PI: Dr. David Eckmann
Department: Anesthesiology
Email: david.eckmann@osumc.edu
Lab Manager/Department Contact: Adam Green
Lab Manager/Department email: adam.green@osumc.edu
Preferred Method of contact: Faculty email
Have you mentored a medical student before? Yes (funded)
Website(s): https://medicine.osu.edu/departments/cmei
Category of Research: Basic

Project Description: The Eckmann lab studies mitochondrial mechanics and bioenergetics in the framework of cellular metabolic engineering. Work in the lab includes cell culture, cell exposure to environmental and other types of challenge, evaluation of mitochondrial dynamics via fluorescence microscopy imaging and image analysis, and evaluation of cellular bioenergetic function utilizing high resolution respirometry. Students will have opportunity to participate in all aspects of the research with appropriate background and/or previous training.

Specific area of research emphasis: Cells, Organ Systems & Integrative Biology, Other Cell Biology and Organ Specific Disorders, cell metabolism

Video URL:
http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/35-1d4661d5d0448bd9fac90e318e84c351_Eckmann_Lab_MSR_Intro.ppsx
PI: Dr. Lauren Southerland
Department: Emergency Medicine
Email: lauren.southerland@osumc.edu
Lab Manager/Department Contact: Jennifer Frey
Lab Manager/Department email: jennifer.frey@osumc.edu
Preferred Method of contact: Faculty email
Have you mentored a medical student before? Yes (funded)
Website(s):
Category of Research: Clinical
Project Description: I typically have 1-2 MDSR students a summer on different projects working ED patient data. My clinical focus is geriatrics, but I have a broad range of projects on deck. 1. How do referrals to the trauma recovery center (STAR) for victims of violence impact use of the ED for healthcare? 2. Qualitative study involving semi-structured interviews of ED patients of different ethnicities and races to characterize microaggressions or any elements of systematic racism in our current standard practice of care. 3. Analysis of the results of physical therapy consults for older adults in the ED or ED Observation Unit. 4. How do ED physicians document goals of care conversations for end of life or very sick patients? and others. Typically my students publish 1-2 papers from their summer work and present at one of the EM or geriatrics conferences because we will pull you into multiple projects (respecting the time you need to work on your primary MDSR project). Key criteria include loving tea and homemade cookies.
Specific area of research emphasis: Emergency Medicine, Trauma, Geriatrics, Palliative Care, underserved populations
Video URL: http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/111-b5b76300274769238d0a4471706032d7_Southerland_MDSR_video.mp4
PI: Dr. Michael Prats
Department: Emergency Medicine
Email: michael.prats@osumc.edu
Lab Manager/Department Contact: Joshua Ye
Lab Manager/Department email: joshua.ye@osumc.edu
Preferred Method of contact: Lab Manager/Dept Contact email
Have you mentored a medical student before? Yes (funded)
Website(s): https://sites.google.com/a/osultrasound.com/website/home?pli=1
Category of Research: Clinical

Project Description: We study point-of-care, bedside, or emergency ultrasound. For our research we are primarily in the ED, the Clinical Skills lab, or the emergency medicine offices on the 7th floor of prior. Our research is in the use of and education of ultrasound. Ultrasound is valuable diagnostic tool that can help patients. Participating in ultrasound research is another way to take advantage of that and learn more ultrasound. We have many ongoing and ever changing projects, but many of them focus on novel educational methods for ultrasound. We use the Heartworks cardiac simulator in the Clinical skills center to figure out the best ways to teach students transthoracic or transesophageal echocardiography. We create objective ways to measure competency in ultrasound. We design and investigate the best ways to make sure we are keeping our machines working in the clinical setting. There are additional projects available as well. We want to teach you ultrasound and match you with a rewarding and interesting research project!

Specific area of research emphasis: Critical Care, Emergency Medicine, Radiology and Imaging Research

Video URL: http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/82-8827966e5bfd533b3ff19021f8f59551_GMT2020929-143824_Michael-Pr_640x360.mp4
PI: Dr. Kathleen Dungan  
**Department:** Internal Medicine  
**Email:** kathleen.dungan@osumc.edu  
**Lab Manager/Department Contact:**  
**Lab Manager/Department email:**  
**Preferred Method of contact:** Faculty email  
**Have you mentored a medical student before?** Yes (funded)  
**Website(s):**  
**Category of Research:** Basic  
**Project Description:** My interest is in 1) glycemic management of hospitalized patients, including patients with major comorbidities as well as the role of glucose control. 2) clinical trials, particularly those involving glucagon-like peptide-1 receptor agonists and other diabetes therapeutics. 3) studies involving continuous glucose monitoring  
**Specific area of research emphasis:** Endocrine Disorders, Diabetes,  
**Video URL:** http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/84-68ec5b8623d0d0facc124b0d3a6c8ce8_inpatient_DM_fellows_2020_recording_for_medical_students_Dungan.pptx
PI: Dr. Electra Paskett  
**Department:** Internal Medicine  
**Email:** electra.paskett@osumc.edu  
**Lab Manager/Department Contact:** Toyin Adeyanju  
**Lab Manager/Department email:** Olutoyin.Adeyanju@osumc.edu  
**Preferred Method of contact:** Lab Manager/Dept Contact email  
**Have you mentored a medical student before?** Yes (funded)  
**Website(s):**  
**Category of Research:** Translational  
**Project Description:** Each summer my Center provides research opportunities for undergraduate and medical students. The goals of the program are to: increase the number of students who pursue graduate study and research careers in the basic/clinical sciences or public health; teach students to think critically; Increase student's proficiency in presenting scientific concepts; gain knowledge on cancer health disparities. Over the 10-week summer program and under the guidance of a faculty mentor, all of our summer interns complete an independent research project and present their findings during the end-of- the program luncheon. Students will also present their independent research project in a poster session and as a research paper. In addition to completing a mentored research project, students will participate in professional development workshops, book club, journal club, and weekly seminars focused on health disparities and research conducted by the Center. We will help you select a research project that matches your research and career goals. Due to time constraints, students will not be in the field collecting data or initiating a new study. Instead, students will use existing data collected from our projects to investigate their own research question.  
**Specific area of research emphasis:** Other Community Research, Other Research in Special Populations, Public Health Research  
**Video URL:**  
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/111-7b17948d9b4a722170f01101f0e004c0_MDSR_Research_Opportunities_Recordin g.pptx
PI: Dr. Mahmoud Houmsse
Department: Internal Medicine
Email: mahmoud.houmsse@osumc.edu
Lab Manager/Department Contact: Lori Allenbaugh
Lab Manager/Department email: lori.allenbaugh@osumc.edu
Preferred Method of contact: Faculty email
Have you mentored a medical student before? Yes (not funded)
Website(s):
Category of Research: Clinical
Project Description: My research focus on patient safety and effective therapy as well as quality improvement. I have been working on optimizing the EP procedure outcome including atrial fibrillation ablation, prevention of atrial fibrillation in lung transplant recipient as well as validation of newer hand held device in measuring QT interval in patient who takes anti arrhythmic drugs so we can these information to the telemedicine communication to assure patient safety while patient at home. I work with student who are interested in research including working with our research team, learn how to plan a research project, work on IRB and involve with research process including drafting abstract and manuscript for conference presentation and publication respectively.
Specific area of research emphasis: Heart Disease,
Video URL: http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/54-427ea93e82f2de910bf7129625c1e5c8_Part_1.mov
PI: Dr. Gang Xin
Department: Microbial Infection and Immunity
Email: gang.xin@osumc.edu
Lab Manager/Department Contact: Gang Xin
Lab Manager/Department email:
Preferred Method of contact: Faculty email
Have you mentored a medical student before? No (never applied)
Website(s):
Category of Research: Translational
Project Description: Please see video
Specific area of research emphasis: Cancer therapy, Immunology, Immunotherapy
Video URL: http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/119-3e74be455ab5d871dd87bbe1d937368e_Gang_Xins_talk.mp4
PI: Dr. Joseph Tobias
Department: Nationwide Children's Hospital
Email: joseph.tobias@nationwidechildrens.org
Lab Manager/Department Contact: Stephani Kim
Lab Manager/Department email: stephani.kim@nationwidechildrens.org
Preferred Method of contact: Lab Manager/Dept Contact email
Have you mentored a medical student before? Yes (funded)
Website(s):
Category of Research: Translational
Project Description: Please see video
Specific area of research emphasis: Anesthesia/Surgery, Pediatrics/Adolescence,
Video URL:
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/82-980ec684f4138987a0eb8be8c109fc27_Medical_Student_Research_Informational_Slides_OSU.pptx
PI: Dr. Paola Malerba
Department: Nationwide Children's Hospital and Pediatrics
Email: paola.malerba@nationwidechildrens.org
Lab Manager/Department Contact: Barbara Morehead
Lab Manager/Department email: barbara.morehead@nationwidechildrens.org
Preferred Method of contact: Faculty email
Have you mentored a medical student before? No (never applied)
Website(s): https://www.nationwidechildrens.org/find-a-doctor/profiles/paola-malerba https://www.nationwidechildrens.org/research/areas-of-research/battelle-center-for-mathematical-medicine/malerba-lab
Category of Research: Translational
Project Description: Existing datasets to analyze: Patients with Disorder of Consciousness who received tDCs, brain dynamics before/after intervention Stratification of brain dynamics of sleep clinic patients wrt potential shaping factors (age, diagnosis, pharmacology, etc.) Preliminary analysis of EEG of patients with Psychogenic Non-Epileptic Events (Collab: Dr. Dara Albert, NCH) or possibly contribute to larger ongoing projects: EEG of patients with Juvenile Myoclonic Epilepsy: looking for "cues" to support diagnosis (Collab: Dr. David Greenberg, NCH) Sleep-memory link in children with Duchenne Muscular Dystrophy (Collab: Dr. Megan Waldrop, NCH) Sleep dynamics after mild concussion (Collab: Dr. Sean Rose, NCH) Topography of spindles across the scalp (Collab: Dr. Sara Mednick, University of California, Irvine) Brain dynamics in arm paresis after stroke (Collab: Dr. Sofia Straudi, Ferrara University Hospital, Italy)
Specific area of research emphasis: Neuroscience, Other Neuroscience, Psychological, & Musculoskeletal, Sleep
Video URL: http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/66-e59cf92dd61aad32e33bf68295d2623b_MalerbaPaola2020.mp4
PI: Dr. Jennifer Cooper
Department: Nationwide Children's Hospital and Pediatrics
Email: jennifer.cooper@nationwidechildrens.org
Lab Manager/Department Contact: Tiwana Henderson
Lab Manager/Department email: tiwana.henderson@nationwidechildrens.org
Preferred Method of contact: Faculty email
Have you mentored a medical student before? Yes (funded)
Website(s): https://www.nationwidechildrens.org/find-a-doctor/profiles/jennifer-n-cooper https://www.nationwidechildrens.org/research/areas-of-research/center-for-innovation-in-pediatric-practice/center-for-surgical-outcomes-research
Category of Research: Clinical
Project Description: I am seeking one medical student to work on a project to evaluate the impact of the Affordable Care Act Medicaid expansion on trends and disparities in surgical and trauma care in young adults.
Specific area of research emphasis: Anesthesia/Surgery, Other Biomedical Informatics/Health Care Ed., Delivery, Organization/ Research Ethics, Trauma
Video URL:
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/111-821f9a39ed80426e7e6d465c3be49012_OSU_MDSR_Slides_Cooper_Final.pptx
PI: Dr. Laurie Glader  
Department: Nationwide Children's Hospital and Pediatrics  
Email: laurie.glader@nationwidechildrens.org  
Lab Manager/Department Contact:  
Lab Manager/Department email:  
Preferred Method of contact: Faculty email  
Have you mentored a medical student before? Yes (funded)  
Website(s):  
Category of Research: Translational  
Project Description: We have a robust database associated with the Comprehensive Cerebral Palsy Program at Nationwide Children's Hospital. We encourage medical students to prepare a question about cerebral palsy, query our database, and synthesize results for scientific presentation. Examples of past work include evaluating risk factors for developing scoliosis in children with CP, identifying frequency of hip migration in children with milder cerebral palsy, and comparing effectiveness of surgical v. non-surgical interventions to address gastroesophageal reflux in children with more significant CP. Resources are available for assistance with study design and statistical analysis. We have a strong commitment to providing mentorship, from conceptualization of the research question all the way through writing a manuscript and submission for publication.  
Specific area of research emphasis: Neurologic Disorders, Other Research in Special Populations, Pediatrics/Adolescence  
Video URL:  
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/111-916c0ab524891f0e84da802a3561c6f1_OSU_Med_Student_2020.mp4
PI: Dr. Mitchell Grayson  
Department: Nationwide Children's Hospital and Pediatrics  
Email: Mitchell.Grayson@nationwidechildrens.org  
Lab Manager/Department Contact: Taylor Young  
Lab Manager/Department email: taylor.young@nationwidechildrens.org  
Preferred Method of contact: Faculty email  
Have you mentored a medical student before? Yes (funded)  
Website(s): https://www.nationwidechildrens.org/find-a-doctor/profiles/mitchell-h-grayson  
https://mcdb.osu.edu/people/grayson.79  
Category of Research: Translational  
Project Description: Allergies are a major health burden and the number of people afflicted is increasing rapidly in the westernized world. It is not known why these diseases are increasing, but it has been documented that severe viral infections early in life greatly increase a child's risk of developing asthma and allergies. To understand the mechanisms behind how a viral infection can lead to allergic disease, we have been using a mouse model where the mice develop allergies and asthma after a single respiratory infection with a mouse-specific virus. Our studies are focused on trying to understand the specific cells and mediators that are involved in this response, and seeing how they translate the viral infection into allergic diseases. Additional work has begun to determine whether the pathways identified in mice are also operative in humans. Our data suggest that our model is indeed relevant to human disease.  
Specific area of research emphasis: Immunology, Lung Disease, Other Basic and Applied Research in Inflammation, Infection & Immunology  
Video URL: http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/135-e65e54a31675764189777d7c18ce45c5_Grayson.ppsx
PI: Dr. Brett Worly
Department: Obstetrics/Gynecology
Email: Brett.worly@gmail.com
Lab Manager/Department Contact: Markisha Tatum
Lab Manager/Department email: Markisha.tatum@osumc.edu
Preferred Method of contact: Faculty email
Have you mentored a medical student before? Yes (funded)
Website(s): https://u.osu.edu/worly.4/home/
https://microbiology.osu.edu/people/dubey.36
Category of Research: Clinical

Project Description: Our group has obtained a CDC contract to perform a prospective cohort study looking at the cellular immune response of the Tetanus-Diptheria-Pertussis vaccine for pregnant and nonpregnant women of reproductive age. We are looking to better understand the effect of the vaccine, as recommended in pregnancy between 27-36 weeks gestation, in relation to whether the patient received the whole cell vaccine (pre-1990s) or the acellular vaccine (1990s and beyond). We will obtain demographic information, and collect blood samples, and a nasal wash to monitor the immune response. Participants will also complete a "Vaccine Attitudes" survey. The medical student will be involved in patient recruitment, informed consent, data collection, specimen collection, data entry, data analysis, and publication of our project.

Specific area of research emphasis: Immunology, Infectious Disease, Research to improve Women's Health

Video URL: http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/124-063e61214795e8632489771e37192168_IMG-5173.MOV
PI: Dr. David Flanigan
Department: Orthopaedics
Email: david.flanigan@osumc.edu
Lab Manager/Department Contact: Mia Bicker
Lab Manager/Department email: mary.bicker@osumc.edu
Preferred Method of contact: Lab Manager/Dept Contact email
Have you mentored a medical student before? Yes (funded)
Website(s):
Category of Research: Clinical
Project Description: Please see video
Specific area of research emphasis: Musculoskeletal Disorders, Tissue Repair and Regeneration,
Video URL:
https://medicine.osu.edu/-/media/video/mdsr/presentation1.mp4?la=en&hash=BB9E502B4420FE2519431D2913C74D7E939494A4
PI: Dr. Maria Gallo
Department: Division of Epidemiology in the College of Health
Email: gallo.86@osu.edu
Lab Manager/Department Contact: Laura Curatti
Lab Manager/Department email: curatti.4@osu.edu
Preferred Method of contact: Faculty email
Have you mentored a medical student before? Yes (funded)
Website(s):
Category of Research: Clinical
Project Description: I have several data sets that students interested in sexual and reproductive health can use for data analysis and manuscript writing. For example, the Ohio Survey of Women is a representative, cross-sectional sample of adult, reproductive-age women in Ohio on women's current conditions and needs with respect to contraception and abortion. The first wave was completed in 2018-2019 (N=2,529) and we just received the second wave of data. Also, I have data from a randomized controlled trial of couples (N=500) in Vietnam who were followed bimonthly for 6 months and 1) surveyed on their condom use and reproductive health-related behaviors and 2) had vaginal swabs collected to test for a biomarker of women's exposure to their partner's semen. Finally, I'm currently working with three students who are conducting analyses using the CDC's PRAMS datasets.
Specific area of research emphasis: Infectious Disease, Public Health Research, Research to improve Women's Health
Video URL: http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/29-c118f52ba7abf1aa51ee3dd3eb80d356_Gallo_20200928.ppsx
PI: Dr. Susan Havercamp  
Department: Psychiatry, Nisonger Center  
Email: susan.havercamp@osumc.edu  
Lab Manager/Department Contact: Ann Robinson  
Lab Manager/Department email: ann.robinson@osumc.edu  
Preferred Method of contact: Faculty email  
Have you mentored a medical student before? Yes (funded)  
Website(s): https://go.osu.edu/OhioDHP  
Category of Research: Basic  
Project Description: This project is to analyze Youth Risk Behavior Survey (YRBS) data, with help from a biostatistician. Goals for medical student are to: - Identify risk behaviors among youth with disabilities - Determine the role of health care providers in preventing and addressing these behaviors - Develop recommendations for minimizing risky behaviors - Co-author peer-reviewed publication  
Specific area of research emphasis: Medical Education, Other Research in Special Populations, Public Health Research  
Video URL: http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/29-0d6807d942f3d0f68c3ef4dc1ba18f3_Havercamp_MDSR_video_10-1.mp4
PI: Dr. Dukagjin Blakaj
Department: Other - Write In (Required)
Email: dukagjin.blakaj@osumc.edu
Lab Manager/Department Contact: Nikol Mladkova
Lab Manager/Department email: nikol.mladkova@osumc.edu
Preferred Method of contact: Lab Manager/Dept Contact email & Faculty email
Have you mentored a medical student before? Yes (funded)
Website(s): https://cancer.osu.edu/find-a-doctor/search-physician-directory/dukagjin-blakaj
Category of Research: Translational
Project Description: Our laboratory is focused primarily on head and neck malignancies and spinal tumors. We have multiple opportunities for involvement for medical students, ranging from exploring the molecular background of rare sinonasal tumors through the prognostic value of transcriptomic biomarkers to database-based clinical research. All of these are geared towards generating new knowledge in our field and producing peer-reviewed publications. We welcome highly motivated students of any skills level and we are prepared to tailor individual projects to fit the student's skill set and ultimate goals. Many of our projects are especially suitable for students interested in developing bioinformatics/statistics skills. Students particularly interested in cancer, radiation and clinical cancer research would especially benefit from involvement in our projects.
Specific area of research emphasis: Cancer Biology, Cancer therapy, Other Cancer Biology & Clinical Cancer Research
Video URL:
http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/137-1d43da99a129e4005140a1de952108c1_zoom_0.mp4
PIs from Nationwide Children's Hospital Department of Otolaryngology

**Department:** Otolaryngology

**Email:** tendy.chiang@nationwidechildrens.org

**Lab Manager/Department Contact:** Heather Francek

**Lab Manager/Department email:** heather.francek@nationwidechildrens.org

**Preferred Method of contact:** Lab Manager/Dept Contact email

**Have you mentored a medical student before?** Yes (funded)

**Website(s):**
- https://www.nationwidechildrens.org/specialties/ear-nose-throat-ent-services-otolaryngology
- https://www.nationwidechildrens.org/research/areas-of-research/center-for-regenerative-medicine/chiang-lab

**Category of Research:** Clinical

**Project Description:** Assortment of basic, clinical, and translational research opportunities for students through the Department of Otolaryngology at Nationwide Children's Hospital. With 45 active protocols including: healthcare disparities, surgical outcomes, surgical simulation and translational research, there are many mentored research programs that will provide a rewarding experience.

**Specific area of research emphasis:** Pediatrics/Adolescence, Tissue Repair and Regeneration, Otolaryngology

**Video URL:**
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/179-a7871abbbf1846eb7c28bc8b1bd1529_ENT_Video_Power_Point_Final.pptx
PI: Dr. Noah Weisleder
Department: Physiology & Cell Biology
Email: noah.weisleder@osumc.edu
Lab Manager/Department Contact:
Lab Manager/Department email:
Preferred Method of contact: Faculty email
Have you mentored a medical student before? Yes (funded)
Website(s): http://www.osuchildrensmusclegroup.org/weisleder.shtml
weisleder.org
Category of Research: Translational

Project Description: The Weisleder laboratory studies several different aspects of skeletal muscle and cardiovascular physiology, principally focusing on changes in plasma membrane repair, cellular metabolism and calcium homeostasis in normal physiology and disease states. We are currently examining how aberrant store-operated calcium handling can contribute to the progression of muscular dystrophy and developing methods to block this calcium entry. Additionally, efforts in heart failure models will determine the mechanisms that contribute to uncoupling of intracellular calcium homeostasis in the failing cardiomyocytes. Further studies examine the role of tripartite motif (TRIM) family proteins in the membrane repair process. Membrane repair is a conserved cellular process where intracellular vesicles actively patch membrane disruptions to allow survival of the cell. While relevant in normal physiology, disruption of this process results in diseases, including muscular dystrophy, ischemic damage to the heart and neurodegeneration. Our group is examining the role of novel TRIM family proteins in regulating membrane repair and how these can be targeted as therapeutic interventions in a number of different diseases. Currently, we have projects exploring the role of membrane repair in the progression of heart failure, muscular dystrophy and neuromuscular diseases such as Charcot-Marie-Tooth disease.

Specific area of research emphasis: Aging, Heart Disease, Musculoskeletal Disorders

Video URL:
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/34-303c5f90bd3ff7d08e2625a6a6dee0d3_Noah_Weisleder_Ohio%2BState%2BCollege%2Bof%2BMedicine.mp4
PI: Dr. David Dean  
Department: Plastic Surgery  
Email: David.Dean@osumc.edu  
Lab Manager/Department Contact: Hongtao Yang  
Lab Manager/Department email: Yang.5471@osu.edu  
Preferred Method of contact: Faculty email  
Have you mentored a medical student before? Yes (funded)  
Website(s): http://www.osteoengineering.com/team/DavidDean  
http://www.osteoengineering.com/  
Category of Research: Translational  
Project Description: The Osteo Engineering Laboratory focuses on providing surgical simulation, procedure and device design, and implant fabrication for skeletal reconstructive surgery. We have projects ranging from tissue engineered, 3D printed, stem cell-seeded bone implants to 3D printed stiffness-matched (NiTi) or resorbable (Mg alloy) skeletal fixation. More specifically we have research projects underway that involve computer aided design, bone stem cell culture, 3D printing of surgical guides and implants, and animal models of surgical procedures.  
Specific area of research emphasis: Radiology and Imaging Research, Tissue Repair and Regeneration, Skeletal Reconstructive Surgery  
Video URL:  
http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/137-ffa631bdc0995648948d5e0a1ce950dc_Dean_D_-_MDSR_Research_Opportunity_Fair_-_Osteo_Engineering_Lab_-_09.30.20.ppt
PI: Dr. Sonu Jain
Department: Plastic Surgery
Email: sonu.jain@osumc.edu
Lab Manager/Department Contact: Jill Beedy
Lab Manager/Department email: jill.beedy@osumc.edu
Preferred Method of contact: Faculty email
Have you mentored a medical student before? Yes (not funded)
Website(s): https://wexnermedical.osu.edu/find-a-doctor/sonu-jain-md-45644
Category of Research: Clinical
Project Description: HAND AND UPPER EXTREMITY SURGERY
Biomechanical cadaveric studies with respect to bones, tendons, ligaments or nerves in the hand/upper extremity
Prospective study looking at CBD Oil for osteoarthritis of the hand/thumb
Use of telemedicine in the acute ER setting for hand/upper extremity trauma
Utility of a hand app in the aid of the diagnosis and triage of patients with hand trauma or hand conditions
Topic/area of your choosing in the hand/upper extremity
Specific area of research emphasis: Anesthesia/Surgery, Other Neuroscience, Psychological, & Musculoskeletal, Technology
Video URL:
http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/179-38ab330f4efc9cb564e2c3e133b03372_MDSR_.docx
**PI:** Dr. KERRY-ANN MITCHELL  
**Department:** Plastic Surgery  
**Email:** kerry-ann.mitchell@osumc.edu  
**Lab Manager/Department Contact:** Bridget Fagan  
**Lab Manager/Department email:** bridget.fagan@osumc.edu  
**Preferred Method of contact:** Lab Manager/Dept Contact email & Faculty email  
**Have you mentored a medical student before?** No (never applied)  
**Website(s):**  
**Category of Research:** Clinical  
**Project Description:** The goal of the Mitchell Neuroplastic Surgery lab is to develop innovative strategies to improve outcomes and quality of life for the millions of patients undergoing reconstruction of large sized skull defects worldwide. This will be done by developing tools to reform cranial reconstruction such that novel innovations can be fully utilized to improve patient outcomes. Specifically, the initial aspect of this project will involve clinical studies to develop, validate and implement patient reported outcome tools. The second aspect will be through developing translational models to evaluate cranial implants. Medial students will be able to assist with either the clinical or translational projects, and have the potential to assist with publications resulting from these studies.  
**Specific area of research emphasis:** Neuroscience, Neuroplastic Surgery,  
**Video URL:**  
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/28-1da354215b1592cd83a6f1fbb8aa281e_Mitchell_Summer_Med_Student_Vid.pptx
PI: Dr. Amy Moore

Department: Plastic Surgery

Email: amy.m.moore@osumc.edu

Lab Manager/Department Contact: Irene Kaptsan

Lab Manager/Department email: irina.kaptsan@osumc.edu

Preferred Method of contact: Lab Manager/Dept Contact email & Faculty email

Have you mentored a medical student before? Yes (funded)

Website(s): https://wexnermedical.osu.edu/departments/plastic-reconstructive-surgery/research

Category of Research: Clinical

Project Description: Clinical Trial using electrical stimulation to improve nerve regeneration. The student will help with identification of patients, enrolling them into the study, data management and will have the opportunity to participate in the operating room and clinical space. Multiple other clinical projects exist in Plastic Surgery in general: Targeted muscle reinnervation, lymphadema, reinnervation of the breast skin and sensation.

Specific area of research emphasis: Anesthesia/Surgery, Neuroscience,

Video URL:
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/135-281871473a13c4c327d0b7c4021bb8fd_Plastic_Surgery_Research_options.mp4
PI: Dr. John Phay
Department: Surgery
Email: john.phay@osumc.edu
Lab Manager/Department Contact: Taylor McIntire
Lab Manager/Department email: Taylor.McIntire@osumc.edu
Preferred Method of contact: Faculty email
Have you mentored a medical student before? Yes (not funded)

Website(s):
Category of Research: Translational
Project Description: Please see video
Specific area of research emphasis: Anesthesia/Surgery, Radiology and Imaging Research, Fluorescent Guided Surgery

Video URL(s):
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/234-0e86f21087a3940f3dca9cf30184412f_Med_Student_Research_John_Phay_no_image_video.pptx

http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/82-b
PI: Dr. Oluyinka Olutoye
Department: Surgery
Email: oolutoye@nationwidechildrens.org
Lab Manager/Department Contact: Candace Style
Lab Manager/Department email: candace.style@nationwidechildrens.org
Preferred Method of contact: Lab Manager/Dept Contact email
Have you mentored a medical student before? Yes (not funded)
Website(s): https://www.nationwidechildrens.org/newsroom/news-releases/2019/08/olutoye-announcement
Category of Research: Translational

Project Description: Our PI, Dr. Olutoye, is a pediatric general surgeon who specializes in treatment of newborn diseases and fetal anomalies. There are opportunities for medical student involvement in either basic or clinical research. The lab is open to medical students of any level of training (M1-M4). For those interested in pediatric general surgery, fetal surgery, neonatal intensive care, or pediatrics, this lab is a one of a kind experience both for clinical learning and preparation for residency applications. One of our major studies centers on a newborn disease called necrotizing enterocolitis. We study this disease in a piglet model. Currently, there are several opportunities for medical student involvement. On the day of surgery (c-section of the sow), we will need several medical students to transport the piglets as they are born in the operating room to the piglet intensive care unit (PigCU) down the hall, and to aid with resuscitation under the guidance of the center's veterinarian. All students can assist with weighing the pigs in the PigCU and taking down initial vitals. Students that have completed their surgery clerkship can also help with suturing in feeding lines and our oxygen delivery devices under the guidance of our postdoctoral fellows. Each experiment in this study runs for 96 hours, typically Monday-Friday, and on average once/month. Each day following surgery has a routine that generally consists of feeding the piglets baby formula via their OG (oral-gastric) tubes, taking vitals, drawing labs, etc. Medical students can participate in these activities alongside our fellows. Time commitment is based on student availability. We do ask that students sign up for a minimum 4-hour block, especially on the day of surgery. We also welcome student involvement in our clinical projects. Students who contribute to data collection, analysis, or manuscript review, will be included in the final manuscript list of authors. Our current clinical projects include: pediatric hypertrophic scar/keloid treatment and prevention literature review, treatment outcomes in children with omphaloceles, clinical trial of NIRS (near infrared spectroscopy) monitoring in preterm infants (translational application of our piglet NEC model), among many others. Interested students should contact our labs fellows, Dr. Candace Style and Dr. Alicia Menchaca. Please cc both fellows on your email. Candace.style@nationwidechildrens.org, Alicia.menchaca@nationwidechildrens.org.

Specific area of research emphasis: Critical Care, Pediatrics/Adolescence, pediatric general surgery, fetal anomalies

Video URL: http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/73-ebe351b5ae323734f060af282a9c164f_Med_Stud_Recruitment_Final.pptx
PI: Dr. Sabrena Noria
Department: Surgery
Email: sabrena.noria@osumc.edu
Lab Manager/Department Contact: Kayla Diaz
Lab Manager/Department email: kayla.diaz@osumc.edu
Preferred Method of contact: Lab Manager/Dept Contact email & Faculty email
Have you mentored a medical student before? Yes (funded)
Website(s):
Category of Research: Clinical
Project Description: There are multiple projects/opportunities (see video for details) currently underway that fall into three categories: 1 - quality improvement 2 - disparities in access to care 3 - impact of sociodemographic variables on outcomes after surgery
Specific area of research emphasis: Nutrition/Obesity, disparity in care,
Video URL:
http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/206-be1720ee8647b4011d5db68473518fb5_Research_Opportunities_in_Bariatric_Surgery_-_Dr_Sabrena_Noria.mp4
PI: Dr. Benjamin Poulose

Department: Surgery

Email: benjamin.poulose@osumc.edu

Lab Manager/Department Contact: Savannah Renshaw

Lab Manager/Department email: savannah.renshaw@osumc.edu

Preferred Method of contact: Lab Manager/Dept Contact email & Faculty email

Have you mentored a medical student before? Yes (funded)

Website(s): https://wexnermedical.osu.edu/digestive-diseases/abdominal-core-health

Category of Research: Clinical

Project Description: Our Division has a wide array of research opportunity available for motivated medical students. Our investigative efforts cover areas include foregut disease (hiatal hernia, GERD), abdominal core health (including hernia), bariatric surgery, minimally invasive surgery (including robotics). We have infrastructure and personnel in place to help you along the way to have a productive research experience.

Specific area of research emphasis: Anesthesia/Surgery, foregut disease (hiatal hernia, GERD), abdominal core health (including hernia), bariatric surgery, minimally invasive surgery (including robotics)

Video URL:
http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/38-02c4fa5700d9c397020d55f0d876d190_Poulose_Gen_GI_Research-med_students.mp4
PI: Dr. Richard Wood

Department: Surgery

Email: hira.ahmad@nationwidechildrens.org

Lab Manager/Department Contact: Laura Weaver

Lab Manager/Department email: laura.weaver@nationwidechildrens.org

Preferred Method of contact: Lab Manager/Dept Contact email

Have you mentored a medical student before? Yes (funded)

Website(s):

Category of Research: Clinical

Project Description: We investigate clinical outcomes of patients undergoing surgical and medical interventions for the treatment of anorectal malformations, Hirschsprung disease, functional constipation, and other congenital and acquired disorders that affect gastrointestinal, urologic, and gynecologic function.

Specific area of research emphasis: Colorectal and pelvic reconstruction surgery

Video URL: http://surveygizmoresponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/35-1496c5d6fc857dff9caaeacf06a29345_Student_Fair_Poster.pptx
**PI:** Dr. Mitchel Stacy  
**Department:** Surgery  
**Email:** mitchel.stacy@nationwidechildrens.org  
**Lab Manager/Department Contact:**  
**Lab Manager/Department email:**  
**Preferred Method of contact:** Faculty email  
**Have you mentored a medical student before?** Yes (funded)  
**Website(s):** https://www.nationwidechildrens.org/find-a-doctor/profiles/mitchel-r-stacy https://www.nationwidechildrens.org/find-a-doctor/profiles/mitchel-r-stacy  
**Category of Research:** Translational  
**Project Description:** Research positions are currently available in the Stacy Lab within the Center for Regenerative Medicine at Nationwide Children's Hospital. Research in the lab is focused on translational imaging techniques for evaluation of cardiovascular diseases and tissue engineered vascular grafts. The lab employs clinically translatable animal models and utilizes various imaging modalities, which include SPECT/CT, PET/CT, CT angiography, ultrasound, and MR imaging. Experimental work and training will be focused on pre-clinical models of limb ischemia and tissue engineering, diabetes/wound healing, molecular imaging of peripheral arterial disease (PAD), and medical image processing techniques. Research will be conducted through collaborative efforts with The Research Institute at Nationwide Children's Hospital and OSU’s Division of Vascular Surgery. Ideal lab members should have an interest in pre-clinical and/or clinical cardiovascular imaging. Interested students should contact Dr. Stacy at mitchel.stacy@nationwidechildrens.org  
**Specific area of research emphasis:** Radiology and Imaging Research, Tissue Repair and Regeneration, Vascular Disease  
**Video URL:** http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/254-8f0d48c54b6000454568e848966ba217_OSU-Med-Student_Flyer.pdf
PI: Dr. Renzhi Han

Department: Surgery

Email: renzhi.han@osumc.edu

Lab Manager/Department Contact:
Lab Manager/Department email:
Preferred Method of contact: Faculty email

Have you mentored a medical student before? Yes (not funded)

Website(s): https://hanlab.cc https://hanlab.cc

Category of Research: Translational

Project Description: The research in the Han Lab is dedicated to the study of molecular mechanisms of genetic myopathies and the development of novel genome editing therapeutic strategies for treating them. Research opportunities are available for medical students to participate in our research projects aiming to pioneer revolutionary therapies for genetic diseases.

Specific area of research emphasis: Heart Disease, Molecular Virology and Gene Therapy, Musculoskeletal Disorders

Video URL:
http://surveygizmoreponseuploads.s3.amazonaws.com/fileuploads/191224/1799161/134-d83cb76c9f2c01e45d1184223c7a84cd_HanRenzhi2020.mp4