The goal of MCORRP is to improve the quality of cardiovascular care at the University of Michigan Health System, in the state of Michigan, and throughout the United States and the world. This will be accomplished by studying cardiovascular conditions and procedures among large populations, developing modern mathematical tools to assess risk and outcomes, and promoting evidence-based care models which incorporate best science into care itself by targeting physicians, nurses, and patients. MCORRP will extend its reach by presenting and publishing scientific results at regional, national and international meetings and in peer-reviewed publications, as well as, by partnering with regional and national organizations for win-win solutions to overcoming barriers to providing quality cardiovascular care. Finally, MCORRP is committed to creating a vibrant, rigorous, diverse, and collegial research environment which promotes the investigative development of students, house officers, fellows, and junior faculty.
MCORRP continues to grow every year by expanding our registries and increasing our student internship program. The faculty, staff, fellows, residents and student interns of our nine registries collect data on thousands of patients and hundreds of thousands of patient follow-ups. Our global presence has expanded. We coordinate our registries with national and international sites across all 50 states and in 13 countries. Our work was highlighted at numerous national and international meetings this year, along with many local internal research symposiums.

Our summer internship program accommodated 36 superb students in 2015 from the following schools: Denison University (Granville, Ohio), Hamline University (St. Paul, Minnesota), Indiana University (Bloomington, Indiana), Kalamazoo College (Kalamazoo, Michigan), Kenyon College (Gambier, Ohio), Grinnell College (Grinnell, Iowa), Central Michigan University (Mount Pleasant, Michigan), University of Nevada (Reno, Nevada), Federal University of Paraiba (Brazil), St. Olaf College (Northfield, Minnesota), Michigan State University (East Lansing, Michigan), University of Wisconsin (Madison, Wisconsin), University of Notre Dame (Notre Dame, Indiana) and University of Michigan (Ann Arbor, Michigan). We had 9 returning students, 20 new students, 7 medical students, one PhD student from the Netherlands and one visiting physician from the Netherlands. Our student interns worked diligently on our registries and their own research projects.

MCORRP continues to publish manuscripts, opening the door to more intensive and in-depth studies and improvements in care. In the coming years, we will continue to expand participation in our multisite registries, many into new countries. We will also be increasing our output of peer reviewed publications, presentations at scientific meetings, as well as launching additional quality improvement initiatives. We also look forward to continuing our exciting participation in training tomorrow’s health services researchers, health care providers and health care leaders.

MCORRP is a vibrant, forward thinking impactful health services research laboratory. Through teamwork, global collaboration and commitment to excellence in science, we are changing the world.
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MCORRP Donors

The MCORRP Team gratefully acknowledges the following individuals for their generous support of the 2015 MCORRP Summer Internship Program.

- Mr. & Mrs. Edward Blanch
  - Mr. Carl Calfin
- Mr. & Mrs. John Edman
- Mrs. Dorothy Gerson
- Mrs. Eleanor Gimon
- Mr. Edward Mardigian
  - Mr. Jim Reynolds
- Mr. & Mrs. Walter Hewlett
Meet our *New* Student Interns
Ricardo Antonio (Undergraduate, Denison University)

Ricardo Xavier Antonio grew up in Chicago, Illinois, and is a rising senior at Denison University in Granville, Ohio. He studies Biochemistry and is involved in chemistry research relating to sustainable solar cell energy development. Ricardo was awarded the Posse Leadership Scholarship to attend Denison University and is actively involved in the community through philanthropy and campus enrichment. As a founder of Chi Sigma Tau, a multicultural fraternity, Ricardo promotes diversity and cultural awareness. Ricardo enjoys playing basketball and other sports and works as an assistant for athletic trainers providing care for Denison’s athletes.

This summer Ricardo worked with the Michigan Anti-coagulation Quality Improvement Initiative (MAQI²) database abstracting data and investigating the correlation between household incomes and anticoagulation treatment. He was interested in examining income as a factor for warfarin alternative medications such as direct acting oral anticoagulants. Ricardo is grateful for everything he has learned with the MCORRP group and hopes to continue his education in healthcare.

Robyn Bernstein (Undergraduate, University of Michigan)

Robyn grew up in Bethesda, Maryland, and graduated Walter Johnson High School in 2012. She will enter her senior year in the fall at the University of Michigan, where she is majoring in International Studies with a focus on international security, norms, and cooperation in the Middle East. Aside from schoolwork, Robyn serves as the Financial Director for the Sujal Parikh Memorial Symposium for Health and Social Justice, supervises the recreation/fitness buildings on campus, and is an active member of the undergrad AMSA chapter, travelling to Atlanta this past spring for a week of service. After graduation Robyn plans to pursue an MPH degree and then attend medical school.

As well as performing data entry and abstraction for the IRAD database, Robyn is studying the weekend effect on acute aortic dissection. Her project investigates whether or not there is a statistically significant difference in the time to treatment and/or outcomes when the symptoms present during the weekend or nighttime. Robyn is incredibly grateful for her experience at MCORRP and has loved all of the shadowing and lectures. She wants to thank all of the doctors, staff members, and interns for a great summer and fueling her passion to pursue medicine as a career.
John Bills (Undergraduate, Michigan State University)

John (Yanni) grew up in Farmington Hills, Michigan, and graduated from North Farmington High School in 2013. He is currently a rising junior at Michigan State University, where he is majoring in Human Biology. In his free time, Yanni plays intramural sports at Michigan State University including soccer, football, and basketball. After graduation, John plans to attend medical school.

This summer, Yanni is working with the Michigan Anticoagulation Quality Improvement Initiative registry (MAQI²) and is studying different prescribed INR ranges among patients with heart valve replacements. His project attempts to see which prescribed INR ranges are better and safer with different types of heart valve replacements.

Morgan Bradford (Undergraduate, Hamline University)

Raised in Ann Arbor, Michigan, Morgan graduated from Pioneer High School in 2014. Morgan is a rising sophomore at Hamline University in St. Paul, Minnesota, where she is studying Exercise Science and Public Health. Morgan is a part of the Honors College at Hamline University and is a member of the Student Athletic Advisory Committee and the Intervarsity Club at Hamline. Morgan also participated in the Hand-in-Hand Mentorship program where she mentored a first grader for a year. In the fall, Morgan will be volunteering at the St. Paul Children's Hospital and plans to be a Biology, Chemistry, and math tutor. Morgan competes in gymnastics for Hamline University and also enjoys coaching younger gymnasts. Morgan also loves wake boarding, paddle boarding, and boating in the summertime.

This summer, Morgan is abstracting and entering data with the BRIDGE database. Morgan is working on a project in the Project Healthy Schools database and is researching the dose effect of resistance training and its impact on Cardiac Health in 6th grade students. Morgan hopes that her project will help young people in the future maximize the amount of cardiac health through exercise to help combat heart disease and the obesity epidemic.
Jake Carolan (Recent Graduate, University of Michigan)

Jake grew up in Grosse Pointe Park, Michigan, and graduated in 2011 from Grosse Pointe South High School. He graduated with high honors from University of Michigan last May with a major in Biophysics and a minor in Philosophy. Jake worked on the research project “Role of TNFa in the Immune Response to Cryptococcus neoformans” in an immunology lab at the Veterans Affairs Health Center throughout his undergraduate years. Outside of his studies, Jake was involved in his community as Health & Wellness Chair for the service organization Circle K and as a volunteer at the University of Michigan Health System Physical Therapy department. In his free time, he enjoys reading, tutoring, and playing basketball. He plans to attend medical school.

This summer, Jake is abstracting data from the BRIDGE database. His project centers on the role of BRIDGE in affecting readmission rates for depression patients. He is interested in whether BRIDGE differentially affects these patients, and the reasons those differences may occur. Jake is thankful for the opportunity to work with MCORRP this summer.

Sarah Edwards (Undergraduate, University of Wisconsin)

Sarah is a rising sophomore at the University of Wisconsin, Madison, where she is studying Communication Sciences and Disorders. She is deciding between pursuing a career in Orthopedic Surgery or a career as a Speech Pathologist. Outside of her studies, Sarah enjoys playing co-ed intramural volleyball, training for her 2nd Tough Mudder, and taste testing a variety of cheeses through the Badger Cheese Club.

This summer at MCORRP, Sarah is working with the MAQI² database, and her project involves comparing "real world" MAQI² patients to those eligible for a DOAC (Direct Oral Anticoagulant) to determine how real world patients would fit into the clinical trial.
Matthew Geiger (Undergraduate, University of Michigan)

Hailing locally from the Ann Arbor area, Matthew graduated from Saline High School in 2012. He is a rising senior at the University of Michigan, majoring in Biopsychology, Cognition, and Neuroscience with plans to continue his education in medical school. It is still early, but some of his interests are neurosurgery, orthopedic surgery, and psychiatry. Upon coming to college Matthew joined the Pi Kappa Alpha Fraternity (PIKE) during the fall of his freshman year, and became involved in the Biology Student Alliance (BSA) on campus. Three years later he is still a proud member of PIKE and the president of BSA. In between studies, student organizations, and spending time with friends Matthew enjoys playing his guitar, competing in sports, and spending time with his family.

This summer, Matthew abstracted cardiovascular patient data for the BRIDGE program. Further, his project investigates the ideal timeframe for a post-discharge follow-up appointment for patients with acute coronary syndrome (ACS) or congestive heart failure (CHF). The ultimate goal of the study is to reduce hospital readmissions by examining if the BRIDGE program currently services patients at an appropriate time period (~14 days after discharge) in the healing process or if this needs to be adjusted to better meet the needs of patients who are re-admitted within 30 days. Matthew thoroughly enjoyed his first summer with the MCORRP internship, and is thankful for the enriching experiences in the field of cardiology and the practice of medicine.

Eric Glanz (Recent Graduate, Kalamazoo College)

Eric was born and raised in West Bloomfield, Michigan where he graduated from Walled Lake Central High School in 2009. As a Presidential Scholar, Eric graduated from Kalamazoo College in 2013, and earned his Bachelor’s of Science in Chemistry as a captain of the Varsity Baseball team. Currently, while applying to medical school he provides mentorship and coaches youth baseball in Metro-Detroit. Eric has done some work as a cardiovascular research assistant prior to this summer. At St. John Providence hospital in Southfield, he analyzed Predictors of Immediate Technical Success of Chronic Total Occlusions In De Novo Femoro-Popliteal Lesions – In the Current Era. He also examined the treatment of hypertriglyceridemia with fibric acid derivatives and its impact on lipid subtractions along with the translation into a reduction in cardiovascular events. Outside of his studies Eric enjoys spending time with his family, going to baseball games, running, weight lifting, and traveling.

This summer, along with performing data abstraction for MAQI², Eric is working with Dr. Rubenfire, Patrick Walden, and Megan Schechtman to study Metabolic Syndrome. His goal is to examine the impact of a lifestyle intervention program (Met Fit) on the utilization of medical resources after completion of intervention. The project attempts to characterize the top and bottom quartile of patients who sign up for Met Fit vs. those who do not and analyze how each group continues to use healthcare.
**Thomas Goslinga (Medical Student, University of Michigan)**

Thomas is originally from a small town in Minnesota called Milaca, but soon enough found himself at the University of Minnesota studying Neuroscience as an undergrad. He is currently a rising second year medical student at the University of Michigan Medical School. He enjoys backpacking, biking, and being outdoors. This summer, he has been working with the IRAD team doing data abstraction from the acute period surrounding the dissection of the patient’s aorta. The project that he is working on completing involves looking at whether delays from hospital admission to diagnosis of type B aortic dissections are associated with different outcomes for those patients, as well as what types of things might be resulting in delays to diagnosis to be present in the first place.

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**Azba Gurm (Undergraduate, University of Michigan)**

Azba grew up in Ann Arbor, Michigan, and graduated from Pioneer High School in 2013. In the fall, she will enter her junior year at the University of Michigan where she is majoring in Computer Science and double minorin g in Entrepreneurship and Cultural Anthropology. On campus, she is involved with social innovation and entrepreneurship organizations. Outside of school, she enjoys playing tennis, traveling, film and photography.

This summer at MCORRP, Azba is working on the BRIDGE database. Her summer research project is focused on Health Information Technology use in transitional care.
Jeff Hewlett (Undergraduate, University of Michigan)

Jeff is from Novi, Michigan, and is a 2012 graduate from Northville High School. This upcoming year Jeff will be entering his senior year at the University of Michigan, where he is studying Bio molecular Science and Writing. He has been actively involved in medical research during his undergraduate career, with research experience in Endocrinology, Renal Pathology, and Pulmonary Pathology. In working closely with various research departments, Jeff has also taken an active role as an advocate and fundraiser for Type 1 Diabetes research. As a part of his work in writing, Jeff has participated in the Sweetland Writing Center’s Peer Advising program, taking part in the tutoring and mentoring of fellow students. He very much enjoys running, swimming, golf, basketball, and playing the guitar and alto saxophone in his spare time.

This summer, Jeff has had a very diverse range of experiences at MCORRP. In addition to performing data abstraction in the MAQI, he has also coupled his efforts with research on MCORRP’s Cardiac Sarcoidosis registry. His research project entails looking at the efficacy of immunosuppressant treatments on cardiac sarcoid patients, including whether such treatment is indicative of improved cardiac function and amelioration of disease progression. Jeff has thoroughly enjoyed his summer and is very grateful for the opportunity to have worked with so many wonderful people here at MCORRP.

Tanner Jones (Medical Student, University of Nevada)

Tanner grew up in rural Nevada. He enjoys the outdoors, particularly recreational water sports. Tanner received his bachelor’s degree in Biochemistry from Brigham Young University, Hawaii. After graduation, Tanner worked for three years as an analytical chemist and equipment specialist at Forensic Laboratories, a toxicology laboratory in Denver, Colorado. In 2014 he moved to Reno to begin medical school at the University of Nevada School of Medicine in Reno.

This summer, Tanner has been working on the IRAD database. His project is seeking to understand how the patency or thrombosis of the false lumen in dissection patients predicts symptoms and outcomes. A complicating, but exciting finding of this project is that the status of the false lumen might be more dynamic than previously predicted.
Maria Kim (Recent Graduate, University of Michigan)

Maria is from East Lansing, Michigan, and graduated from Okemos High School in 2010. This past May, she graduated from University of Michigan with a Bachelor of Science in Bio molecular Science. Outside of her studies, she was actively involved in a human rights non-profit called Liberty in North Korea and in Pops Orchestra as a violinist at the University. In her free time, she enjoys playing many sports, biking, running, traveling, and is a big outdoor enthusiast. Currently she is applying to medical school and will be doing research here at U of M during her gap year.

This summer, Maria is abstracting data for the BRIDGE registry and is working on a project observing the change in the patient population who are referred to BRIDGE clinic over time. She hopes to provide important information to assess the BRIDGE clinic over the 6 years it has been running and for its future directions. She is very grateful for the learning experiences and opportunities MCORRP has provided and for all the members of MCORRP

Katie Larin (Recent Graduate, University of Michigan)

Katie Larin grew up in Ann Arbor, Michigan, and graduated from Father Gabriel Richard High School in 2011. She attended the University of Michigan and graduated in May with a degree in Organizational Studies, where she focused on nonprofit and health care organizations. Katie is interested in pursuing a Master’s degree in health care administration or social work. She loves traveling, reading, and sports, and is a proud UM intramural champion for inner-tube water polo and volleyball. Next year, she will be doing a year of service in Oakland, California, with the Jesuit Volunteer Corps, working with the service and ministry programs at a Catholic high school.

Katie worked on the BRIDGE registry this summer where she learned about the advantages and challenges of cardiovascular transitional care programs. Because of her academic interests in organizational studies and sociology, she was interested in studying whether social support, including marital status and accompaniment to appointments, affects patient outcomes.
Henry Lather (Medical Student, University of Michigan)

Hailing from the fair city of Midland, Michigan, Henry majored in Biomedical Engineering at Washington University in St. Louis, graduating summa cum laude in 2014. In his senior year of undergrad, he and two friends designed and built a novel 3D-printed prosthetic arm for an amputation patient. During his first year of medical school, he co-founded the Free Time Interest Group (FTIG) and was on the runner-up team in IM Broomball. He enjoys volunteering at the UM Student-Run Free Clinic in Pinckney and the Delonis Homeless Shelter in Ann Arbor. In his free time, Henry enjoys mountain biking, skiing, ultimate Frisbee, backpacking, spending time with his family, and playing all racquet, basement, and lawn sports. Looking towards the future, he is interested in Emergency Medicine, and/or Cardiology.

This summer Henry worked on characterizing the relationship between FMD and intracranial aneurysms. Hopefully, this project will help provide another piece in the puzzle of determining the prevalence of intracranial aneurysms in patients with FMD. Henry has greatly enjoyed his time at MCORRP and would like to thank all of the MCORRP staff for such a wonderful experience.

Matt Lee (Undergraduate, University of Michigan)

Raised in Midland, Michigan, Matt graduated from Dow High School in 2014. He will be entering his sophomore year at the University of Michigan, majoring in neuroscience. In his free time he likes to play sports, hang out with his friends and watch boxing. After graduation, he plans on attending medical school.

This summer he is part of the BRIDGE Registry. His project focuses on Post Hospital Syndrome. Post Hospital Syndrome is a time of vulnerability and susceptibility to a variety of conditions after discharge, making the chances of being readmitted more likely. His project focuses on how different factors in hospital care contribute to post hospital syndrome and what could be done to help prevent this.
Uchenna Okoro (Medical Student, University of Michigan)

Uchenna is from Beltsville, Maryland, and is currently a rising second-year medical student here at the University of Michigan. He came straight through to medical school after completing his college degree in biochemistry at the University of Maryland, Baltimore County. Some of his extracurricular in the medical school include being a member of the Student Council, the Black Medical Association, and the Admissions Ambassadors team. In his spare time, he enjoys listening to music, hanging with friends, watching TV and occasionally playing tennis.

This summer Uchenna has been working with the IRAD database. Previous studies have shown that black and white patients differ in the etiology and clinical presentation when they develop acute aortic dissection (AAD). His project focuses on the specific interventional cohort of IRAD who received either surgery or endovascular therapy. He wanted to see if differences in the risk factors and presentation of black and white AAD patients result in differences in the interventions these two demographic groups receive. Hopefully the work will reveal significant findings that will help provide novel insight into better management of this emergent condition and ultimately improve patient care.

Ania Poteraj (Undergraduate, University of Notre Dame)

Ania grew up in Shelton, Connecticut and graduated from St. Joseph High School in 2012. She is entering her senior year at the University of Notre Dame where she is majoring in Biological Sciences with minors in Anthropology and Bioethics. She also serves as a seminar leader at the Center for Social Concerns, works in an aquatic ecology lab, and volunteers in the ER and NICU at Saint Joseph’s Regional Medical Center. In her free time, Ania enjoys reading, playing tennis and volleyball, and attending Notre Dame sporting events. She hopes to attend medical school after graduation.

This summer at MCORRP, Ania is working on an IRAD project that focuses on the Aortic Dissection Detection (ADD) risk score. She is interested in patients that the ADD risk score classifies as low risk for having an aortic dissection and how these patients differ from those found to be at higher risk. Because low risk patients do not present with any of the 12 clinical risk markers included in the calculation of the ADD risk score, she hopes that her project will help reveal other risk markers that the ADD score may be missing and promote the elucidation of better strategies to detect aortic dissection. Ania is grateful for the opportunity to have worked with MCORRP this summer.
Rishika Ramireddy (Undergraduate, University of Michigan)

Rishika is an Ann Arbor native and graduated from Skyline High School in 2014. She currently is majoring in Biopsychology, Cognition and Neuroscience at the University of Michigan, with an intended minor in Science, Technology and Society. During the school year, Rishika works in Dr. Scott Tomlins’ lab through the Michigan Center for Translational Pathology, studying the molecular profiling of genitourinary malignancies and clinical sub typing of prostate cancer. In her free time, she enjoys playing/watching tennis, kayaking, and spending time with her family and friends. She hopes to attend medical school in the future.

This summer, Rishika worked on the MAQI\textsuperscript{2} database. Her project focuses on studying the relationship between patients taking SSRI antidepressant medications and warfarin, in terms of comparing the time in therapeutic range (TTR), major bleeds, and ratio of times the patient had an INR value that was "out of range." Better understanding mental illness and promoting mental health is a cause that Rishika is passionate about, and due to the fact that a significant number of patients with complicated health conditions also suffer from mental health ailments, she thought this would be an interesting topic to explore. Rishika is very thankful to have had the opportunity to work with the wonderful group at MCORRP this summer and get a better understanding of outcomes research while obtaining clinical exposure.

Ryan Rogers (Undergraduate, University of Michigan)

Ryan lives in Ann Arbor, MI, where he will continue his studies at the University of Michigan in the fall. In his upcoming junior year, he looks forward to starting new classes toward his biology major and participating in U of M’s Italian and ceramics clubs. He enjoys playing and watching most sports, spending time with friends and dogs, feeding squirrels on campus, and working with clay/ceramics. His future aspirations are not yet solidified, but he plans to pursue a career in healthcare.

This summer, Ryan spent time working on the BRIDGE registry and preparing a project in Project Healthy Schools. Ryan is interested in parental influence on childhood obesity, and his project studies the effects of parental education level on lifestyle and nutritional choices of children. Ryan feels very fortunate for his experience at MCORRP this summer and hopes to continue his research in Project Healthy Schools.
Michael Schultz (Undergraduate, Michigan State University)

Michael is from Northville, Michigan, and graduated from Detroit Catholic Central in 2012. He will be a senior at Michigan State University in the fall, where he is studying Human Biology. Currently, Michael is in the process of applying to Medical School. During his time as an undergraduate, Michael has enjoyed volunteering through various organizations including Meals on Wheels and My Heart Your Heart Project. His non-academic interests include football, basketball and golf.

This summer at MCORRP, Michael is working on MAQI² and Met Fit. He is working on a project with Met Fit comparing the demographics of those that decide to participate in the program and those that decline. He hopes that this research can help better the program and make it more accessible to those deciding not to participate. Michael is grateful for the many opportunities MCORRP has offered him.

Kyle Stahlbaum (Undergraduate, Michigan State University)

Kyle was born in Novi, MI, and raised in Pinckney, MI, where he graduated from Pinckney High School in 2013. He currently is a junior in the Lyman Briggs College at Michigan State University where he is studying Human Biology. He is a volunteer at American Red Cross and is a member of the pre-professional club at MSU. This next year he plans on taking his classes, working and beginning to study for the MCAT in December. After undergraduate, he plans on attending medical school to pursue his dream of becoming a sports medicine doctor. In his free time he enjoys hanging out with his friends and playing soccer, hockey, and basketball.

This summer, Kyle is working with the Michigan Anticoagulation Quality Improvement Initiative (MAQI²) team to determine how an anticoagulation patient’s risk for bleeds is affected by their body mass index (BMI). He also helps in abstracting and entering anticoagulation patient recent follow-ups into the MAQI² registry. He is grateful to have received the opportunity to be a part of MCORRP and is planning on returning next summer if possible.
**Chandler Veich (Undergraduate, University of Michigan)**

Chandler is from Marshall, Michigan and graduated from Marshall High School in 2014. She will be entering her sophomore year at the University of Michigan, where she is studying Evolutionary Anthropology. On campus, Chandler is a member of the Women in Science and Engineering Residence Program as well as an active member of the University of Michigan’s Pre-Veterinary Club. In her free time, she enjoys volunteering at the Creature Conservancy of Ann Arbor as well as the Huron Valley Humane Society. Chandler plans on pursuing veterinary school after graduation.

This summer, Chandler is working on the IRAD registry. Her project is focusing on smoking as a risk factor for acute aortic dissection as well as how smoking will affect a dissection patient’s outcomes; in-hospital and long-term.

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**Vija Veinbergs (Undergraduate, Indiana University)**

Vija grew up in Pinckney, Michigan, and will be a junior at Indiana University in the fall. She is studying Applied Physics and plans to go on to graduate school in the future. When Vija isn’t studying, she enjoys playing soccer, going to concerts, and attending IU basketball games.

Along with abstracting data for the IRAD database, this summer Vija is working on a project exploring the differences in type B aortic dissection patients who do and do not experience endovascular stent graft related complications. She hopes to characterize the patients who experience complications, as well as when they occur.
Felipe Ventura (Medical Student, Federal University of Paraiba, Brazil)

Felipe is originally from Joao Pessoa, Brazil, and has lived most of his childhood in Coimbra, Portugal. He is now a second-year medical student at the Federal University of Paraiba, Brazil. During the 2014/2015 school year, he studied Biomedical Sciences at the Southern Illinois University, IL, as a member of the Brazilian government program Science Without Borders. He loves learning new languages, likes soccer more than he plays it, and appreciates the opportunity of connecting to other cultures and the rich exchange one can get out of it - such as starting to enjoy baseball.

Felipe was a research fellow from the Brazilian Ministry of Education in the Young Talents Program for excellence students, during his first year in college. Back then, his main goal was identifying the treatment established to patients diagnosed with hypertensive disorders during pregnancy in low-income communities in Joao Pessoa, Brazil. This summer, Felipe is studying gender and body size differences in stent grafting in patients with Acute Aortic Dissection, using the IRAD database. He is grateful to MCORRP and all its staff for this wonderful summer opportunity.
Foeke Nauta M.D., PhD Candidate, Netherlands

Foeke Nauta was born in Rotterdam, the Netherlands, where he grew up and graduated from high school. For his studies he moved to Amsterdam where he obtained his medical degree at the University of Amsterdam. During this period he spent 4 months at Harvard Medical School, Boston, where he completed a research fellowship regarding “Minimally invasive heart valve surgery”, under supervision of Prof. L.H. Cohn. In June 2014 he started with his PhD in vascular surgery at the University of Utrecht with the title “Dynamic changes of the aortic physiology after thoracic endovascular aortic repair”, supervised by Prof. F.L. Moll. For this 3-year work he directly moved to Milan to work with Prof. S. Tri-marchi at the Thoracic Aortic Research Center at Policlinico San Donato, Milan, Italy. In Italy, Foeke worked closely with bio-engineers from the University of Pavia in a research lab, where he studied the impact of thoracic stent grafts on the normal aortic physiology.

In June 2015 Foeke moved to Ann Arbor to work with Prof. K. Eagle and Prof. A. Figueroa, at the University of Michigan, where he is already involved in multiple IRAD research projects regarding “Retrograde type A aortic dissection”. Foeke will stay involved in these studies at MCORRP which he values greatly. After completing his PhD research his ambitions are to start with his residency in general surgery in the Netherlands. In his spare time Foeke likes to travel and play soccer.

Rosa de Visser, BS PhD Candidate, Netherlands

Rosa de Visser (translation: Fisherman) started her Bachelor in Physical Therapy in the Netherlands. After graduation she wanted to learn more about prevention and public health on a larger scale and so she took her Master degree in Public Health at the Vrije Univeristeit in Amsterdam. She finished her thesis at the Queensland University of Technology in Brisbane, Australia. The topic of her research was ‘physical activity, sedentary behavior as predictors of mental health’. With this fresh in mind, she started working at a large mental health institute in the Netherlands for a couple of years to initiate and implement innovative health concepts. It was a good way for her to learn and see how difficult and complex health systems are, especially when you would like to change them!

Besides her interest in public health, she has a great passion for (vintage) clothing. For 3 years she ran an online webshop named after her grandmother, and served customers in Belgium, the Netherlands and England. A very nice experience!

With a major passion for field hockey and as an old national youth player for the Dutch team, she is now learning the girls of the University of Michigan team some new tricks and tactics!
Meet our Returning Student Interns
Kyle Brunsman (Undergraduate, Michigan State University)

Raised in Fraser, Michigan, Kyle graduated from Warren De La Salle Collegiate in 2011. He will enter his senior year at Michigan State University this fall where he plans on majoring in Bio systems Engineering with a concentration in Biomedical Engineering. Outside of his studies, Kyle is highly involved with the Biomedical Engineering Society at Michigan State, where he serves as the Professional Outreach. In his free time, Kyle enjoys supervising intramural soccer games, as well as playing in them. He also enjoys basketball, football, snowboarding and socializing. He is planning on attending Medical School or pursuing a Biomedical Engineering graduate degree in the future.

This summer, Kyle is helping to lead the interns working with the MAQI^2 database as well as working with Met Fit. His project in Met Fit is assessing the utility of the Michigan Challenge. The project is a statistical project where the information found can be used as a motivational tool that will allow the participants to see how their bodies respond to the exercise.

Daniel Cole (Recent Graduate, University of Michigan)

Daniel grew up in West Bloomfield, MI, and recently graduated from the University of Michigan (Class of 2015) with a B.S. in Neuroscience. In addition to his studies, Daniel was a member of Phi Delta Epsilon International Medical Fraternity, and volunteered for Red Cross and Meals on Wheels. He enjoys running, basketball, and soccer. Daniel is currently applying to medical school.

This summer, Daniel is a team leader for the database that follows patients on warfarin therapy (MAQI^2), where he acts as a mentor and go-to person for the students working in the pacemaker lab. This is a continuation of the research he performed in the summer of 2014 with the same group. The objective of Daniel’s project is to determine the safety of extended testing intervals for patients on warfarin. Daniel is extremely grateful for the opportunity to be spend another summer at MCORRP.
Nate Costin (Recent Graduate, University of Michigan)

Raised in Princeton, New Jersey, Nate graduated from Princeton High School in 2010. Between high school and college, he spent a year in Israel studying, traveling, and working in the healthcare system. This past May, Nate graduated from the University of Michigan with a Bachelor’s degree in Anthropology. His senior thesis, *What we talk about when we don’t talk about death*, explored the integration of palliative medicine in the hospital setting. He plans on spending the upcoming year with MCORRP, completing his current research prior to matriculation to medical school. In his free time, he enjoys reading, playing Frisbee, and road tripping across North America.

This year, his third with MCORRP, Nate was the team leader of both the IRAD and BRIDGE registries. In this capacity, he trained new interns to perform data abstraction, audited and maintained accurate databases, and served as a reference for confused students. In addition, he guided students on their outstanding original research projects. Nate wishes all the interns the best of luck in their future.

Whit Froehlich (Medical Student, University of Michigan)

Whit Froehlich grew up in Wellesley, MA and Ann Arbor, MI, and graduated from Amherst College in 2010, where he studied mathematics and economics. During his year off, he worked in the Emergency Department at the University of Michigan. Whit will start medical school, also at the University of Michigan, this year.

This summer, Whit has continued his work with the Cardiac Sarcoidosis Consortium, validating entered data and completing follow-ups. He is also working on the Consortium's Initial Findings paper, to be completed this fall. This will offer the opportunity to analyze the disease and treatment courses of a large number of cardiac sarcoidosis patients drawn from around the world, allowing us to gain a better understanding of this rare disease.
Christopher Graves (Recent Graduate, Grinnell College)

Christopher grew up in Ann Arbor and recently graduated from Grinnell College (Iowa), where he majored in Biological Chemistry and French. While at school, Christopher spent a semester abroad in France, and would enjoy returning someday. Christopher is currently applying for medical school. In addition to his studies, Christopher also played soccer for his college, and likes running, biking, and supporting the Arsenal Football Club.

This year, Christopher worked as one of the two student managers and continued his study of the root causes of adverse events in patients who are on anticoagulation therapy. He presented his initial findings at the Anticoagulation Forum this spring, and spent this summer drafting a paper for the same project. These findings should hopefully shed light on the effectiveness of anticoagulation care in the state of Michigan, and address areas for improvement in the quality of care. Providers across the country will hopefully be able to use these findings to implement similar initiatives in their own anticoagulation practices.

Jordan Jabara (Undergraduate, Kalamazoo College)

Jordan grew up in Fowlerville, MI, and graduated from Fowlerville High School in 2013. As a rising junior at Kalamazoo College, Jordan is majoring in chemistry and plans on applying to medical school following graduation. At Kalamazoo, Jordan is a running back on the football team and plays piano with a music group on campus. In his free time, Jordan is an avid outdoorsman and enjoys horseback riding, snowboarding, and fly fishing.

Jordan is a co-student team leader for the IRAD registry. This position involves the training and supervision of data abstraction by first year interns. Jordan is proud of the IRAD team and the excellent work they have done this year, as we far surpassed our summer goals. His research project analyzes the impact of body mass index on Aortic Dissection. Jordan is grateful for the opportunity to work and learn at such an outstanding program, alongside such great people.
**Joon Kim (Recent Graduate, University of Michigan)**

Joon is a recent graduate of the University of Michigan, where he majored in Neuroscience and Bio molecular Sciences with a minor in Medical Anthropology. Joon is currently applying to medical school. In his year off, Joon will be devoting a year of service through City Year in Chicago, where he will serve as a teacher and mentor for “at-risk” youths. For leisure, Joon follows English Premier League soccer.

Joon is very appreciative of the opportunity to return to MCORRP this summer as a team leader. This summer, Joon contributed to the FMD and MAQI$^2$ databases. He has also been writing a manuscript on his project from last year, which involves analyzing the extent of family history in presenting characteristics of FMD patients.

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**Christa Kuck (Undergraduate, St. Olaf College)**

Christa grew up in Ann Arbor and graduated from Huron High School in 2013. She is a rising junior at St. Olaf College in Northfield, MN. Christa is a biology major and loves taking history and writing classes. She also enjoys running, biking, volunteering at the local food shelf, taking naps, and eating ice cream. She would like to participate in a service year before starting medical school.

This summer, Christa was one of the student managers, and spent her time coordinating the new interns. She loved helping the students as they learned registry work and created unique research projects. Christa also abstracted data for the BRIDGE and MAQI$^2$ registries and helped with FMD projects.
Colin McMahon (Recent Graduate, Kenyon College)

Colin grew up in Ann Arbor, Michigan and graduated from Father Gabriel Richard High School in 2011. He is a recent graduate of Kenyon College majoring in biology. Colin was a volunteer firefighter/EMT for the surrounding community while attending Kenyon and was also a member of the varsity lacrosse team and Phi Kappa Sigma fraternity. His medical interests include cardiology, emergency medicine, and trauma surgery.

At MCORRP, Colin was the student leader for the World Medical Relief and My Heart Your Heart projects and also worked on the BRIDGE registry. He continued to work on his project from last year comparing the frequency of clinically unique patients across varying distances from UMHS, using admission length as a metric to classify patients clinically unique. His project hopes to provide insight into tertiary hospital transfers of clinically unique patients and its impacts on hospital systems in regards to the Patient Protection and Affordable Care Act sanctions on readmission rates under the Hospital Readmissions Reduction Program. Additionally, his project hopes to determine the efficacy of the BRIDGE program with patients traveling far distances from socioeconomically disadvantaged areas.

Neil Parikh (Medical Student, Central Michigan University)

Neil Parikh grew up in Ann Arbor, Michigan, and is a 2010 alumnus of Pioneer High School. He went to the University of Michigan and received his B.S. in Biology, with a minor in astronomy.

Neil just finished his first year of medical school at Central Michigan College of Medicine, and is looking forward to his second year, which begins in August.

This is Neil’s fourth summer back at MCORRP, and he is now working on an IVC project with IRAD, comparing surgically managed Type A dissection patients from different time periods within the database. He is glad to be back on the IRAD team.
Megan Schechtman (Undergraduate, University of Michigan)

Megan grew up in Ann Arbor and graduated from Pioneer High School in 2011. Megan has one more semester at the University of Michigan where she will graduate from the movement science program with a business minor. She was also a four-year member of the women’s varsity soccer team. Megan enjoys volunteering at the C.S. Mott Children’s Hospital as well as helping kids with disabilities play soccer through the TOP Soccer organization. She is currently applying to medical schools.

This summer Megan was the team leader for the metabolic fitness registry. She continued her summer research project from last year which assessed the relationship between demographic variables and biochemical and anthropometric outcomes in the Met Fit program. She completed an abstract that will be submitted to the AHA epidemiology and prevention conference. In addition to working with Met Fit, Megan also did data abstraction for MAQI².
“Never doubt that a small group of thoughtful, committed people can change the world. Indeed, it is the only thing that ever has.”

- Margaret Meade
A Reflection on 55 Years of Cardiovascular Research...

Paraphrasing Eugene Braunwald, modified by Kim Eagle (January 8, 2009)

- Regard research as an end in itself—not a means to an end.
- Impactful research today requires a team.
- Building a research team requires sustained energy, investment and vision
- Feel deeply the thrill of the chase and the joy of discovery: answering an important question.
“Improving Care through Quality Research”

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