47th Annual
Medical Student Research Day
September 4, 2015

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

Program of Events

Sponsored by:
Medical Student Research Club and
Medical Student Research Council

Free to University of Iowa Students
Welcome to the 47th Annual Student Medical Research Day. Research Day provides an opportunity for medical students who have conducted research to present their results, receive feedback, and compete for awards. The day’s events begin at 8:00 A.M. and include the following schedule:

8:00-8:30  Continental Breakfast and Registration
           MERF Atrium

8:30–10:15  Oral Presentations (concurrent sessions)
            1117, 2123, 2135, 2155, 2165, 2189 MERF

10:15–10:30  Break

10:30–11:15  1110 MERF
             Plenary Speaker: Jeffrey Murray, M.D.
             Professor, Department of Pediatrics
             Deputy Director, Discovery and Translational Sciences
             Bill and Melinda Gates Foundation

             “From pipettes to patients to public health:
             An unanticipated career path of discovery and people”

11:15–11:30  Break

11:30–1:30  Poster Sessions and Buffet Lunch
            MERF Atrium

AWARDS BANQUET, TUESDAY, SEPTEMBER 8, 2015

6:00 – 6:30  Social Time
            Second Floor Ballroom, IMU

6:30 – 9:00  Buffet Dinner
            Second Floor Ballroom, IMU

Keynote Speaker: Gary Rosenthal, M.D.
Interim Chair & Department Executive Officer
Department of Internal Medicine
Professor of Internal Medicine and of Health Management & Policy

“Building a Career as a Physician Investigator:
Lessons I Learned Along the Way”
AWARDS BANQUET
Tuesday, September 8, 2015

There are several Research Day awards, including three 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 Dr. 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 Dr. Edward Heath, this award recognizes outstanding medical research. As Professor and Chairman of the Biochemistry Department at the University of Iowa, Dr. 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 Dr. Melvin L. Marcus, faculty supervisor of the ISMRC for over a decade. Dr. Marcus was instrumental in maintaining the club as an integral part of the University of Iowa research community. Dr. 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.
DEPARTMENTAL AWARDS

ANESTHESIA
The Department of Anesthesia will sponsor The Margaret V. Lunsford Award for Research in Anesthesia, the Excellence in Basic Science Research Award and the Excellence in Clinical or Translational Research Award for the best oral or poster presentation by a medical student doing research in anesthesia.

DERMATOLOGY
The Department of Dermatology will sponsor the Excellence in Dermatology Research award. The award will be 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 Excellence in Emergency Medicine research. The award will be designated 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 designated for the best oral or poster presentation by a medical student in family medicine research.

INTERNAL MEDICINE
The Department of Internal Medicine will sponsor The John Stokes Award for Research in Internal Medicine (first place) and two awards for Research Excellence in Internal Medicine (2nd and 3rd place), for a total of three awards for outstanding student presentations. The awards will be open to student research in any department and in any project area.

NEUROLOGY and NEUROSURGERY
The Departments of Neurosurgery and Neurology will sponsor three awards designated for the best poster or oral presentation by a medical student in the categories of basic neuroscience, translational neuroscience and clinical neuroscience.

OBSTETRICS/GYNECOLOGY
The Department of Obstetrics and Gynecology will sponsor an award designated for the best poster or oral presentation by a medical student in clinical/translational research in Obstetrics and Gynecology.
OPHTHALMOLOGY
The Department of Ophthalmology will sponsor two awards to honor William E. Scott, MD and Thomas A Weingeist, PhD, MD for the best oral or poster presentations by a medical student in eye research.

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

OTOLARYNGOLOGY
The Department of Otolaryngology will sponsor an award 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 for outstanding student presentations this year. One will be for basic science and one for clinical/translational study in pediatrics.

PHARMACOLOGY
The Department of Pharmacology will sponsor the 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 two awards, The George Winokur Research Award, and The Bob Robinson 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. Dr. 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. 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, The Nicholas P. Rossi Award for research in cardiothoracic surgery and The Dr. Kimberly Ephgrave Medical Student Award 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 designated for the best oral or poster presentation by a medical student in urology research.

A special thank you to:
The Medical Student Research Council
The Medical Student Research Club
Robert Roghair, Director, Deanna Nielson, Stephanie Whitlock, OSAC,
The Departments of Anesthesiology, Dermatology, Emergency Medicine, Family Medicine, Internal Medicine, Neurology and Neurosurgery, Obstetrics & Gynecology, Ophthalmology, Orthopaedics, Otolaryngology, Pathology, Pediatrics, Pharmacology, Psychiatry, Radiology, Radiation Oncology, Surgery and Cardi thoracic Surgery and Urology.
Acknowledgements

**JUDGES**

<table>
<thead>
<tr>
<th>Dr. Bryan Allen</th>
<th>Dr. Toshi Kitamoto</th>
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<tr>
<td>Dr. Patrick Barlow</td>
<td>Dr. Matthew Krasowski</td>
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<td>Dr. Emine Bayman</td>
<td>Dr. Clare Kreiter</td>
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<td>Dr. Timothy Brennan</td>
<td>Dr. Anne Kwitek</td>
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<td>Dr. Garry Buettner</td>
<td>Dr. Barcey Levy</td>
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<td>Dr. Yury Chaly</td>
<td>Dr. Ashutosh Mangalam</td>
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<td>Dr. Anil Chauhan</td>
<td>Dr. Steven McElroy</td>
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<td>Dr. Natalie Denburg</td>
<td>Dr. Stephen McGowan</td>
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<td>Dr. Abhay Divekar</td>
<td>Dr. Kelly Messingham</td>
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<td>Dr. Arlene Drack</td>
<td>Dr. David Meyerholz</td>
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<td>Dr. Eric Epping</td>
<td>Dr. Francis Miller</td>
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<td>Dr. Jess Fiedorowicz</td>
<td>Dr. Nicholas Mohr</td>
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<td>Dr. Katherine Gibson-Corley</td>
<td>Dr. Robert Roghair</td>
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<td>Dr. Prabhat Goswami</td>
<td>Dr. Sergio A. Sanchez Luna</td>
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<td>Dr. Duane Hall</td>
<td>Dr. Melinda Seering</td>
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<td>Dr. Donna Hammond</td>
<td>Dr. Jeffrey Segar</td>
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<td>Dr. Matthew Harper</td>
<td>Dr. Andread Simons-Burnett</td>
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<td>Dr. Jon Houtman</td>
<td>Dr. Douglas Spitz</td>
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<td>Dr. Frederick Keith Houwen</td>
<td>Dr. David Stoltz</td>
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<td>Dr. Snigdha Jain</td>
<td>Dr. Maria Story</td>
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<td>Dr. Charles Jennissen</td>
<td>Dr. Sudhakar Subramani</td>
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<tr>
<td>Dr. Laura Kair</td>
<td>Dr. Michelle Weckmann</td>
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Oral Presentations
8:30 am – 10:15 am
Concurrently in Rooms 1117, 2123, 2135, 2155, 2165, 2189

Room 1117

8:30 Jenna Peterson, M2
“Differential Vasopressin Receptor Expression and Response in Preeclampsia”
Mentor: Dr. Mark Santillan, Obstetrics & Gynecology

8:45 Kelsey Harringa, M2
“Anticoagulation Quality Assessment: Warfarin Therapy at the University of Iowa Children’s Hospital”
Mentor: Dr. Anjali Sharathkumar, Pediatrics

9:00 Gabriel Velez, M2G
“Precision Medicine: Personalized Proteomics for Diagnosis and Treatment of Idiopathic Inflammatory Disease”
Mentor: Dr. Vinit Mahajan, Ophthalmology & Visual Sciences

9:15 Nathan Miller, M2
“Selective spinal immobilization protocol for prehospital providers: Effects on practice and patient outcomes”
Mentor: Dr. Joshua Stilley, Emergency Medicine

9:30 Emily White, M1
“Dignity Therapy: Narratives at end of life”
Mentor: Dr. Michelle Weckmann, Family Medicine

9:45 James Chounramany, M2
“Determining the correlation between thermal images and skin and soft tissue infections.”
Mentor: Dr. Philip Polgreen, Internal Medicine

10:00 Mitchell LeFebvre, M1G
“Conjugation of Pathogen Associated Molecular Pattern Molecules to Radiation Attenuated Plasmodium Sporozoites Enhances Plasmodium-specific CD8+ T Cell Responses”
Mentor: Dr. John Harty, Microbiology

Room 2123

8:30 Braden Jensen, M2
“GMPPB-Associated Dystroglycanopathy: Emerging Common Variants with Phenotype Correlation”
Mentor: Dr. Katherine Mathews, Pediatric Neurology

8:45 Brent Kramer, M3
“Residual Astigmatism After Toric IOL Placement”
Mentor: Dr. John Berdahl, Ophthalmology
9:00  Tiffany Lim, M4G  
“The Role of Inflammasomes in Bacterial Co-infection during Cutaneous Leishmaniasis”  
Mentor: Dr. Mary Wilson, Internal Medicine

9:15  Anthony Chung, M4  
“The Effect of Fine Motor Skill Activities on Surgical Simulator (Eyes®) Performance”  
Mentor: Dr. Erin Shriver, Ophthalmology & Visual Sciences

Room 2135

8:30  Ali Cohen, M2  
“Violence as a Mechanism of Ocular Injury in Women”  
Mentor: Dr. Erin Shriver, Ophthalmology & Visual Sciences

8:45  Grant Henning, M2  
“A new mitochondria-targeted therapy for metastatic melanoma”  
Mentor: Dr. Michael Schultz, Radiology

9:00  Evelyn Qin, M2  
“Epidemiology and Geospatial Analysis of All-Terrain Vehicle Crashes in Iowa”  
Mentor: Dr. Gerene Marie Denning, Emergency Medicine

9:15  Lisa Wehr, M2  
“Resident physician perceptions and practices toward the integration of primary care in psychiatry”  
Mentor: Dr. Jess Fiedorowicz, Psychiatry

9:30  Sheps King-McAlpin, M2G  
“Interaction of HCN4 and Cav1.3 in SA Node Function”  
Mentor: Dr. Amy Lee, Physiology & Biophysics

9:45  Sara Stucker, M2  
“Flow Differential as a Method of Predicting ECMO Oxygenator Failure”  
Mentor: Dr. Joseph Turek, Cardiothoracic Surgery

10:00  Aline Sandouk, M2  
“Glycerol Monolaurate (GML) Inhibits T Cell Activation by Simultaneously Decreasing Oxidative Phosphorylation and Increasing Glycolysis”  
Mentor: Dr. Jon Houtman, Microbiology

Room 2155

8:30  Kai Rogers, M2G  
“The Role of N-AgrD Polymerization in a Novel Form of Bacterial Motility”  
Mentor: Dr. Blaise Boles, Microbiology

8:45  Olivia Rice, M2  
“The Face Doesn’t Lie: A Novel Approach to Diagnose and Treat Light Sensitivity”  
Mentor: Dr. Randy H. Kardon, Ophthalmology & Visual Sciences

9:00  Thomas Harris, M2  
“Youth Tackle Football Players Experience Lower Injury Rates Than Flag Football Players”  
Mentor: Dr. Andrew Peterson, Pediatrics
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<th>Time</th>
<th>Speaker</th>
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<tr>
<td>9:15</td>
<td>William McDowell, M2</td>
<td>“Injuries in Youth Tackle Football Are More Severe Than Flag Football”</td>
<td>Dr. Andrew Peterson, Pediatrics</td>
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<td>9:30</td>
<td>Karan Rao, M2</td>
<td>“Relating Fracture Severity to Post-Traumatic Osteoarthritis Risk after Intra-Articular Calcaneal Fractures.”</td>
<td>Dr. Don Anderson, Orthopaedics and Rehabilitation</td>
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<td>9:45</td>
<td>Matthew Traxler, M2</td>
<td>“Identifying differentially expressed genes following the knockdown of RGD1562963 in H4IE hepatoma cells”</td>
<td>Dr. Anne Kwitek, Pharmacology</td>
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<td>10:00</td>
<td>Robert Humble, M1</td>
<td>“Extra tubes at UI Health Care: a work in progress”</td>
<td>Dr. Matthew Krasowski, Pathology</td>
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<td>8:30</td>
<td>Keyan Zarei, M2</td>
<td>“Using the Banana Slug to Study Mucus Expansion in Cystic Fibrosis”</td>
<td>Dr. Michael Welsh, Internal Medicine</td>
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<td>8:45</td>
<td>Amy Whillock, M2G</td>
<td>“Loss of TRAF3 increases BCR signaling and B cell proliferation with BCR stimulation”</td>
<td>Dr. Gail A. Bishop, Microbiology</td>
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<td>9:00</td>
<td>Morgan Bobb, M1</td>
<td>“Telemedicine Provides Non-Inferior Research Informed Consent for Remote Enrollment in an Emergency Department-based Clinical Trial”</td>
<td>Dr. Nicholas Mohr, Emergency Medicine</td>
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<td>9:15</td>
<td>Zhaohui Hu, M2</td>
<td>“Why can’t patients with albinism see? Electrophysiology and structure of the central retina in albinism”</td>
<td>Dr. Arlene Drack, Ophthalmology &amp; Visual Sciences</td>
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<td>9:30</td>
<td>Nyle Larson, M2</td>
<td>“Comparison of Asymmetric PSO vs. SPO, and a Novel Technique to Improve Anatomic Outcomes”</td>
<td>Dr. Stuart L. Weinstein, Orthopaedics and Rehabilitation</td>
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<td>9:45</td>
<td>Thomas Meirick, M2</td>
<td>“Determining the Prevalence and Costs of Unnecessary Referrals in Adolescent Idiopathic Scoliosis”</td>
<td>Dr. Stuart L. Weinstein, Orthopaedics and Rehabilitation</td>
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<td>10:00</td>
<td>Adam Kruse, M2</td>
<td>“Using Sideline Concussion Tests in the Emergency Department”</td>
<td>Dr. Andy Peterson, Pediatrics, Sports Medicine</td>
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Room 2189

8:30  Sanam Zarei, M1
      “Altering Ear Development to Mimic Reduced Vestibular Input in the Elderly”
      Mentor: Dr. Bernd Fritzsch, Otolaryngology

8:45  Brenton Sherwood, M2
      “Evaluation of the efficacy, effectiveness, and cost-effectiveness of telemedicine for
      urologic care in the state of Iowa’s prison population”
      Mentor: Dr. Bradley Erickson, Urology

9:00  Erin Evans, M2
      “Child Welfare Professionals’ Determination of When Certain Unsafe Activities and
      Lack of Child Protection Constitutes Child Neglect”
      Mentor: Dr. Charles Jennissen, Emergency Medicine

9:15  Margaret Fuller, M2G
      “Alcohol Abuse: a role for ASICs?”
      Mentor: Dr. John Wemmie, Psychiatry

9:30  Drake Bouzek, M1
      “Early airway disease in cystic fibrosis pigs”
      Mentor: Dr. David Stoltz, Internal Medicine

9:45  Madeline Knott, M2
      “Role of hypothalamic angiotensin receptors in the hemodynamic and anorexigenic
      responses to leptin”
      Mentor: Dr. Robert Roghair, Pediatrics

10:00 Jenna Fussell, M2
      “A lipogenic-switch shifts metabolism from glycolysis to mitochondrial respiration
      during aging”
      Mentor: Dr. Prabhat Goswami, Radiation Oncology
40. **Tina Arkee, M2G**
   “Neuroantigen-specific CD8+ T cells in experimental autoimmune encephalitis (EAE)”
   Mentor: Dr. Nitin Karandikar, Pathology

24. **Nicholas Arpey, M2**
   “Intramuscular hydrogen peroxide (H2O2) induces spontaneous pain via TRPA1 receptors”
   Mentor: Dr. Timothy Brennan, Anesthesia

11. **Samantha Aust, M1**
   “Evaluation of APC’s and Tregs in Lesions from Patients with the Autoimmune Blistering Disease, Bullous Pemphigoid”
   Mentor: Dr. Kelly Messingham, Dermatology

28. **Lauren Boland, M2G**
   “Severity of Diabetic Microenvironment Differentially Impacts the Immunosuppressive Potency of Mesenchymal Stem Cells”
   Mentor: Dr. James Ankrum, Biomedical Engineering

36. **Brandon Boldt, M2**
   “Assessment of KIT and Androgen Receptor Expression in Adenoid Cystic Carcinoma”
   Mentor: Dr. Andrew Bellizzi, Pathology

67. **Nicholas Borcherding, M2G**
   “ROR1, an oncogenic target for therapy in basal-like breast cancer”
   Mentor: Dr. Weizhou Zhang, Pathology

49. **Leo Brueggeman, M1G**
   “Identifying Recurrent Enhancer Mutations in Cancer”
   Mentor: Dr. Kai Tan, Internal Medicine

48. **Elliot Burghardt, M1G**
   “Rapid, Culture-Free Identification of Bacterial Pathogens”
   Mentor: Dr. James McNamara, Internal Medicine

65. **Robert Burnett, M2**
   “Factors Affecting Outcomes After ACL reconstruction”
   Mentor: Dr. Matthew Bollier, Orthopaedics and Rehabilitation

16. **Allen Choi, M1**
   “A Gene Expression Classifier for Gastroenteropancreatic Neuroendocrine Tumors”
   Mentor: Dr. James Howe, Surgery
41. Justine Cheng, M2
   “Velvet, a New Mouse Model of Aortic Valve Disease”
   Mentor: Dr. Donald D. Heistad, Internal Medicine

39. Rebecca Chung, M4
   “Clinicopathological predictors of chemoresponsiveness in epithelial ovarian cancer”
   Mentor: Dr. Colleen Stockdale, Obstetrics & Gynecology

38. Tatiana Correa, M2
   “Cox-2 and 15-PGDH Play a Critical Role in Progression of Cerebral Aneurysms to Rupture with Evidence of Gender Differential Response to Aspirin in Humans and Mice”
   Mentor: Dr. David Hasan, Neurosurgery

9. Greta Dahlberg, M2
   “Implementation of trauma informed care in a pediatric population assessed for child abuse and neglect”
   Mentor: Dr. Resmiye Oral, Pediatrics

46. Taisha Doo, M2
   “Small Von Willebrand Factor (VWF) Multimers from a Patient with Type 2B Von Willebrand Disease Inhibit Platelet Aggregation Mediated By VWF with a Normal Multimer Pattern”
   Mentor: Dr. Jose Lopez, Biological Sciences

5. Dean Elhag, M2
   “Factors Affecting Turnover Time in a Hospital Surgical Suite”
   Mentor: Dr. Javier H. Campos and Dr. Franklin Dexter, Anesthesia

4. Dean Elhag, M2
   “A Practical Lower Limit in the Incidence of Postoperative Residual Paralysis with Electromyographic Neuromuscular Monitoring”
   Mentor: Dr. Michael Todd & Dr. Bradley Hindman, Anesthesia

3. Ryan Frisbie, M2
   “Optimizing Design Features of a Novel Device for Joint Distraction in the Ankle”
   Mentor: Dr. Jess Goetz, Orthopaedics and Rehabilitation

70. Geoffrey Gerardin, M2
    “Difference in Primary Pulmonary Fibroblast Traction Force in Response to Initial Culture Conditions”
    Mentor: Dr. Daniel J. Tschumperlin, Mayo Clinic Department of Physiology & Biomedical Engineering

18. Jonathan Gilmore, M1
    “Molecular Analysis of Metastatic Lung Adenocarcinoma to the Pancreas: Case Presentation and Literature Review”
    Mentor: Dr. James Mezhir, Surgery
45. Joshua Godding, M2
   “Impact of Early Expansion of the Affordable Care Act in Select States”
   Mentor: Dr. Gary Rosenthal, Internal Medicine

35. Alexander Greiner, M2
   “Identification of Sudden Cardiac Death Candidate Genes by Whole Exome Sequencing”
   Mentor: Dr. Barry London, Internal Medicine

1. Chloe Gumpert, M2
   “Identification of novel genes with mutations leading to hypertrophic cardiomyopathy (HCM) in ENU mice”
   Mentor: Dr. Ferhaan Ahmad, Internal Medicine

15. Kripa Guram, M2
   “Pharmacological agents that generate H2O2 radiosensitize human lung and breast cancer cells to ionizing radiation”
   Mentor: Dr. Douglas R. Spitz, Radiation Oncology

58. James Halsey, M2
   “Helicobacter pylori modulates neutrophil morphology and lifespan”
   Mentor: Dr. Lee-Ann H. Allen, Internal Medicine

10. Claire Hannah, M1
   “Exome sequencing in eating disorders: a pathway”
   Mentor: Dr. Michael Lutter, Psychiatry

30. Ike Hasley, M2
   “Systematic review of the role of surgical margins on sarcoma recurrence and survival”
   Mentor: Dr. Benjamin Miller, Orthopaedics and Rehabilitation

17. Marcus Haustein, M2
   “Interceptive sensitivity is associated with affect, personality, and memory in older adults”
   Mentor: Dr. Natalie Denburg, Neurology

27. Tai Holland, M1
   “Early Life Exposure to General Anesthetics Reduces Sleep in Adult Drosophila melanogaster”
   Mentor: Dr. Toshi Kitamoto, Anesthesia

60. Evan Holleran, M2
   “Succinate Dehydrogenase Deficiency in Pheochromocytoma and Paraganglioma”
   Mentor: Dr. Andrew Bellizzi, Pathology
13. Andrew Holte, M1
   “Validation of Linearly Ramped Protocol for the Determination of Lacate Threshold”
   Mentor: Dr. Andrew Peterson, Sports Medicine

26. Chase Johnson, M2
   “Pharmacological Ascorbate Enhances Chemotherapeutics in Gastric Adenocarcinoma”
   Mentor: Dr. James Mezhir, Surgery

64. Amrit Kanwar, M2
   “The Association of Weight Loss and Cardiometabolic outcomes in overweight and obese children: a systematic review and meta-regression”
   Mentor: Dr. M. Hassan Murad – Mayo

14. Ian Kidder, M2
   “Role of HDAC4 in Eating Disorders”
   Mentor: Dr. Michael Lutter, Psychiatry

25. Emma Killoran, M2
   “Type 1 diabetic induced pluripotent stem cell-derived insulin producing cells rapidly correct hyperglycemia in diabetic mice”
   Mentor: Dr. Nicholas Zavazava, Internal Medicine

42. Johnny Kingyon, M1
   “Mechanisms of human timing: An intraoperative electrophysiology study in Parkinson's disease.”
   Mentor: Dr. Nandakumar Narayanan, Neurology

34. James Kohler, M2
   “Can surgeons accurately predict the risk of perioperative complications?”
   Mentor: Dr. Benjamin Miller, Orthopaedics and Rehabilitation

47. Scott Laurenzo, M2
   “Irradiance Measurement Abnormalities in Seasonal Affective Disorder”
   Mentor: Dr. Jess Fiedorowicz, Psychiatry

23. Ryan Lechtenberg, M1
   “Co-localization of serotonin (5-HT) and thyrotropin-releasing hormone (TRH) within neurons of the ventral medulla”
   Mentor: Dr. George Richerson, Neurology

7. Eric Lee, M1
   “Structure/Function Correlation of Optical Coherence Tomography in the Central and Peripheral Visual Fields”
   Mentor: Dr. Michael Wall, Neurology
69. Laura Marquez Loza, M1G
   “Acute effects of THC on the Brain Reward System of Healthy and Schizophrenic Individuals”
   Mentor: Dr. Daniel O'Leary, Psychiatry

52. Kaci McCleary, M2
   “The Efficacy of propofol as a replacement for amobarbital in intracarotid Wada testing”
   Mentor: Dr. Robert Jones, Neurology

56. Tyler McDermott, M2
   “An In-Depth Review of 368 Errors in Radiology”
   Mentor: Dr. Monzer Abu-Yousef, Radiology

8. Devin McKissic, M2
   “Service Referral Rates and Their Determinants in Trauma-Exposed Children and Their Caretakers”
   Mentor: Dr. Resmiye Oral, Pediatrics

62. James McMenimen, M2
   “Impaired mucociliary transport in CF piglets: pH sensitivity and interrogation of the gland-surface interface”
   Mentor: Dr. Michael Welsh, Internal Medicine

32. Adam Miller, M2
   “The Role of Collagen XVII Autoantibodies in the Pathogenesis of Parkinson’s disease”
   Mentor: Dr. Janet Fairley, Dermatology

29. Norah Nguyen, M2
   “Relapses after clubfoot correction by the Ponseti method: evaluating patient adherence and contributory obstacles in Vietnam”
   Mentor: Dr. Jose A. Morcuende, Orthopaedics and Rehabilitation

53. Andrew Pap, M2
   “Establishment of a Protocol for Generating Definitive Hematopoietic Progenitor Cells from Human Induced Pluripotent Stem Cells”
   Mentor: Dr. Nicholas Zavazava, Internal Medicine

31. Garrick Priebe, M2
   “How Accurately Do Resident Case Presentations Reflect the Content of Clinical Interviews? – A Comparative Analysis”
   Mentor: Dr. Marcy Rosenbaum, Family Medicine

63. Allie Rapp, M2
   “Patient Satisfaction with Immediate Post-delivery Long Acting Reversible Contraception Placement”
   Mentor: Dr. Abbey Hardy-Fairbanks, Obstetrics & Gynecology
19. Zachary Rasmussen, M2  
“Correlating Dynamic SSEP and MRI in Cervical Myelopathy Treatment”  
Mentor: Dr. Kingsley Abode-Iyamah, Neurosurgery

50. Grant Riesberg, M2  
“Evaluation of Focal Neurologic Lesions in Refractory Epilepsy Utilizing 7T Magnetic Resonance Imaging”  
Mentor: Dr. Vincent A. Magnotta, Radiology

55. Kevin John Rivera, M2  
“Recombinant Trypanosoma cruzi antigens in enzyme-linked immunosorbent assay yield diagnostic confirmation for blood donors in Northeast Brazil”  
Mentor: Dr. Mary Wilson, Internal Medicine

22. Miguel Rodriguez-Homs, M2  
“A New, Low Frequency Gene Predisposing to Juvenile Polyposis”  
Mentor: Dr. James Howe, Surgery

12. Brett Rosauer, M2  
“Dynamic needle tip positioning with ultrasound versus palpation technique for radial artery cannulation. A prospective randomized controlled trial.”  
Mentor: Dr. Roy Kiberenge, Anesthesia

43. Caroline Sanderson, M2  
“Dynamic serial casting and physical therapy to prevent hip dislocation in children with cerebral palsy”  
Mentor: Dr. Jose A. Morcuende, Orthopaedics and Rehabilitation

57. Rachel Schenkel, M1  
“The LPO/DUOX/Halide Airway Host Defense System Has Antiviral Properties Against Influenza A”  
Mentor: Dr. Paul McCray, Pediatrics

51. Matthew Sloan, M2  
“Relationship between hippocampal volume, spatial memory, and cardiorespiratory fitness in older adults”  
Mentor: Dr. Daniel Tranel, Neurology  
Dr. Michelle Voss, Psychological and Brain Sciences

68. Payton Strawser, M1  
“Cardioprotective Effects of Leptin Supplementation in the Midst of Neonatal Growth Restriction”  
Mentor: Dr. Robert Roghair, Pediatrics

66. Sriya Subramani, M2  
“Analysis of Physician and Practice Baseline Surveys for The ICARE (Improved Cardiovascular Risk Reduction to Enhance Rural Primary Care) Study”  
Mentor: Dr. Barcey Levy, Family Medicine
21. **Subha Subramanian, M2**
   “**Discovery of differential HDAC4 methylation sites in anorexia nervosa**”
   Mentor: Dr. James B. Potash, Psychiatry

37. **Frida Teran, M2G**
   “**Discovery of proteins that interact with ATF4 in skeletal muscle**”
   Mentor: Dr. Chris Adams, Internal Medicine

59. **MacKenzie Thayer, M2**
   “**The Role of Effective Communication during the Postoperative Conversation with Family**”
   Mentor: Dr. Muneera Kapadia, Surgery

61. **Justin Vaverka, M1**
   “**Long Term Evaluation of Patients with Congenital Heart Disease and Congenital Arrhythmias with Pacemakers**”
   Mentor: Dr. Nicholas Von Bergen, Pediatrics

33. **David Wang, M1**
   “**CHOP expression in Schwann cells of CMT1B patients and morphometric analysis of cutaneous nerve fibers**”
   Mentor: Dr. Michael Shy, Neurology

6. **Robert Wanzek, M1**
   “**New Insights for Glaucomatous Visual Loss: The Outer Periphery**”
   Mentor: Dr. Michael Wall, Neurology

20. **Jessica Waters, M1**
   “**A Safer Place to Ride: Regulations and DNR enforcement in OHV Parks Increases Safety Behaviors**”
   Mentor: Dr. Karisa Harland, Emergency Medicine

2. **Emily Weig, M1**
   “**Pulse Wave Velocity as a Predictor for Postoperative Cardiac Events: Preliminary Results**”
   Mentor: Dr. Kenichi Ueda, Anesthesia

44. **Christopher Winters, M1**
   “**CaMKII Inhibition in Type II Pneumocytes Protects From Bleomycin-Induced Pulmonary Fibrosis**”
   Mentor: Dr. Isabella Grumbach, Internal Medicine

54. **Eliot Zhu, M1G**
   “**forestSV v2: Resolving structural variation from whole-genome short read sequencing data with statistical learning**”
   Mentor: Dr. Jacob Michaelson, Psychiatry