Program of Events

Medical Student
Research Conference
September 12 – 14, 2018

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 55th 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 12, 2018

8:00 - 10:00 AM  Concurrent Oral Présentations
1117, 2117, 2123, 2135, 2136, 2155, 2165, 2189 MERF

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

September 13, 2018

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

September 14, 2018
Awards Banquet

5:30 - 7:30 PM  Buffet Dinner, Keynote Speaker, and Award Presentations
Second Floor Ballroom, Iowa Memorial Union (IMU)

Keynote Speaker
Nicholas Mohr, MD, MS
Clinical Associate Professor of Emergency Medicine,
Anesthesia - Critical Care Medicine, and Epidemiology

For student presenters, research mentors, & invited guests
Awards Banquet  
Friday, September 14, 2018

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.
Francois 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 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.

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.

ORTOPAEDICS
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.

PHARMACOLOGY
The Department of 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 AND CARDIOTHORACIC SURGERY
The Department of Surgery will sponsor two awards designated for the best poster or oral presentation by a medical student in the discipline of surgery: the Kimberly Ephgrave Medical Student Award for Research in Surgery, and the Nicholas P. Rossi Award for Cardiothoracic Surgery Research.

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 and Outstanding Mentorship in Basic Research.

A special thank you to:
The Iowa Medical Student Research Council - Robert Roghair, Director
Deanna Nielson, Gwen Hoffmann, 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 (REDCap)
Acknowledgements

Judges

Bryan Allen, MD, PhD  Toshi Kitamoto, PhD
Michael Anderson, PhD  Matthew Krasowski, MD, PhD
Girish Bathla, MBBS, MMed  Anne Kwitek, PhD
Emine Bayman, PhD  Kathryn Lamping, PhD
Maresi Berry-Stoelzle, MD, PhD  Laurel Lyckholm, MD
Robert Block, PhD  Alison Lynch, MD
Noelle Bowdler, MD  Kelly Messingham, PhD
Timothy Brown, MD  Nicholas Mohr, MD, MS
Carlos Chan, MD, PhD  Arvind Murali, MBBS
Anil Chauhan, PhD  Resmiye Oral, MD
Mitch Coleman, PhD  Amy O’Shea, PhD
Alejandro Comellas, MD  Dionne Peacher, MD
Natalie Denburg, PhD  Prerna Rastogi, MBBS
Prakash Doddapattar, PhD  Dan Runde, MD, MME
Arlene Drack, MD  Ginny Ryan, MD
Alina Dumitrescu, MD  Antonio Sanchez, MD
Eric Epping, MD, PhD  Donna Santillan, PhD
Jess Fiedorowicz, MD, PhD  Eva Schoen, PhD
Laura Fuller, PhD  Thomas Scholz, MD
Marie Gaine, PhD  Christina Shutters, ARNP, CNM
Colette Galet, PhD  Kelly Skelly, MD
Justin Grobe, PhD  Douglas Spitz, PhD
Duane Hall, PhD  Hanna Stevens, MD, PhD
Sarah Haskell, DO  Melissa Swee, MD, MS
Martha Herbst, MD  Michael Tansey, MD
Yumi Imai, MD  Nicholas Trapp, MD
Unyime Ituk, MBBS  Eric Weatherford, PhD
Gerald Jogerst, MD  Lucy Wibenmeyer, MD
Yusung Kim, PhD
## Oral Presentations

### Room 1117

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter, Year</th>
<th>Title</th>
<th>Mentor, Department</th>
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</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Kelly Yom, M2</td>
<td>The Effect of Visual Aids in Preoperative Patient Counseling for Oculoplastic Surgery</td>
<td>Audrey Ko, Ophthalmology &amp; Visual Sciences</td>
</tr>
<tr>
<td>8:15</td>
<td>Sarah Kottenstette, M2</td>
<td>Psychosocial Functional Capacities of Children and Their Immediate Caretakers</td>
<td>Resmiye Oral, Pediatrics</td>
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<tr>
<td>8:30</td>
<td>Dabin Choi, M2</td>
<td>The Effect of Sleep Position Preference on Periorbital Symmetry</td>
<td>Erin Shriver, Ophthalmology &amp; Visual Sciences</td>
</tr>
<tr>
<td>8:45</td>
<td>Rob Manges, M1</td>
<td>The cough is coming from inside the house</td>
<td>Alejandro Comellas, Internal Medicine</td>
</tr>
<tr>
<td>9:00</td>
<td>Marissa Martin, M4</td>
<td>Outpatient Frailty as a Risk Factor for the Development of Delirium in Geriatric Inpatients</td>
<td>Michelle Weckmann, Family Medicine</td>
</tr>
<tr>
<td>9:15</td>
<td>Nate Mullin, M1</td>
<td>Transplantable photoreceptor grafts from patient-specific pluripotent stem cells</td>
<td>Budd Tucker, Ophthalmology &amp; Visual Sciences</td>
</tr>
<tr>
<td>9:30</td>
<td>Ben Fick, M2</td>
<td>A Retrospective Review of Percutaneous Ultrasonic Tenotomy for Chronic Tendinopathies</td>
<td>Mederic Hall, Orthopaedics &amp; Rehabilitation</td>
</tr>
<tr>
<td>9:45</td>
<td>Katherine Merritt, M2</td>
<td>Social Determinants of Health Needs Assessment Within an Inpatient Population at UIHC</td>
<td>Kevin Glenn, Internal Medicine</td>
</tr>
</tbody>
</table>

### Room 2117

<table>
<thead>
<tr>
<th>Time</th>
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<th>Title</th>
<th>Mentor, Department</th>
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<tbody>
<tr>
<td>8:00</td>
<td>Andrew Holte, M4</td>
<td>Instituting a Restrictive Opioid Prescribing Protocol for Primary Total Hip and Knee Arthroplasty: One Institution’s Experience</td>
<td>Timothy Brown, Orthopaedics &amp; Rehabilitation</td>
</tr>
<tr>
<td>8:15</td>
<td>Rob Thinnes, M2</td>
<td>Preferences for Emergency Medical Service Transport After Childhood Injury: An Emergency Department-Based Mixed Methods Study</td>
<td>Nicholas Mohr, Emergency Medicine</td>
</tr>
<tr>
<td>8:30</td>
<td>Cassandra Hardy, M2</td>
<td>Prediction Model for Diagnosing Patients with Anaphylaxis in the Emergency Department</td>
<td>Sangil Lee, Emergency Medicine</td>
</tr>
</tbody>
</table>
Oral Presentations

8:45  Sarah Bakir, M2  
*Accuracy of Vaginal pH Testing Before and After Addition of Sterile Saline*  
Mentor: Abbey Hardy-Fairbanks, Obstetrics & Gynecology

9:00  David Wang, M2  
*Two-stage exchange arthroplasty for prosthetic joint infection: If at first you don’t succeed, should you try again?*  
Mentor: Jesse Otero, Orthopaedics & Rehabilitation

9:15  Ben Wilkinson, M2  
*The Utility of Routine X-ray Imaging Following Chest Tube Removal*  
Mentor: Kalpaj Parekh, Cardiothoracic Surgery

9:30  Maddie Mix, M1  
*The role of the inflammasome in generating CD8 T cell responses and protection against malaria*  
Mentor: John Harty, Microbiology & Immunology

9:45  Will Lorentzen, M2  
*The Effects of Sleep Quality on Heart Rate Variability in Varsity College Football Players*  
Mentor: Andrew Peterson, Pediatrics

Room 2123

8:00  Weiren Liu, M2  
*Developing a Pipeline for Radiomics Biomarkers in Head and Neck Cancer*  
Mentor: John Buatti, Radiation Oncology

8:15  Alyssa Heinzman, M2  
*Antegrade versus Retrograde IV Cannulas for the Aspiration of Blood*  
Mentor: Andrew Feider, Anesthesia

8:30  Heba Isaac, M2  
*Characterization of Non-Syndromic Hearing Loss in a Family with Suspected vGLUT3 Mutation*  
Mentor: Marlan Hansen, Otolaryngology - Head & Neck Surgery

8:45  Luke Schiller, M2  
*Assessing Reliability and Validity of Measuring Body Composition with A-mode Ultrasound*  
Mentor: Michael Willey, Orthopaedics & Rehabilitation

9:00  Joyce Wahba, M2  
*Insights into the pathogenesis of leishmaniasis through the study of circulating exosomes*  
Mentor: Mary Wilson, Internal Medicine

9:15  Andrew Poggemiller, M2  
*Use of Cyproheptadine for the Treatment of Serotonin Syndrome: A case series and retrospective review*  
Mentor: Colette Galet, Surgery
Oral Presentations

9:30  Michael Slattery, M2  
*Does iatrogenic Cartilage Injury Risk Damage to Otherwise Healthy Chondrocytes Overlying CAM Morphology?*  
  Mentor: Robert Westermann, Orthopaedics & Rehabilitation

9:45  Hayley Hansen, M2  
*Relationships Between Symptoms, Patient Demographics, and Cervical Cancer*  
  Mentor: Colleen Stockdale, Obstetrics & Gynecology

Room 2135

8:00  Julie Amendola, M2  
*An Automated Approach to Counting Coughs*  
  Mentor: Alejandro Comellas, Internal Medicine

8:15  Sawyer Kieffer, M1  
*Assessing Balance and Predicting Fall Risk in Older Adults for Inpatient Hospital Settings*  
  Mentor: Philip Polgreen, Internal Medicine

8:30  Laura Scieszinski, M1  
*The Impact of Adverse Childhood Experiences (ACEs) on Burn Outcomes in Pediatric Patients*  
  Mentor: Lucy Wibbenmeyer, Surgery

8:45  Nicholas Bartschat, M2  
*Cartilage Degeneration is Associated with Increased Joint Contact Stress in Patients with Hip Dysplasia*  
  Mentor: Robert Westermann, Orthopaedics & Rehabilitation

9:00  Kasra Zarei, M2G  
*New Insights into Data-Driven Biomarkers, Mechanisms, and Treatments of Delirium*  
  Mentor: Gen Shinozaki, Psychiatry

9:15  Hannah Trembath, M4  
*Dispositional mindfulness in healthy older adults is associated with cortical thinning in the brain*  
  Mentor: Natalie Denburg, Neurology

9:30  Kevin Cheung, M2  
*The Genetics of Melanoma in a Veteran Population*  
  Mentor: Jennifer Powers, Dermatology

9:45  Deepika Raghavan, M2  
*Upstream Obstetrics: Assessing the Prevalence of Food Insecurity in a High-risk Obstetrics Population*  
  Mentors: Michael Haugsdal, Craig Syrop, Obstetrics & Gynecology
Oral Presentations

**Room 2136**

8:00  Guillermo Romano Ibarra, LOA  
*CF airway smooth muscle transcriptome guides identification of small molecule agents with therapeutic potential for asthma*  
Mentor: David Stoltz, Internal Medicine

8:15  Soham Ali, M2  
*Improving Rotamer Optimization Using an X-ray Target Function*  
Mentor: Michael Schnieders, Biomedical Engineering

8:30  Miranda Schene, M1  
*Structure of a Mutant Form of PCNA Deficient in Error-Free Repair*  
Mentor: Todd Washington, Biochemistry

8:45  Brooke Jennings, M1  
*Role of PAK Signaling in Vemurafenib Resistant Melanoma*  
Mentor: Christopher Stipp, Biological Sciences

9:00  Joseph Chin, M2G  
*Characterization of Adenovirus Mediated Gene Delivery into the Cochlea*  
Mentors: Marlan Hansen, Otolaryngology & Samuel Young, Anatomy & Cell Biology

9:15  Hannah Van Ert, M1  
*In vitro and in vivo evaluation of DEPDC5 as a causative gene for Brugada Syndrome*  
Mentor: Barry London, Internal Medicine

9:30  Sophia Williams-Perez, M2  
*Exposure to Fluid Shear Stress Results in Activation of YAP/TAZ in prostate cancer cells*  
Mentor: Michael Henry, Molecular Physiology & Biophysics

9:45  Danial Syed, M1  
*Refining mind control: using a bispectral analysis to improve brain-computer interface performance*  
Mentor: Matthew Howard, Neurosurgery

**Room 2155**

8:00  Patrick Rooney, M2  
*Cellphone administration of the Short Hip Osteoarthritis Outcome Score (HOOS-PS) and Pain Subscale (HOOS-PAIN) using Text Messaging*  
Mentor: Robert Westermann, Orthopaedics & Rehabilitation

8:15  Hannah McAtee, M4  
*Academic Achievement of Iowa Children with Brain Tumors*  
Mentor: Mariko Sato, Pediatrics
Oral Presentations

8:30  Cassie Moylan, M2
Treating heart failure in Duchenne muscular dystrophy: is proactive better than reactive?
Mentor: Ravi Ashwath, Pediatrics

8:45  Maggie Gannon, M2
Identification of biometric variables impacting clinical outcomes in non-small cell lung cancer patients to improve imaged-based machine learning response prediction
Mentor: Yusung Kim, Radiation Oncology

9:00  Eric Schnieders, M2
Impact of Trauma Informed Assessment on case identification at the Child Assessment Clinic that requires referral for services
Mentor: Resmiye Oral, Pediatrics

9:15  Nicholas Evans, M2
Assessing balance and determining assistive device use in older adults in community settings using a mobile health platform
Mentor: Philip Polgreen, Internal Medicine

9:30  Zoe Hildreth, M2
White matter microstructure and behavioral inhibition in adolescents: Effects of family history of alcohol use disorder
Mentor: Jatin Vaidya, Psychiatry

9:45  Tucker Dangremond, M2
Electrophysiology and optical coherence tomography of the central retina in aniridia due to PAX6 mutations
Mentor: Arlene Drack, Ophthalmology & Visual Sciences

Room 2165

8:00  Austin Kazarian, M2
Clinical outcome of pancreatic cancer patients with indeterminate pulmonary nodules
Mentor: Carlos Chan, Surgery

8:15  Kelsey Sheets, M3
Morbid Obesity: Effects on Cervical Cancer Screening and Presentation
Mentor: Abbey Hardy-Fairbanks, Obstetrics & Gynecology

8:30  Arham Pasha, M2
Surgical Management of Proximal Femur Metastatic Disease of Bone - A Pilot Study
Mentor: Benjamin Miller, Orthopaedics & Rehabilitation

8:45  Allie Simpson, M4
The association between MMP9 risk alleles and exudative age-related macular degeneration (wet AMD)
Mentor: John Fingert, Ophthalmology & Visual Sciences
Oral Presentations

9:00  Gabriel Conley, M2

Assessing the NSQIP® Surgical Risk Calculator’s Accuracy in Predicting Radical Cystectomy Outcomes
Mentor: Kenneth Nepple, Urology

9:15  Beth Wole, M2

Electrocardiographic changes pre and post Transcatheter Pulmonary Valve Replacement
Mentor: Manish Bansal, Pediatrics

9:30  Madalyn Rasor, M2

Quality of Life Among Pediatric Patients with Limb Girdle Muscular Dystrophy type 2I
Mentor: Katherine Mathews, Pediatrics

9:45  Daniel Pape, M2G

Characterization of a small peptide (“B-peptide”) in INS-1 pancreatic beta cells
Mentor: Ling Yang, Anatomy & Cell Biology

Room 2189

8:00  Tong Yu, M2

Epigenetics of Delirium: Investigation of DNA Methylation Changes on Tumor Necrosis Factor alpha in Search for Delirium Biomarker
Mentor: Gen Shinozaki, Psychiatry

8:15  Nealy Wooldridge, M2

Morning Blood Pressure Surge is Blunted in Individuals with Chronic Anxiety: Relation with Nocturnal Blood Pressure Dipping
Mentor: Gary Pierce, Health & Human Physiology

8:30  Greg Power, M2

Comparison of Outcomes in Extremely Premature Babies with Respiratory Distress Syndrome through Administration of Curosurf and Survanta
Mentor: John Dagle, Pediatrics

8:45  Mary Kate Skalitzky, M2

The Impact of Religiosity/Spirituality on Infertility Quality of Life Metrics in a Veteran Population
Mentor: Ginny Ryan, Obstetrics & Gynecology

9:00  Erik Anderson, M2

High- and Total-Spinal Anesthesia: A Systematic Review
Mentors: Cynthia Wong & Unyime Ituk, Anesthesia

9:15  Brendan George, M2

Deep Sedation is Associated with Increased Mortality in Mechanically Ventilated Air Transport Patients: A Cohort Study
Mentor: Azeemuddin Ahmed, Emergency Medicine
Oral Presentations

9:30  Tyler Foley, M2
      *Implementation of an ED Mechanical Ventilation Protocol Improves Compliance with Lung Protective Ventilation*
      Mentor: Nicholas Mohr, Emergency Medicine

9:45  Hannah Pope, M2
      *The Long-Term Outcome of Patients with Abnormal Head Position Due to Nystagmus Treated with The Anderson-Kestenbaum Procedure*
      Mentor: Alina Dumitrescu, Ophthalmology & Visual Sciences
Poster Presentations

1. **Ryan Staudte, M2**  
   *Endocrine Effects of BPF on HS Rats*  
   Mentor: Anne Kwitek, Pharmacology

2. **Kyle Leubka, M2**  
   *Are College Football Players Who Also Wrestled in High School at a Lower Risk for Concussion than Non-Wrestlers?*  
   Mentor: Andrew Peterson, Pediatrics

3. **Conor Houlihan, M2**  
   *Alcohol Consumption’s Effect on Heart Rate Variability in High Endurance Athletes during a One Week Endurance Cycling Event.*  
   Mentor: Britt Marcussen, Family Medicine

4. **Austin DeLau, M2**  
   *Identification & Preliminary Characterization of ATF4 Interacting Proteins in Skeletal Muscle Fibers*  
   Mentor: Chris Adams, Internal Medicine

5. **Vivian Pham, M2**  
   *Improving Therapies for Metastatic Colorectal Cancer with Radiosensitizers and Stereotactic Body Radiotherapy*  
   Mentor: Bryan Allen, Radiation Oncology

6. **Michael Heffernan, M2**  
   *Relationship between numeracy and pain burden in parturients using patient-controlled epidural labor analgesia (PCEA): a prospective cohort study*  
   Mentor: Cynthia Wong, Anesthesia

7. **Nicholas Fleege, M4**  
   *MRI Occult Meniscal Tears of the ACL Deficient Knee: Characterization of Occult Meniscal Tears and Association with Medial Femoral Condyle Rim Bone Contusions*  
   Mentor: D. Lee Bennett, Radiology

8. **Sarah Dougherty, M2**  
   *Obstacles Faced During Bracing in the Treatment of Clubfoot Deformity*  
   Mentor: Jose Morcuende, Orthopaedics & Rehabilitation

9. **Zachary Rye, M1**  
   *Post-operative Pain Management of Pediatric Urological Procedures*  
   Mentor: Douglas Storm, Urology

10. **Grant Young, M4**  
    *Qualitative systematic review of reports of dural puncture and cerebral vein thrombosis*  
    Mentor: Cynthia Wong, Anesthesia

11. **Jayden Bowen, M2G**  
    *Leishmania major and Staphylococcus aureus coinfection in mice and human neutrophils*  
    Mentor: Mary Wilson, Internal Medicine

12. **Nolan Asprey, M2**  
    *The Effect of Individualized Positive End-Expiratory Pressure Compared to Low Positive End-Expiratory Pressure on Tissue Oxygenation During One Lung Ventilation in Obese Patient undergoing Thoracic Surgery*  
    Mentor: Dionne Peacher, Anesthesia
<table>
<thead>
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<th>No.</th>
<th>Name</th>
<th>Year</th>
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<tbody>
<tr>
<td>13</td>
<td>Julia Gales</td>
<td>M2</td>
<td>Pediatric Surgery Near the End of Life</td>
<td>Erica Carlisle, Surgery</td>
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<tr>
<td>14</td>
<td>Tori Troesch</td>
<td>M2</td>
<td>Quality of Treatment for Clubfoot Deformity: A Decade Analysis</td>
<td>Jose Morcuende, Orthopaedics &amp; Rehabilitation</td>
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<tr>
<td>15</td>
<td>Hassan Ahamed</td>
<td>M1</td>
<td>The Effect of Monoamine Reuptake Inhibitors on Seizure Susceptibility in DBA/1 Mice</td>
<td>George Richerson, Neurology</td>
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<td>16</td>
<td>Pavane Gorrepati</td>
<td>M2</td>
<td>The Effect of Eyelid Surgery on the Ocular Surface, Tear Composition, and Meibomian Gland</td>
<td>Erin Shriver, Ophthalmology &amp; Visual Sciences</td>
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<td>17</td>
<td>Leo Brueggeman</td>
<td>LOA</td>
<td>Forecasting Autism Gene Discovery With Machine Learning and Heterogeneous Biological Data</td>
<td>Jacob Michaelson, Psychiatry</td>
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<td>18</td>
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<td>Gordon Buchanan, Neurology</td>
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<td>John Engelhardt, Anatomy &amp; Cell Biology</td>
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<td>Roshan Abid</td>
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<td>Don Anderson, Orthopaedics &amp; Rehabilitation</td>
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<td>Lucy Wibbenmeyer, Surgery</td>
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<td>Staphylococcus aureus Nasal Carriage and the Risk of Surgical Site Infections among Patients Undergoing Orthopedic Surgical Procedures to Fix Acute Fractures: A Retrospective Cohort Study</td>
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<td>Using engineered photopolymerized micropatterns and live cell imaging to study the growth of Spiral Ganglion Neurons</td>
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<td>Mariko Sato, Pediatrics</td>
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<td>Identification and Analysis of Leishmania exosome-associated proteins and patient demographic information in Natal, Brazil.</td>
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<td>Ryan Neuhaus, M1</td>
<td>Sangil Lee, Emergency Medicine</td>
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<td>Activation and Utilization of an Electronic Health Record Patient Portal at an Academic Medical Center - Impact of Patient Demographics and Geographic Location</td>
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<td>Alex Meyer, M1</td>
<td>Ravi Ashwath, Pediatrics</td>
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<td>Noelle Bowdler, Obstetrics &amp; Gynecology</td>
<td>Recovery from cesarean delivery at UIHC: a comparison to Enhanced Recovery Protocols</td>
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<td>Chris Amdahl, M2</td>
<td>Muneera Kapadia, Surgery</td>
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<td>Mohammad Bashir, Cardiothoracic Surgery</td>
<td>Evaluating the need for routine screening of carcinoid heart disease</td>
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<td>Ashten Sherman, M1</td>
<td>Natalie Denburg, Neurology</td>
<td>Neural Correlates of Positive and Negative Affectivity in Older Adults: A Structural MRI Study</td>
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<td>Ossama Abu-Halawa, M1</td>
<td>Miles Pufall, Biochemistry</td>
<td>Positive feedback between PI3Kd and glucocorticoids sensitizes resistant B-cell Precursor Acute Lymphoblastic Leukemia cells to treatment</td>
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<td>Jasmine Roghair, M1</td>
<td>Patricia Espe-Pfeifer, Psychiatry &amp; Andrew Peterson, Sports Medicine</td>
<td>Neuropsychological Profiles of Youth Participants in Flag vs. Tackle Football</td>
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<td>Andrew Kalenkiewicz, M2G</td>
<td>Michael Welsh, Internal Medicine</td>
<td>Novel Drug Candidate for Parkinson's Disease Stimulates the Glycolytic Enzyme PGK1</td>
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Poster Presentations

52  Jessica Hui, M2
Effects of region-specific knockouts of Ndufs4 on volatile anesthetic response
   Mentor: Philip Morgan, Margaret Sedensky, Anesthesia (non-UI)

53  David Crompton, M2
A New Rapid Visual Field Screening Test for Patients with Idiopathic Intracranial Hypertension
   Mentor: Michael Wall, Neurology

54  Mikako Harata, M1
Delivery of short hairpin RNA via lentivirus in human pseudoislets provides a model to test
dynamic regulation of insulin secretion and gene function in human islets
   Mentor: Yumi Imai, Internal Medicine

55  Akansha Jain, M1
Utilizing ferroptosis to target therapy-resistant cancer cells
   Mentors: Michael Henry & Adam Dupuy, Molecular Physiology & Biophysics

56  Sanjeeva Weerasinghe, M2
Impact of medical scribing on the learning of clinical skills
   Mentor: Kelly Skelly, Family Medicine

57  Yixi Wang, M1
Creation of an inducible neonatal diabetic zebrafish model
   Mentor: Christopher Emfinger, Colin Nichols, Physiology & Cell Biology, Washington Univ. School of Medicine

58  Shadeh Ghaffari-Rafi, M2
Quantitative Susceptibility Mapping (QSM) and Vessel Wall Imaging (VWI) MRI sequences in
Identifying Subjects with Intracranial Aneurysms who Have Microbleeds Associated with Sentinel Headache: Pilot Study
   Mentor: David Hasan, Neurosurgery

59  Andres Dajles, M2G
Penalized Regression Models on the Lipid Profile of Subjects With Multiple Sclerosis
   Mentor: Yuan Huang, Public Health