagnostic algorithm for chest pain **Mentor:** Paul Van Heukelom, Emergency Medicine

Krista Bergquist, M2, Poster Presentation Thursday #55

Title: The association of exposure to hemodynamically significant PDA beyond the transitional period and growth failure over the first 6 postnatal weeks **Mentor:** Regan Giesinger, Pediatrics

Jayden Bisson, M2, Poster Presentation Thursday #63

Title: Combining Superoxide Dismutase Mimetics and Pharmacological Ascorbate Enhances Efficacy of Radiation Treatment in Non-Small Cell Lung Cancer **Mentor:** Douglas R. Spitz, Radiation Oncology

Kelsey Blocklinger, M2, Oral Presentation Room 1117 at 8:15

Title: Raising a child with intellectual and developmental disability: Impact on maternal stress and social support **Mentor:** Lane Strathearn, Pediatrics

Claire Boettcher, M2, Oral Presentation Room 2155 at 8:00

Title: Intersectional labeling of CGRP receptor sites in the mouse brain **Mentor:** Andrew Russo, Molecular Physiology & Biophysics

Krikor Bornazyan, M2, Oral Presentation Room 2165 at 9:00

Title: Correlations Between Sleep And Cognitive Functioning In Healthy, Older Adults At Risk Of Developing Alzheimer'S Disease **Mentor:** Natalie Denburg, Neurology

Eric Bracken, M1, Poster Presentation Wednesday #54

Title: Bioimpedance for Revision Arthroplasty **Mentor:** Jacob Elkins, Orthopaedics and Rehabilitation

Pratyusha Bujimalla, M2, Oral Presentation Room 2156 at 9:15

Title: Maternal and Neonatal Outcomes in a Rural Cohort During the Coronavirus Pandemic **Mentor:** Mary Rysavy, Obstetrics & Gynecology

Conor Burke-Smith, M3, Poster Presentation Wednesday #12

Title: Buprenorphine Induction in the UIHC Emergency Department Mentor: Joshua Radke, Emergency Medicine

Connor Byeman, M2, Oral Presentation Room 1117 at 8:45

Title: Use of 3-D Printing Technology to Assist and Formulate Surgical Plans in Complex Congenital Heart Disease Patients **Mentor:** Ravi Ashwath, Pediatrics

Emily Capper, M4, Oral Presentation Room 2156 at 9:45

Title: Cumulative live birth rate in women 37 years of age or less who utilize preimplantation genetic testing aneuploidy (PGT-A) versus untested embryos **Mentor:** Rachel Mejia, Obstetrics & Gynecology

Erica Carlson, M4, Poster Presentation Wednesday #28

Title: Identifying Drivers of Cesarean Delivery Among Low-Risk Nulliparous Birthing People: A Foundation for Risk-Adjusted Improvement Targets **Mentor:** Stephanie Radke, Obstetrics & Gynecology

Alex Choi, M2, Oral Presentation Room 2123 at 8:15

Title: Atherosclerotic Proteins and Aneurysm Wall Enhancement in Unruptured Intracranial Aneurysms **Mentor:** David Hasan, Neurosurgery

Lauren Coffey, M4, Poster Presentation Thursday #57

Title: Predicting loss of ambulation in patients with muscular dystrophy due to FKRP variants **Mentor:** Katherine Mathews, Pediatrics

Cyrus Colah, M4, Oral Presentation Room 2155 at 9:30

Title: The Photic Blink Reflex As A Diagnostic Assessment of Optic Neuropathy **Mentor:** Randy H. Kardon, Ophthalmology & Visual Sciences

George Cooper, M2, Poster Presentation Thursday #71

Title: Clinical Outcomes of Mixed-Grade Urothelial Carcinoma Mentor: Vignesh Packiam, Urology

Sarah Costello, M2, Poster Presentation Wednesday #30

Title: Skin-to-skin contact and exclusive breastfeeding rates after cesarean birth at UIHC, before and during the COVID-19 pandemic. Mentor: Noelle Bowdler, Obstetrics & Gynecology

Landon Crippes, M2, Poster Presentation Thursday #21

Title: Clinical outcomes in standard of care multiple sclerosis treatment: A case series **Mentor:** Terry L. Wahls, Internal Medicine

Tyler Crowe, M2, Poster Presentation Thursday #1

Title: Analysis of peripheral CD4+ Vß TCR repertoire expression in Bullous pemphigoid **Mentor:** Kelly Messingham, Dermatology

Victoria Cunningham, M2, Poster Presentation Thursday #7

Title: Impact of Education and Self-Collection Kits on Extragenital Sexually Transmitted Infection Testing in the Urgent Care Setting **Mentor:** Lisa Veach, Iowa Methodist Medical Center, Infectious Diseases

Tim Davie, M2, Poster Presentation Thursday #19

Title: Renal sodium wasting in CF hemizygous mice **Mentor:** Jonathan Nizar, Internal Medicine

John Davison, M2, Oral Presentation Room 2135 at 8:00

Title: Assessing the impact of nutritional intake on post-operative recovery following Orthopaedic Trauma **Mentor:** Michael Willey, Orthopaedics and Rehabilitation

Jessica De Haan, M3 and Bradley Fleming, M3, Poster Presentation Wednesday #4

Title: Elements of Pregnancy and Parenthood Policies of Importance to Medical Students and Included in a Sample of Medical Schools' Websites and Student Handbooks. **Mentor:** Franklin Dexter, Anesthesia

Chandni Desai, M4, Poster Presentation Thursday #39

Title: Prognostic and therapeutic value of the Hippo pathway, RABL6A, and p53-MDM2 axes in sarcomas Mentor: Munir Tanas, Pathology

Levi Doyle, M1G, Poster Presentation Thursday #25

Title: Mechanism of GRB2 Nuclear Localization in T Cells Mentor: Jon Houtman, Microbiology

Alyssa Drewelow, M2, Oral Presentation Room 2123 at 9:30

Title: Evaluating Airway Surface Epithelium in Chlorine Gas Exposed Ferret Lungs Mentor: Kalpaj Parekh, Cardiothoracic Surgery

Peter Eckard, M2, Poster Presentation Wednesday #66

Title: Dexamethasone Eluting Arrays suppress Foreign Body Response following Cochlear Implantation

Mentor: Marlan R. Hansen, Otolaryngology - Head & Neck Surgery

Alexandra Eckburg, M4, Virtual Presentation Tuesday 9/21 at 12:15

Title: Frequency and Significance of Radiographic Findings Detected on Initial Staging for Mycosis Fungoides & Sezary Syndrome Mentor: Vincent Liu, Dermatology

Evan Economos, M2, Oral Presentation Room 2135 at 9:45

Title: Investigation of factors influencing antibiotic prescription decisions in the Veteran's Health Administration

Mentor: Daniel Livorsi, Internal Medicine

Hannah Erlbacher, M2, Oral Presentation Room 1117 at 9:15

Title: The role of antioxidants in reducing prenatal-stress-linked changes in adult offspring microglia morphology **Mentor:** Hanna Stevens, Psychiatry

Caleb Escudero, M1, Poster Presentation Thursday #9

Title: Pathophysiology of Sodium-Dependent Glucose Transporter 1 in Diabetic Cardiomyopathy Mentor: Ferhaan Ahmad, Internal Medicine

Larry Feng, M2, Oral Presentation Room 2123 at 9:00

Title: Frailty as a predictor of negative outcomes in trauma patients with isolated rib fractures **Mentor:** Dionne Skeete, Surgery

Bennett Feuchtenberger, M2, Oral Presentation Room 2117 at 9:30

Title: Predicting High-Risk Spinopelvic Relationships Using Anteroposterior Pelvis Radiographs **Mentor:** Nicholas Bedard, Orthopaedics and Rehabilitation

Zack Fleishhacker, M3, Poster Presentation Thursday #37

Title: Impact of Interfacing Near Point of Care Clinical Chemistry and Hematology Analyzers at Urgent Care Clinics at an Academic Health System **Mentor:** Matthew Krasowski, Pathology

Kory Ford, M3, Oral Presentation Room 2117 at 8:15

Title: Return to Sport after Knee Injuries in Collegiate Wrestling **Mentor:** Robert Westermann, Orthopaedics and Rehabilitation

Emily Fuller, M2, Poster Presentation Thursday #67

Title: The Factors Associated with Tissue Infarction Following Thrombectomy for Acute Ischemic Stroke Mentor: Colin Derdeyn, Radiology

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Rick Gardner, M2, Oral Presentation Room 2155 at 9:15

Title: Cardiomyocyte-specific deletion of Med13 and Med13L leads to dysregulated gene expression, heart failure, and subsequent death **Mentor:** Chad Grueter, Internal Medicine

Josh Gassmann, M2, Oral Presentation Room 2135 at 8:15

Title: Weight Bearing CT: Does Joint Loading Improve Evaluation of Hip Instability/Dysplasia **Mentor:** Michael Willey, Orthopaedics and Rehabilitation

Ella Gehrke, M2, Oral Presentation Room 2189 at 9:45

Title: Optimizing Gene Therapy in a Mouse Model of Juvenile X-linked Retinoschisis **Mentor:** Arlene Drack, Ophthalmology & Visual Sciences

Sawyer Goetz, M2, Oral Presentation Room 1117 at 8:30

Title: Medical Applications of Extended Reality **Mentor:** Ravi Ashwath, Pediatrics

Carolina Gonzalez Bravo, M2, Poster Presentation Thursday #15

Title: A Mixed Methods Approach to Advancing Health Equity for Patients at Risk for Diabetes-Related Foot Conditions **Mentor:** Martha Carvour, Internal Medicine

Anuradha Gore, M2, Poster Presentation Wednesday #26

Title: Prolapse, Pelvic Pain and Pelvic Floor Muscle Dysfunction **Mentor:** Catherine Bradley, Obstetrics & Gynecology

Martin Goree, M2, Poster Presentation Wednesday #20

Title: The Impact of Point-of-Care HbA1C Testing on HbA1C Levels and Medication Management in a Community-Based, Free Clinic Setting **Mentor:** George Bergus, Family Medicine

Pavane Gorrepati, M4, Poster Presentation Thursday #3

Title: The impact of genital psoriasis among psoriatic patients Mentor: Gideon P. Smith, Massachusetts General Hospital, Dermatology

Anna Greenwood, M3, Poster Presentation Wednesday #38

Title: Identifying Social Needs Among Gynecologic Oncology Patients Receiving Acute Inpatient Care

Mentor: Michael Haugsdal, Obstetrics & Gynecology

Sarah Gross, M4, Poster Presentation Wednesday #40

Title: United States Abortion Policy During the COVID-19 Pandemic: A summary of state and federal policy responses to a public health crisis

Mentor: Caroline Moreau, Department of Population, Family and Reproductive Health, Johns Hopkins University

Josh Hagedorn, M3, Poster Presentation Wednesday #50

Title: Electroretinogram Abnormalities in Patients with Dystroglycanopathies **Mentor:** Arlene Drack, Ophthalmology & Visual Sciences

Alec Hanson, M1, Poster Presentation Thursday #13

Title: Gathering Contact Network Data to Inform Interventions Designed to Decrease the Spread of COVID-19 in Healthcare Facilities Mentor: Philip Polgreen, Internal Medicine

Emma Hartness, M1, Poster Presentation Wednesday #44

Title: Computerized Evaluation of Double Vision Caused by Ocular Misalignment **Mentor:** Randy H. Kardon, Ophthalmology & Visual Sciences

Kaleigh Haus, M2, Poster Presentation Wednesday #10

Title: Factors Influencing High Adolescent Pregnancy Rate in Riobamba, Ecuador Mentor: Hans House, Emergency Medicine

Devin Hedlund, M4, Oral Presentation Room 2156 at 9:00

Title: First Trimester Human Plasma and Urine Endothelin-1 Predicts Development of Hypertensive Diseases of Pregnancy **Mentor:** Mark Santillan, Obstetrics & Gynecology

Zach Heinzman, M2, Poster Presentation Thursday #35

Title: Validation of Visual Field Results of a new Open-Source Virtual Reality Headset Mentor: Michael Wall, Neurology

John Henrich, M4, Poster Presentation Thursday #65

Title: NSCLC Patients' Therapeutic Response to Pharmacological Ascorbate is Correlated with Markers of Oxidative Stress Mentor: Douglas R. Spitz, Radiation Oncology

Joseph Hentges, M2, Poster Presentation Wednesday #6

Title: Dependence on canonical MAPK and RAC signaling in drug-resistant melanoma Mentor: Christopher Stipp, Biological Sciences

Nicole Hines, M2, Poster Presentation Thursday #27

Title: Determining the Relationship Between TRAF3 Protein Levels and Phenotypic/Functional Characteristics of B Lymphocytes with Aging **Mentor**: Gail A. Bishop, Microbiology

Arman Hlas, M2, Poster Presentation Wednesday #56

Title: Arthroscopic Irrigation Fluids and their Effects on Articular Chondrocyte Health **Mentor:** Joseph Buckwalter, Orthopaedics and Rehabilitation

Steve Huang, M2, Oral Presentation Room 2155 at 8:15

Title: Elucidating the Host-Pathogen Interactions between C. trachomatis and IFN-Induced Transmembrane Proteins (IFITMs) **Mentor:** Mary Weber, Microbiology and Immunology

Caleb Iehl, M2, Oral Presentation Room 2189 at 8:00

Title: Flatfoot Deformity Correction Using Longitudinal Arch Support Ankle-Foot Orthosis: A Weight-Bearing CT Prospective Case-Control Study **Mentor:** Cesar de Cesar Netto, Orthopaedics and Rehabilitation

Kyle Jackson, M2, Poster Presentation Thursday #47

Title: Evaluating the Disease-Modifying Effects of Naltrexone on the Development of Post-Traumatic Epilepsy using a Novel, Automated EEG Analysis Algorithm **Mentor:** Alexander Bassuk, Pediatrics

Matthew Jones, M1, Oral Presentation Room 2123 at 9:15

Title: Convolutional Neural Network Analysis of Retinal Microcirculation Imaging Mentor: John Cromwell, Surgery

Vijay Kamalumpundi, M2, Oral Presentation Room 2165 at 8:45

Title: Psychosocial Issues for Post-treatment Head and Neck Cancer Survivors: A Narrative Review

Mentor: Seyedehtanaz Saeidzadeh, University of Wisconsin-Madison School of Nursing

Kinnari Karia, M2, Oral Presentation Room 1117 at 9:00

Title: Assessing Neuropsychiatric Outcomes and Cerebellar Outflow Pathway Damage after Pediatric Posterior Fossa Tumor Resection **Mentor:** Aaron Boes, Pediatrics

Tanner Kempton, M2, Oral Presentation Room 1117 at 8:00

Title: Anxiety, Depression and Stress in Mothers of Children with Autism Spectrum Disorder Mentor: Lane Strathearn, Pediatrics

Matthew Kigin, M1, Oral Presentation Room 2165 at 9:45

Title: Corneal endothelial cell loss in narrow-lumen DMEK tissue injectors Mentor: Christopher Sales, Ophthalmology & Visual Sciences

Tarynne Kinghorn, M4, Poster Presentation Wednesday #42

Title: Aspirin Reduces Triglycerides in Both Preeclamptic and Non-Preeclamptic Pregnancies Mentor: Donna Santillan, Obstetrics & Gynecology

Jessie Knobbe, M2G, Poster Presentation Thursday #53

Title: Murine chorioamnionitis causes a dampened innate immune response that persists into infancy

Mentor: Jennifer Bermick, Pediatrics

Kelsey Kolasa, M2, Oral Presentation Room 2123 at 9:45

Title: Flow cytometric analysis of peripheral regulatory T cell abundance in ferret tracheal graft transplants

Mentor: Kalpaj Parekh, Cardiothoracic Surgery

Alexis Kollasch, M2, Oral Presentation Room 2155 at 9:00

Title: Morphometric analysis of Arhgap29-deficient murine excisional wounds **Mentor:** Martine Dunnwald, Anatomy & Cell Biology

Elias Kovoor, M2, Poster Presentation Thursday #23

Title: Appropriateness of Type of Blood Culture Orders used to Diagnose CLABSI at UIHC **Mentor:** Jorge Salinas, Internal Medicine-Infectious Diseases

Maddy Kroeger, M2, Oral Presentation Room 1117 at 9:45

Title: Vision-Related Quality of Life in Adults with Strabismus **Mentor:** Alina Dumitrescu, Ophthalmology & Visual Sciences

Treyton Krupp, M2, Poster Presentation Wednesday #14

Title: A Survey Assessing Contributing Risk Factors for Pediatric Lawn Mower-Related Injuries Mentor: Charles Jennissen, Emergency Medicine

Jeff Kuziel, M2, Oral Presentation Room 1117 at 9:30

Title: Prolonged Duration to Full Retinal Vascularization in Infants Diagnosed with Retinopathy of Prematurity **Mentor:** Alina Dumitrescu, Ophthalmology & Visual Sciences

Jace Lapierre, M2, Oral Presentation Room 2117 at 8:00

Title: Examining Long-Term Outcomes of High Tibial Osteotomies & Distal Femoral Osteotomies **Mentor:** Robert Westermann, Orthopaedics and Rehabilitation

Molly Larson, M1G, Poster Presentation Thursday #33

Title: Seizure susceptibility, post-ictal breathing, and death in a mouse model of amyloidopathy. **Mentor:** Gordon Buchanan, Neurology

Steven Leary, LOA, Poster Presentation Thursday #75

Title: Return to Sport and Testing following Hip Arthroscopy For FAI in High School and Collegiate Athletes

Mentor: Robert W. Westermann, Orthopaedics and Rehabilitation

Alice Lee, M4, Oral Presentation Room 2165 at 8:30

Title: Hospitalization in persons with dementia receiving care coordination Mentor: MSTAR Project

Grace Lee, M2, Oral Presentation Room 2155 at 8:30

Title: Peripheral Trigeminal Nerve Blocks for Chronic Orbital Pain: Clinical Features and Outcomes **Mentor:** Erin Shriver, Ophthalmology & Visual Sciences

Emma Lewis, M2, Oral Presentation Room 2156 at 9:30

Title: Urine copeptin as an early pregnancy predictor of preeclampsia Mentor: Mark Santillan, Obstetrics & Gynecology

Ben Linden, M2, Oral Presentation Room 2135 at 9:30

Title: Characterizing the Role of Diet Composition on the Development of Obesity and Metabolic Syndrome

Mentor: Mohamad Mokadem, Internal Medicine

Shannon Linderman, M2, Poster Presentation Wednesday #60

Title: Quantifying the Reverse Total Shoulder Arthroplasty Clinical Exam **Mentor:** Don Anderson, Orthopaedics and Rehabilitation

Connor Littlefield, M1, Poster Presentation Wednesday #62

Title: The Anterolateral Ligament of the Knee: An Updated Systematic Review of Anatomy, Biomechanics, and Clinical Outcomes **Mentor:** Eric C. McCarty, University of Colorado, Sports Medicine

Shana Liu, M1, Poster Presentation Wednesday #46

Title: Exomic Analysis of a Pedigree with Primary Open-Angle Glaucoma **Mentor:** John Fingert, Ophthalmology & Visual Sciences

Lola Lozano, M2G, Oral Presentation Room 2155 at 8:45

Title: Modeling the Effects of Two Eye Diseases on Choroidal Endothelial Cells in vitro **Mentor:** Robert Mullins, Ophthalmology & Visual Sciences

Angela Mahoney, M1, Oral Presentation Room 2189 at 9:15

Title: Self-Reported Visual Functioning in Adults with Albinism Mentor: Arlene Drack, Ophthalmology & Visual Sciences

Smrithi Mani, M2, Oral Presentation Room 2155 at 9:45

Title: Sympathetic nervous system modulation of vascular supply to the eye Mentor: Randy H. Kardon, Ophthalmology & Visual Sciences

Ian McElree, M1, Poster Presentation Thursday #69

Title: Sequential Intravesical Gemcitabine and Docetaxel for BCG-Naive High-Risk Non-Muscle Invasive Bladder Cancer **Mentor:** Vignesh Packiam, Urology

Abbie McKernan, M1, Poster Presentation Thursday #11

Title: The Acquired Long QT-Prolonging Drugs Haloperidol and Terfenadine Cause Defects in HERG Trafficking **Mentor:** Barry London, Internal Medicine

Zain Mehdi, M2, Oral Presentation Room 2165 at 9:15

Title: The Role of Pharmacological Ascorbate in Selective Peroxide-Induced Glioblastoma Cell Killing

Mentor: Bryan Allen, Radiation Oncology

Jamie Miller, M3, Poster Presentation Wednesday #18

Title: Prediction Models for Severe Manifestations and Mortality due to COVID-19: A Rapid Systematic Review **Mentor:** Sangil Lee, Emergency Medicine

Sarah Minion, M3, Oral Presentation Room 2165 at 8:00

Title: A comparison of GIS-based measures on spatial accessibility to obstetricians and associations with adequate prenatal care utilization in Pennsylvania birth records from 2011-2015

Mentor: Catherine Haggerty, University of Pittsburg Graduate School of Public Health, Epidemiology

Bryan Mouser, M1, Poster Presentation Wednesday #8

Title: Screening for Carcinoid Heart Disease: Future Perspectives Mentor: Mohammad Bashir, Cardiothoracic Surgery

Ananya Munjal, M3, Oral Presentation Room 2117 at 9:00

Title: Characterizing nipple skin injuries in postpartum women Mentor: Jennifer Powers, Dermatology

Ananya Munjal, M3, Poster Presentation Wednesday #52

Title: COVID-19 Related Delays in Treatment of Melanoma Mentor: Jennifer Powers, Dermatology

Priynt Patel, M2, Poster Presentation Thursday #49

Title: Impact of Feedback Reports on EHR Re-access Mentor: Christina Cifra, Pediatrics

Rishi Patel, M1, Poster Presentation Thursday #31

Title: Volumetric Analysis of Unruptured Intracranial Aneurysms Using Magnetic Resonance Angiography **Mentor:** Edgar Samaniego, Neurology

Katelyn Paulsen, M2, Oral Presentation Room 2117 at 9:45

Title: What is the fate of total joint arthroplasty patients who are asked to quit smoking prior to surgery?

Mentor: Nicholas Bedard, Orthopaedics and Rehabilitation

Albert Pedroza, M2, Poster Presentation Wednesday #70

Title: Improving Procedural Pain in Burn Patients Mentor: Lucy Wibbenmeyer, Surgery

Eli Perez, M4, Oral Presentation Room 2123 at 8:30

Title: Impact of Obesity on Posterior Cervical Fusion for Cervical Myelopathy Mentor: Woodroffe, Royce, Neurosurgery

Anthony Piscopo, M2, Oral Presentation Room 2123 at 8:00

Title: Intra-Arterial Encephalography from Acutely Implanted Aneurysm Embolization Device in Awake Humans **Mentor:** David Hasan, Neurosurgery

Sarv Raval, M2, Poster Presentation Thursday #51

Title: The use of EKGs to screen Athletes for myocarditis following COVID-19 infection Mentor: Ian Law, Pediatrics

Lulua Rawwas, M3, and Chris Halbur, M3, Oral Presentation Room 2135 at 8:45

Title: Agricultural Workers in Meatpacking Plants Presenting to an Emergency Department with Suspected COVID-19 Infection are Disproportionately Black and Hispanic **Mentor:** Hans House, Emergency Medicine

Elijah Reische, M2, Poster Presentation Wednesday #32

Title: The effect of the PICO negative-pressure dressing on cesarean section infection rates in obese women **Mentor:** Colleen Stockdale, Obstetrics & Gynecology

Alex Rier, M4, Oral Presentation Room 2117 at 8:45

Title: Impact of High Spinal Anesthesia Technique on Fast-Track Strategy in Pediatric Cardiac Surgery: A Retrospective Study **Mentor:** Satoshi Hanada, Anesthesia

Stephanie Rodriguez, M2, Poster Presentation Wednesday #64

Title: AB lowa Study Mentor: Marlan R. Hansen, Otolaryngology - Head & Neck Surgery

Ariel Roghair, M2, Poster Presentation Thursday #43

Title: The role of type I interferon signaling in mice following a model of traumatic brain injury **Mentor:** Elizabeth Newell, Pediatrics

Emily Ruba, M3, Poster Presentation Wednesday #24

Title: Physician transfer of Clinician Communication Skills to workplace settings: Insights from communication skills coaches
Mentor: Marcy Rosenbaum, Family Medicine

Peter Sanchez, M2, Poster Presentation Wednesday #58

Title: A Peripheral Compressive Neuropathy Model to Visualize Pathology at the Neuromuscular Junction

Mentor: Joseph Buckwalter V, Orthopaedics and Rehabilitation

Eli Schmidt, M3, Oral Presentation Room 2189 at 8:15

Title: The Role of Transverse Tarsal Arch Collapse in Progressive Collapsing Foot Deformity **Mentor:** Cesar de Cesar Netto, Orthopaedics and Rehabilitation

Patrick Schwartzhoff, M2, Oral Presentation Room 2165 at 9:30

Title: Using ELISA and IFAT to determine exposure to Anaplasma spp. in Natal, Brazil **Mentor:** Christine Petersen, Epidemiology

Kristy Sevcik, M3, Poster Presentation Thursday #29

Title: Interferon-Mediated Protection of Keratinocytes from Ebolavirus Infection Mentor: Wendy Maury, Microbiology

Mala Sharma, M2, Poster Presentation Thursday #73

Title: Virtual and Innovative Personalized Platform for Improving Glycemic Outcomes **Mentor:** Amy Pearlman, Urology

Katie Sharp, M2, Oral Presentation Room 2135 at 9:00

Title: Paramedic Education: The Effects of COVID-19 on Paramedic Clinical Skills Mentor: Peter Georgakakos, Emergency Medicine

Alix Sharp, M2, Poster Presentation Wednesday #34

Title: Comparison of infection rates post cesarean section with Prevena negative pressure dressing and PICO negative pressure dressing in obese women **Mentor:** Colleen Stockdale, Obstetrics & Gynecology

Bryce Shonka, M2, Oral Presentation Room 2156 at 8:15

Title: Assessing the role of SOD2 in the maintenance of corneal-endothelial cell density Mentor: Mark Greiner, Ophthalmology & Visual Sciences

Megan Sinik, M2, Oral Presentation Room 2165 at 8:15

Title: Development of Shigella spp. Soil Recovery Protocol **Mentor:** Kelly Baker, Occupational & Environmental Health

Carl Skoog, M2, Poster Presentation Wednesday #2

Title: Relationship Between Anesthetic Type and Fetal Outcomes Following Emergent (Grade 3) Cesarean Delivery **Mentor:** Unyime Ituk, Anesthesia

Olivia Snyder, MS3, Poster Presentation Thursday #59

Title: Correlating Mental Health Disorders with Bleeding Rates in Hemophilia Mentor: Janice Staber, Pediatrics

Dana Soukup, M2, Poster Presentation Thursday #45

Title: Characterization of the efficiency of DAF in regulating nephritic factor stabilized complement convertases in patients with C3 Glomerulopathy **Mentor:** Carla Nester, Pediatrics

Nathen Spitz, M3, Virtual Presentation Tuesday 9/21 at 12:45

Title: Effectiveness of Early Improvement as a Predictor of Clinical Outcomes in 10Hz rTMS and iTBS Treatment for Major Depressive Disorder **Mentor:** Nicholas Trapp, Psychiatry

Yutao Su, M2, Poster Presentation Wednesday #72

Title: IRG1 potentially alters CMP-001 treatment anti-tumor microenvironment **Mentor:** Carlos Chan, Surgery

Danial Syed, M4, Virtual Presentation Tuesday 9/21 at 12:00

Title: Identification of phase amplitude coupling in the human hippocampus during episodic memory processing **Mentor:** Matthew Howard, Neurosurgery

Tutku Tazegul, M2, Oral Presentation Room 2189 at 8:30

Title: Quantifying ankle arthritis using a 3D Hounsfield Unit (HU) weight-bearing computed tomography (WBCT) algorithm **Mentor:** Cesar de Cesar Netto, Orthopaedics and Rehabilitation

Tutku Tazegul, M2, Poster Presentation Thursday #61

Title: Dosimetric comparison of a JEI-Deep Logismos algorithm to physician-drawn contours for radiation treatment of laryngeal and oropharyngeal cancers **Mentor:** Carryn Anderson, Radiation Oncology

Sanika Thukral, M2, Poster Presentation Thursday #41

Title: Maternal Characteristics in a Prospective Study on the Impact of Depression on Infant Heart Development Mentor: Sarah Haskell, Pediatrics

Chan Tinsman, M2, Oral Presentation Room 2123 at 8:45

Title: Improvement in surgical stabilization of critical abdominal injuries prior to transfer: A measure of trauma system improvement Mentor: Dionne Skeete, Surgery

Matt Van Engen, M2, Oral Presentation Room 2117 at 9:15

Title: Functional Outcomes and Patient Reported Outcomes after Successful DAIR for Periprosthetic Joint Infection of Total Knee Arthroplasty **Mentor:** Nicolas Noiseux, Orthopaedics and Rehabilitation

Christian VandeLune, M2, Oral Presentation Room 2189 at 8:45

Title: Deformity Correction In End-Stage Ankle Osteoarthritis Using A Lateral Trans-Fibular Approach Total Ankle Replacement: A Weight-Bearing Ct Study **Mentor:** Cesar de Cesar Netto, Orthopaedics and Rehabilitation

Abby Walling, M3, Oral Presentation Room 2156 at 8:00

Title: Gender Disparity in Ophthalmology Resident Surgical Case Numbers Mentor: Jaclyn Haugsdal, Ophthalmology & Visual Sciences

Max Wei, M2, Oral Presentation Room 2156 at 8:30

Title: Cherry-Picking in the UIHC Emergency Department: A qualitative study from the perspective of attendings, APPs, and residents. **Mentor:** Paul Van Heukelom, Emergency Medicine

Kali Weiss, M2, Oral Presentation Room 2135 at 8:30

Title: Identifying Victims of Human Trafficking in the Hospital via the use of an Abuse Screening Tool

Mentor: Shannon Findlay, Emergency Medicine

Rebecca Wen, M2, Poster Presentation Wednesday #68

Title: Assessing cognitive performance in bipolar disorder and effects of cerebellar TMS **Mentor:** Nicholas Trapp, Psychiatry

Piper Wenzel, M2, Poster Presentation Wednesday #48

Title: Characterization of Sialoglycoconjugates in the Retina and Choroid through Neuraminidase Treatment and Lectin Labeling **Mentor:** Robert Mullins, Ophthalmology & Visual Sciences

Austin Wisnousky, M2, Poster Presentation Wednesday #22

Title: Treatment of Low Back Pain in Family Medicine and Internal Medicine **Mentor:** Barcey Levy, Family Medicine

Brianna Wright, M2, Poster Presentation Thursday #17

Title: Results of a SARS-CoV-2 Serosurvey among University of Iowa Hospitals and Clinics (UIHC) Employees **Mentor:** Loreen Herwaldt, Internal Medicine

Cal Zahn, M2, Poster Presentation Wednesday #16

Title: CT-P/A Results and Evaluation considerations for Emergency Providers (CREEP) Mentor: Nick Kluesner, Emergency Medicine

room #	8:00am	8:15am	8:30am	8:45am	9:00am	9:15am	9:30am	9:45am
1117	Tanner Kempton	Kelsey Blocklinger	Sawyer Goetz	Connor Byeman	Kinnari Karia	Hannah Erlbacher	Jeffrey Kuziel	Maddy Kroeger
2117	Jace Lapierre	Kory Ford	Nabeel Baig	Alex Rier	Ananya Munjal	Matthew Van Engen	Bennett Feuchtenberger	Katelyn Paulsen
2123	Anthony Piscopo	Alex Choi	Eli Perez	Chan Tinsman	Larry Feng	Matthew Jones	Alyssa Drewelow	Kelsey Kolasa
2135	John Davison	Josh Gassman	Kali Weiss	Lulua Rawwas and Chris Halbur	Kathryn Sharp	Fiona Armstrong	Ben Linden	Evan Economos
2155	Claire Boettcher	Steve Huang	Grace Lee	Lola Lozano	Alexis Kollasch	Richard Gardner	Cyrus Colah	Smrithi Mani
2156	Abby Walling	Bryce Shonka	Max Wei	Lisa Bell	Devin Hedlund	Pratyusha Bujimalla	Emma Lewis	Emily Capper
2165	Sarah Minion	Megan Sinik	Alice Lee	Vijay Kamalumpundi	Krikor Bornazyan	Zain Mehdi	Patrick Schwarzhoff	Matthew Kigin
2189	Caleb lehl	Eli Schmidt	Tutku Tazegul	Christian VandeLune	Samuel Ahrenholz	Angela Mahoney	Uma Balakrishnan	Ella Gehrke

Poster Schedule									
Student	Poster	Day	Student	Poster	Day				
Carl Skoog	2	W	Tyler Crowe	1	TH				
Jessica DeHaan and									
Bradley Fleming	4	W	Pavane Gorrepati	3	TH				
Joseph Hentges	6	W	Victoria Cunningham	7	TH				
Bryan Mouser	8	W	Caleb Escudero	9	TH				
Kaleigh Haus	10	W	Abbie McKernan	11	TH				
Conor BurkeSmith	12	W	Alec Hanson	13	TH				
Treyton Krupp	14	W	Carolina Gonzalez Bravo	15	TH				
Cal Zahn	16	W	Brianna Wright	17	TH				
Jamie Miller	18	W	Tim Davie	19	TH				
Martin Goree	20	W	Landon Crippes	21	TH				
Austin Wisnousky	22	W	Elias Kovoor	23	TH				
Emily Ruba	24	W	Levi Doyle	25	TH				
Anuradha Gore	26	W	Nicole Hines	27	TH				
Erica Carlson	28	W	Kristy Sevcik	29	TH				
Sarah Costello	30	W	Rishi Patel	31	TH				
Elijah Reische	32	W	Molly Larson	33	TH				
Alix Sharp	34	W	Zach Heinzman	35	TH				
Maya Altemeier	36	W	Zack Fleishhacker	37	TH				
Anna Greenwood	38	W	Chandni Desai	39	TH				
Sarah Gross	40	W	Sanika Thukral	41	TH				
Tarynne Kinghorn	42	W	Ariel Roghair	43	TH				
Emma Hartness	44	W	Dana Soukup	45	TH				
Shana Liu	46	W	Kyle Jackson	47	TH				
Piper Wenzel	48	W	Priynt Patel	49	TH				
Josh Hagedorn	50	W	Sarv Raval	51	TH				
Ananya Munjal	52	W	Jessie Knobbe	53	TH				
Eric Bracken	54	W	Krista Bergquist	55	TH				
Arman Hlas	56	W	Lauren Coffey	57	TH				
Peter Sanchez	58	W	Olivia Snyder	59	TH				
Shannon Linderman	60	W	Tutku Tazegul	61	TH				
Connor Littlefield	62	W	Jayden Bisson	63	TH				
Stephanie Rodriguez	64	W	John Henrich	65	TH				
Peter Eckard	66	W	Emily Fuller	67	TH				
Rebecca Wen	68	W	lan McElree	69	TH				
Albert Pedroza	70	W	George Cooper	71	TH				
Yutao Su	72	W	Mala Sharma	73	TH				
			Steven Leary	75	TH				