

THE VULCAN LETTER

Voice of the UAB MSTP

JUNE 2016

You Say Goodbye and I Say Hello

Paige Souder



Once upon a time there was an MSTP program, and that MSTP program was great. There was incredible leadership, endless opportunity for advancement, and inimitable silliness. Students boasted the sweaty glow of productivity, seamlessly transitioning from the furrowed brow of a long day of knowledge acquisition (from one trade or another) to the wrinkled lines of laughter born with friends and family. The UAB MSTP is unparalleled

in its capacity to create family from a string of classes, rotations, exams, and dissertations. For those who are leaving the program this summer to pursue highly sought-after residencies, we bid you farewell and look forward to the innovations you will undoubtedly bring to your respective fields and the couches you will provide for us to sleep on when it is our turn to live the rollercoaster that is residency interviewing. For those who are nose deep in books, computers, and lab benches, let us

never lose sight of why we are here and never forget to enjoy every second of it. And finally, for those who are just now beginning this crazy journey, jump in head first and be assured that you've landed in a good place. In this newsletter, you will find stories of our students, new and old—their accomplishments, their hobbies, their families, and their passions. I hope you enjoy reading and will join me in welcoming our first year class to UAB.

Hello hello: Entering Class of 2016

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Anna Joy Rogers

Hunter Dean

Univ of Alabama (BS Chemical Engineering/Biology)
Univ of Alabama (MS Biological Sciences)



Originally from the suburbs of Memphis, TN, Hunter Dean went on to attend The University of Alabama in Tuscaloosa for his education. While at UA, he worked in the lab of Dr. Janis O'Donnell where he utilized the fruit fly, *Drosophila melanogaster*, as a model organism to elucidate mechanisms of immune-driven toxicity in response

to oral administration of compounds such as metal oxide nanoparticles and the neurotoxic herbicide, paraquat. His current research interests are centered around immune-mediated neurodegeneration and neurotoxicity and focus on the development of quantitative and computational models to augment current understanding of how those processes progress. Outside of the lab, Hunter remains deeply involved in elementary science education and public engagement with the sciences, having taught and directed science mentoring programs at underprivileged schools in Tuscaloosa county. He is also a hobbyist rock-climber and is an avid chef and connoisseur of any (and all) nearby food.

Entering Class of 2016, continued

Jake Files

Spring Hill College (BS Biochemistry)



Jake recently graduated from Spring Hill, a small private school in Mobile, AL. He has previously performed research at the University of Mississippi Medical Center and at St. Jude Children's Research Hospital. His research interests are primarily in cancer biology. During his time at Spring Hill, Jake was

a four-year varsity letterman for their division II soccer program. He tries to stay physically active (preferably when it is not 90+ degrees outside) and likes to run and play sports, including soccer, golf, and tennis. In addition to athletics, Jake has always enjoyed volunteering. In college, he went on three international service-immersion trips to Nicaragua and the Dominican Republic, as well as one domestic service-immersion trip to South Dakota. He was a student leader on two of these trips and has also performed various other local service activities.

Emily Hayward

Rhodes College (BS Biochemistry)

Emily Hayward, a Michigan native, attended Rhodes College in Memphis, Tennessee. She graduated this May with a B.S. in biochemistry and molecular biology as well as a minor in English. Her first year of research was at Rhodes, where she helped identify a novel hemoparasite species in copperhead snakes. For the following three years of her undergraduate career, Emily researched at St. Jude Children's Research Hospital. Her work there primarily involved the expression and purification of proteins that are aberrant in various cancers. In addition to being in the lab at St. Jude, Emily completed multiple clinical internships and five years of volunteering with the children at the hospital. This work spurred her desire to ultimately be a physician scientist who sees cancer patients in the clinic while striving to identify novel anticancer therapeutic agents.



Ashleigh (Burns) Irwin

Georgia Tech (BS Biology)

Georgia State Univ (MS, Neurobiology)

Ashleigh received her B.S. in 2011 and M.S. in 2014. She studied the chemical nature and connectivity of neurons involved in processing social stimuli in rodents under Dr. Aras Petrulis at GSU. After



completing her master's thesis, she worked as a research technician at the University of Michigan investigating the origin of reproductive and metabolic disorders such as PCOS. Outside of lab, Ashleigh enjoys tutoring adults in basic literacy, hiking, kayaking lazily down the Huron River, and binge-watching Netflix with her husband Zachary.

Shreya Kashyap

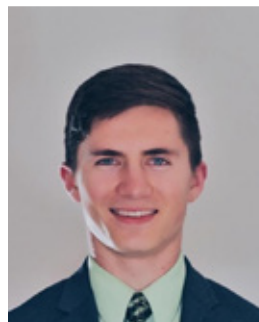
Tulane Univ (BS Neuroscience)

Shreya Kashyap graduated from Tulane University in New Orleans this past May and received a bachelor's degree in Neuroscience. She worked in the lab of Dr. Sarah Lindsey, Assistant Professor of Pharmacology in the Tulane School of Medicine, where she investigated sex differences in blood pressure and vascular integrity. She also studied the role of the newly discovered G-protein coupled estrogen receptor (GPER) in ameliorating vascular responses to injury and its role in the development of safer, more effective hormone replacement therapies. Passionate about women's healthcare and sex differences in health and disease, Shreya is interested in studying the sex differences in the neuropathology of schizophrenia during her training in the UAB MSTP program. Shreya was actively involved in the Indian Association of Tulane University, as well as the Tulane University Bollywood Dance Team. She is a certified yoga instructor, and a thoroughly un-certified Bollywood and Taylor Swift enthusiast.



Andrew Schroeder

Univ. of West Florida (BS Chemistry/Biochemistry)



While attending the University of West Florida, Andrew worked as a registered pharmacy technician at a retail pharmacy, but he also enjoyed working in the chemistry lab, where his research was focused in the areas of organic and analytical chemistry. In the lab of Dr. Schrock, Andrew worked towards the synthesis of polymers to be used in organic light emitting diodes (OLEDs), and he also worked on a project synthesizing novel boron-containing fluorescent molecules. Additionally,

Entering Class of 2016

he worked on the extraction and quantification of capsaicin from several members of the chili pepper family. Andrew's future research interests include cell biology and cancer biology. Andrew grew up near Evansville, Indiana, where most of his family remains. In 2009, his nuclear family moved down to Florida, so that his father could pursue his dream of working on a fishing boat. Andrew enjoys exercising and most outdoor activities, especially around water, and he is a certified scuba diver. Music is also a big part of his life, and he has been found singing to the radio in his car, as well as performing in church, school and all-state choruses.

Kristina Tymes-Wilbekin

Spelman College (BS Psychology)

Kristina graduated from Spelman College this past May in Atlanta, GA. As an undergraduate, Kristina worked on a long term research project at Spelman and also completed two summer research experiences through the PARAdiGM program at UAB. Her experiences have sparked an interest in statistical methods used in research and also exposed her to vision science research. In addition to time spent in the lab, Kristina enjoyed nannying for numerous families in Atlanta, volunteering at local gardens in lower income communities, and training for her first half-



marathon. She hopes to continue some of these activities while at UAB.

Blake Frey

Xavier University (BS Biology)

Originally from Rochester NY, Blake completed his undergraduate studies at Xavier in Cincinnati, OH. As an undergraduate, Blake performed research on the role of long-term latency and reactivation cycles of HSV-1 in the central nervous system at Cincinnati Children's Hospital. Shortly after graduation, Blake moved to Washington DC for the NIH post baccalaureate IRTA program. While at the NIH, Blake worked on several HIV vaccine studies as well as an independent project investigating the effects of endosomal proteases on the processing and presentation of the HIV gp120 surface envelope protein on cellular immune responses. Blake is currently interested in immunology and infectious disease, and was drawn to UAB due to the strength of its immunology program. As an MSTP student, Blake hopes to continue to explore basic immune functions as well as host-pathogen interactions. Outside of the lab, Blake has mentored homeless youth and worked in several free DC clinics. Blake also enjoys playing soccer, going to concerts and spending time with friends and family.



Hellogoodbye hellogoodbye: Graduating Class of 2016

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Paige Souder

In addition to the 8 students the UAB MSTP is welcoming this June, there are also 9 we will be sending off to various institutions around the country for residency. It is only fitting that we give them a shout-out for their hard work and celebrate their superhero status as we bid them farewell. Before we do, however, a few students have shared some parting words on their experiences in the program over the past 8ish years:

"What was your favorite memory or best experience of your MSTP career?"

"I loved the retreats. I still remember at my first retreat when Travis Lewis (now a PGY3 in Neurology at Penn) jumped up onto one of the tables in the pavilion at the 4H Center with a full bag of Franzia wine, and instructed the MSIs to stand under the bag, open the valve, and drink as much as possible. After closing the valve, we each slapped the bag and a tradition was born." -Brian Warmus

"Completing and defending my dissertation" -Emily Blosser

"Chatting with the other MSTPs of all the different years at the annual retreat." -Avinash Honasoge

"The people in the program and the relationships I've formed here. You have all been like family to me for the past seven years and I am grateful for the study breaks, the help with moving, the old 4H retreats, and so many other moments we have shared." -Stephanie Brosius

"What are you most excited about as you begin residency?"

"Taking care of patients on my own!" -Avinash Honasoge

"Being able to work with a diverse population of children and exploring Philadelphia." -Stephanie Brosius

"To meet new colleagues, explore a new city, and finally be able to introduce myself to patients as more than just 'Brian'." -Brian Warmus

"Beginning a new chapter in training, and finally beginning clinical training." -Emily Blosser

Take a Hike!

continued on pg. 5

Hayden Pacl

From short walks fit for a study-break to premier backpacking trails, Alabama can fuel your fire for fresh air. Experienced, multiday hiker? Exercise enthusiast? Need to get off the study bender you've been on? 'Bama's got you covered!

Short walks (an afternoon or less)

Railroad Park Located less than a mile from Volker Hall, this park provides a simple trail that showcases the urban landscape that is Birmingham, AL. The park itself features sprawling lawns, playgrounds, and a pond that all cultivate a laidback atmosphere. Take it all in across the street at the Red Cat Coffee House, rent a bicycle or scooter to go for a fun ride, or squeeze in a quick run in a 2.5-mile loop from Volker or the Campus Rec Center.



Red Mountain Park A little more out of the way (15-minute drive) you can find the 14-mile trail system of the Red Mountain Park. The terrain is generally suitable for trail running and hiking boots are hardly required. The longest trail the park has to offer is 3.4 miles, which allows for tailoring of shorter or longer hikes/runs based on the system. It offers a quick way to get out of the city and into the woods for a quick morning or afternoon trip!

Moderate trips (longer day trips and car camping)

Oak Mountain State Park A little further away (30-minute drive), Oak Mountain State Park offers a wide variety of outdoor activities. Their 52-mile trail system offers a variety of experiences for mountain bikers, horseback riders, and day hikers. With tent sites available for rent, it is also easy to turn your daytrip into an overnight campout, without the necessity of carrying in all of the gear you need.



Lake Nichols, Tuscaloosa A little over an hour away from the 'Ham, Lake Nichols and the surrounding areas provide a great opportunity for some time on the water! Rent a canoe or kayak from the Rec center and paddle around on the lake. You can head out to the cliffs and watch folks take the plunge several stories into the waiting water (or watch them think twice about it). You can also make an overnight trip of it with some car camping!



Long Trips (Some Planning Required—likely 2+ days)

Walls of Jericho, AL-TN State Line This 6 mile trail (reported to be longer by some) is a challenging out and back hike that features nearly 1500 feet of elevation gain and—if the weather has been wet—a waterfall and swimming hole. Given that it straddles the AL-TN state line, it is a bit of a drive from Birmingham (just under 2 and a half hours). This, combined with the distance and elevation gain of the hike would make it a solid day trip or an easier overnight back packing trip.



Cheaha State Park Located in the Talladega National Forrest an hour and a half east of Birmingham, this park contains the trailhead for the Pinhoti Trail. As promised, this trail provides the

Graduating Class of 2016, continued

Below are the match results of our graduating class and their superhero persona. Congratulate them, pick their brains for advice/wisdom, and keep an out for their future world-saving adventures:

Emily Blosser: Superman

Obstetrics-Gynecology
Ochsner Medical Center
New Orleans, LA



Catherine Poholek: Black Widow

Pediatrics
University of Pittsburgh
Pittsburgh, PA



Stephanie Brosius: the Flash

Child Neurology
Children's Hospital of Philadelphia
Philadelphia, PA



Evan Thomas: Deadpool

Radiation Oncology
University of Alabama/Birmingham
Birmingham, AL



Zachary Dobbin: Captain America

Obstetrics-Gynecology
University of Chicago
Chicago, IL



Brian Warmus: Doctor Who

Neurology
University of California/SF
San Francisco, CA



Avinash Honasoge: Iron Man

Ophthalmology
Washington University
St. Louis, MO



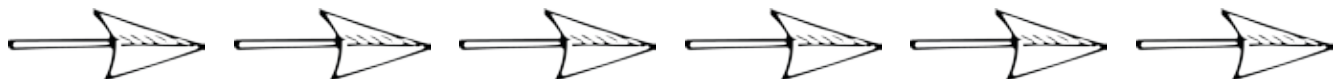
Ryan Wells: Professor X

Internal Medicine-Dermatology
Univ. of Minnesota/Minneapolis
Minneapolis, MN



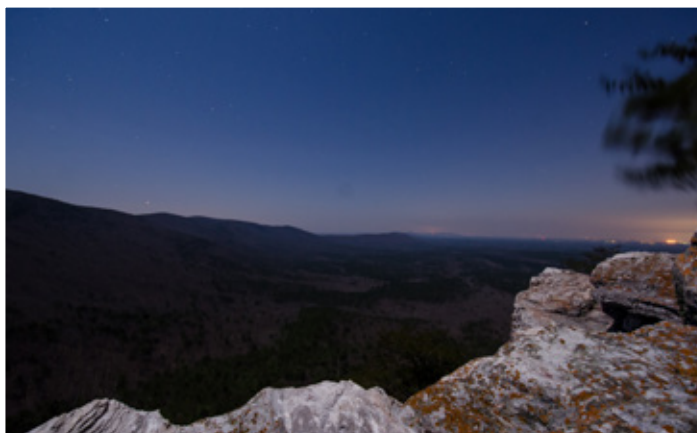
Michael Lopker: Spiderman

Internal Medicine
University of Arizona
Tucson, AZ



Take a Hike, continued

opportunity for the skilled overnight backpacker to practice his or her craft. It is the 335-mile prologue (or epilogue) to the world-renowned Appalachian Trail (AT). It is also suitable for shorter out-and-back trips, but you must carry your supplies in!



This list comprises but a handful of the incredible outdoor opportunities afforded in and around the Magic City. From the new Rotary Trail in Birmingham to the 20 other state parks not mentioned here, there is more than enough to do in and around Birmingham to keep you busy for anywhere from 7 to 8 years!

Tiny Humans: MSTP Parenting

Anna Joy Rogers and the MSTP parents

As tough as it is to be in a dual degree program, some “MSTPers” like to step it up a notch by adding kids to the mix. But as the blurbs below demonstrate, the reward of coming home to little smiling faces is more than worth the effort!

Travis Hull: Isaak and Olivia



I have two children, Isaak (5-years-old) and Olivia (4-years-old). They are best friends, but have very distinct personalities. Isaak is compassionate (like my wife, Ericka) with a great sense of humor. He loves toy cars and playing football and baseball. Olivia is fierce and strong-willed (like me). She enjoys dance class and playing with our dogs, chickens, and rabbits. When Isaak was born, I was an MS-2 preparing for Step 1, but I was in graduate school—and much more relaxed—when Olivia was born. For me, the toughest part of being an MSTP-parent is the feeling that I am neglecting my family when I am working long hours in the lab or the hospital. However, my wife could not be more supportive, and my kids are resilient and surprisingly independent for their young age. My wife is excellent at planning activities to keep them busy and stimulated, despite working full-time herself. They also do a great job of entertaining each other. Kids are a great distraction from the seriousness of the MSTP life. At the end of the day, they don't care if your experiment failed or if your attending was tough on you. They just want to talk about getting pushed down at school or to know if you're ready to play Legos. Having kids was the best thing that ever happened to me, both personally and professionally. The difficulties of being a father and aspiring physician-scientists are far outweighed by the joy of coming home, every day, to a family that accentuates your successes and makes your failures feel meaningless.

Brian Warmus: Audrey and Zoey



My wife and I have two beautiful daughters. Audrey (6-years-old) is smart, outgoing, energetic, athletic, and empathetic. Zoey (almost 4-years-old) is strong-willed, graceful, sweet, outgoing, and funny. We had Audrey in January of my MS2 year (my module grades progressively drop from P1 to P4 the rest of the year), and we had Zoey during grad school. The hardest part of being a parent in the MSTP is when you don't get to see the kids for a few days. Early mornings and late nights mean you're gone before they're awake and back after they've gone to sleep. And when “free time” is consumed by writing or studying, you start to feel like a bad parent. I eventually decided that I would do my best to separate work from home so that I could dedicate all of my attention to them and make the best of what little time we had together. That's why I was always so grateful and excited to be able to bring the kids to MSTP events, especially the holiday parties at Robin's house.

Anna Joy Rogers: Maisha

My daughter Maisha is 10 months old. She loves to wiggle her little body to music and sit on the porch waving to all the neighbors. I spent seven months of my pregnancy in Kenya conducting data collection for my dissertation, so it's only fitting that I gave her a Swahili name! The toughest thing about being both an MSTP student and a parent is that sometimes I feel torn in two directions, making it difficult to excel in both capacities. I will always remember setting up my computer on a high bar table for a few weeks not long after she was born so that I could stand and rock her in a baby carrier while furiously typing to try and meet a deadline for a manuscript submission. My advice for anyone contemplating

Anna Joy Rogers: Maisha (cont.)



having kids while in a tough program like ours: your kids don't need you to be there for them 100% of the time, but when you are there with them, even if it's only 20% of their day, be 100% there. They will always cherish those times with you.

Jennifer Stanley: Amelia and Adelaide

My daughters, Amelia (4.5-years-old) and Adelaide (6-months-old), are polar opposites. Although they were both born on/near Halloween (October 24 and 31), their personalities are night and day different. Amelia is high-energy and bounces from elation to desperation within seconds. Adelaide, on the other hand, is calm and collected—very even keel. I bookended my PhD with pregnancies—Amelia during Step 1/beginning of lab and Adelaide during thesis defense/beginning clerkships. The daily struggle is feeling torn between school and family. For example,



“You have all been like *family* to me for the past seven years.” -Stephanie Brosius

MEDICAL SCIENTIST TRAINING PROGRAM

Program Overview



MSTP Student Profile



M.D./Ph.D. Match Profile

Based on U.S. News & World Report rankings



Student Sketch: Stephanie Robert, MS-4

Paige Souder

Stephanie grew up in Metairie, Louisiana (a suburb of the New Orleans Metropolitan area) in her early childhood, then moved to Hunstville, AL in third grade. For undergraduate studies, her roots took her back to Louisiana to pursue a Chemistry major at LSU. She remembers LSU as a fun place to enjoy good football and great friends. She then returned to Alabama for medical school at UAB, initially as a MD-only student. After pursuing research with Dr. Harold Sontheimer (whom she kindly refers to as Harry throughout the interview, and whom recently started his own neuroscience center at VTC) her first year, she decided to continue her work in Harry's lab via the CCTS one-year master's program. She met with great success in his lab, receiving her own grant funding before even committing to a full-time research position. Her work with glioblastoma and epilepsy, and the mentorship of Harry, deepened her passion for science so much that she decided to apply for a spot in the MSTP to further shape and mature her work into a PhD thesis before returning to medical school. She is currently finishing her third year of medical school and plans on applying to residency programs this fall. In her future career, she sees herself sticking with neuroscience research (and rocking it, naturally), and doing a neuro-related clinical specialty. Below are some of her responses from our interview:

Paige: Your path to MSTP was different than most students, why did you decide to join after going through two years of medical school and a masters program?

Stephanie: I was involved with brain tumor research at LSU, and even though I liked it, I didn't have enough experience to know if I wanted to commit to the MSTP when I was applying to medical schools. In the spring of my first year I joined Harry's lab and wrote and won a grant, then he encouraged me to join the masters program with CCTS. I started talking to the MSTPs in his lab (Avinash Honasoge, Vishnu Cuddapah) during my year of masters work about joining the program, and after some more encouragement from Harry to apply so I could stay and get my PhD I applied. Overall, it was the combination of a good project, enjoying the research, and now being able to see myself doing



this [research] in my career.

Paige: Awesome! How was your experience integrating into the MSTP after joining a class during their third year together?

Stephanie: I had gotten to know some of the other MSTP students via other routes (lab, friends, etc) and those who were in my medical school class, and they were all very supportive of my joining the program. Everyone was very welcoming and even though I was nervous initially, it worked out very well. You naturally find people you fit in with. Once I joined I wanted to buy a house for the remainder of my stay at UAB, and Robin [program director, Dr. Robin Lorenz] and Randy [program manager, Randy Seay] were both very helpful in making that happen.

Paige: I think any MSTP here would echo the supportive and encouraging environment of both the students and administration in our program. Going off of that, were there any challenges that you faced joining the program later, or in general?

Stephanie: Working with both the graduate and medical schools to transition and catching up on graduate school classes once I was in lab was probably the hardest thing. I felt behind in the beginning, but it helped to have some overlap with the masters classes I took. Not going through the first two years with people in my class definitely wasn't an issue, though. Coming back to clinic has been the biggest challenge so far.

Paige: I'm sure that's fresh on your mind as a now third year medical student. Could you talk a bit more about what it's like coming back to clinic?

Stephanie: The first month is the hardest; you feel very behind and think you may never catch up, but after that you realize you're not really as disadvantaged as you think. Once you get in there

Student Sketch

and start being an active member of the team it's not as daunting.

Paige: How is it different coming back as a PhD?

Stephanie: There are certain skills you gain during the PhD that are intangible; these are very useful once you come back to clinic. You're mature and know how to function independently, and that makes you stand out in a good way. That being said, it's very important to be upfront about the fact that you're an MSTP and are years removed from the first half of medical school. So be realistic that you may not be able to spit out details like a classmate coming straight from Step 1 studying, but also don't use that as an excuse. You have a different level of respect as a student who can analyze literature and think like a scientist, and that brings a huge advantage to the team. Also, make sure to take a couple of weeks after defending your PhD before you start clinic to wrap up loose ends and teach the students who will be taking over your project.

Paige: Any other advice for students who haven't started clinic yet?

Stephanie: Take advantage of time you have now to explore what you're interested in. Not specifics, necessarily, but just to get an idea of what kind of medicine you'd like to practice someday or what organ system you're most interested in. Especially if you come back late to clinic it's important to start ruling things in or out. And this doesn't work out for everyone, but try to do research in something you think you want to do clinically, because the connections you make during your PhD are invaluable, especially when it comes to residencies.

Paige: Great advice, thanks. Switching gears now, could you give an "elevator pitch" of your research?

Stephanie: I studied tumor-associated epilepsy, looking at the effect of the cysteine-glutamate antiporter System xc- (SXC) in glioblastoma. SXC creates antioxidants for tumor cells by taking up cysteine, increasing tumor cell survival and decreasing the effectiveness of chemotherapy. It was previously published that cysteine uptake enhances growth, so we looked what glutamate was doing. Half of the patients with gliomas that we studied highly expressed SXC, and those that did died earlier and had seizures detected by EEG. We started a clinical trial giving patients sulfasalazine, an FDA-approved drug that inhibits SXC, and this decreased the peritumoral glutamate levels in patients and may improve patient outcomes.

Paige: Super interesting stuff. What was it like doing a clinical trial?

Stephanie: It was very cool to see a truly

translational project, taking it from cells to mice to humans and seeing it culminate in one paper. Learning the intricate details of all of those systems was useful, and it was definitely good experience for clinic. I am now seeing patients we worked with in the trial in the clinic. As an aside, let your PI know what you're interested in. Knowing I was interested in a translational project, he put me on this project since it had that translational potential. Even if you don't intend to do clinical research I think it's important to have that exposure to understand the effects of studies on real people. There is a difference between giving a drug with harsh side effects to a mouse and to a human.

Paige: You've mentioned a couple of times how Harry's mentorship helped you throughout your training, how did you land in his lab?

Stephanie: It was really serendipity. I looked for interesting projects online and ended up talking to him since I had some experience with brain tumor work. When we met I was excited in a matter of minutes just because of his personality and contagious passion for science. I liked the "benign neglect" mentoring style he offered, where he was there when you needed him but let you find your own way otherwise. When I first started I was able to go into his office and work through anything, but once I got on my feet I was able to work independently. Research can also be very frustrating at times, and he had the ability to rebuild confidence and excitement when I lost them. He was a huge advocate for his students and even though he has great responsibility outside of mentoring, he took his responsibility to his students very seriously.

Paige: What has been your favorite part of the program overall?

Stephanie: I would say grad school. I felt like I was actually making a difference. Med school is a stepping stone and has its purpose, but in grad school you're actually contributing to science. Now that I'm in clinics I miss the feeling of discovering new things instead of learning what's already known; and the feeling of independence in driving discovery.

Paige: That's a great perspective to put on it. Ok last but not least, what do you like to do outside of awesome research and helping patients?

Stephanie: I like baking and cake decorating, and I'm trying to get more into photography and travel. Baking is very time consuming, but it's a great escape from everything (as long as other people eat it). I made a game of thrones cake of the throne of 1000 swords, recently so that was fun. And I also have a little dog, Callie, who I get to hang out with.

Make Every Day an Adventure

Hayden Pacl

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It was a race against time. I had two days to travel 1600 miles across eight states, crossing through the Great Smoky Mountains, the breathtaking Shenandoah River Valley, and the Cumberland Gap famed in American folk songs to see to business in “the most powerful city in the world.” My appointment within the gates of the South African Consulate would see my application for a research permit be considered, rejected, revised, and accepted over the course of several hectic hours. This is the lens through which I now view the most agonizingly boring (and seemingly unnecessary) road trip I have ever taken.

This trip started with the realization that I would need to apply in person at the South African Embassy for a research permit to complete a lab rotation overseas. Scrambling to put everything together for an application over Memorial Day Weekend was not inherently exciting, nor was the prospect of traveling for two days during the week of the last final of my MS1 year. The 25 hours of road time, however, did

give me a lot of opportunity for reflection. I realized that there are a number of ways to make the most of every day—even the more tedious ones. There are also a number of good reasons to do so.

I posit here that, while being happy requires a number of things, the most important of these is mindfulness. Specifically, it is important to be mindful of what you are doing and why you are doing it. Seem simple? It really can be. My drive to D.C. described above was truly a grueling, monotonous trip to turn in some paperwork that I feel could have easily been mailed, at a time when I had far better things to be doing. It was also, however, a stressful (read: exciting) trip through a cross-section of some of the greatest Americana in the land to a foreign embassy, to overcome a

necessary hurdle between me and a much larger goal. It is the same trip either way, but I know that I would much rather take the second one—an adventure of (personally) great significance. But because I failed to think about where I was or why I was going there, I ended up slogging through grueling, monotonous version.

In the same vein, I think it possible to make any mundane activity more exciting simply by being mindful of the purpose of the activity and mentally reframing it in a context that is exciting to you. True, a road trip lends itself to this mental reframing better than many things, but as I stated before, it is possible to be excited about every day. Through the right eyes, for example, a tedious day of pipetting in the lab can be the impetus behind a Rocky-esque mental montage featuring you working toward the

answer to an essential research question. Bear with me here! I’m sure we’ve all seen a movie or TV montage where someone is “doing science.” Though I’m usually the first person to say, “that’s not what science is like”,



a montage never fails to pump me up. In fact, that montage doesn’t look like painstaking basic science research because they have made it more exciting by removing the other 50 samples you have to include in your experiment. By focusing in on the parts of your day that would make for an exciting montage, you actively engage in and enjoy some of the coolest parts of what you do on a daily basis that you might otherwise find exhausting.

This is a little cheesy, I know, but the principle can be applied to other formats. Think about the coolest way you can describe what it is you do to an interested stranger. Actively consider what is physically happening on the cellular or molecular level as you work through a protocol. Imagine what the highlight reel of your day or week might

Come on over, Baby



Congratulations to Ryan Berry (GS4) and his wife, Christine, on the birth of their new daughter, Emma, born in March!



Congratulations to Brandon Fox (GS4) and his wife, Amber, on the birth of their second child, daughter Raegan Eleanor Fox, born April 23, 2016. She joins big brother, Jax (pictured in the right photo above with a spot-on mohawk), in trouble-making around the Fox house.



Awards

- ♦ **Evida Dennis:** 4-year F31 grant from NIH/NIDDK, "Mechanism of Cytomegalovirus-induced Mucosal Inflammation"
- ♦ **Mika Guzman Karlsson:** Winner at 2016 GBS/JHS Graduate Student Research Symposium
- ♦ **Morgan Locy:** Ireland Research Travel Award Recipient
- ♦ **Shima Dowla & Sushma Boppana:** Inaugural Alabama Albert Schweitzer Fellowship Recipients
- ♦ **Evida Dennis:** 2016 Dept of Medicine Samuel B. Barker Award for Excellence in Research by a Graduate Student
- ♦ **Brandon Fox:** Semi-finalist, Samuel B. Barker Award
- ♦ **Sara Stone:** Winner to host the UAB 3rd annual "John Volanakis Immunology Lecturer"

Make Every Day an Adventure

look like. In essence, you can make the most of the adventure you are on every day by constantly reframing in your mind and actively thinking about why it is you are doing what you are doing. Lastly, a note for the incoming class: This mindset has helped shape my first year of med school into one of the best times I've had so far, while still being on campus for 12 hours many days. I spend the mornings with good friends over a cup of coffee (in the lecture hall). I always have the chance for a free lunch while learning from an expert speaking on a topic of interest. I wrap up the day by hanging out with friends while studying, breaking for the occasional coffee (again), working out right across the street, and grabbing dinner. This all while learning more about the coolest field in the world—medicine. I couldn't ask for a better job!

One of Us . . .

Corey Duke transferred to the MSTP from UASOM Class of 2018! A native of rural Oklahoma, his family moved to Fairhope, AL late in his high school career and he elected to stay in AL for college, attending Auburn University and graduating from the University of Montevallo. Corey served as the class president for his MS1 and MS2 years and during that time also helped found Magic City Medcast, a medical student-produced podcast highlighting intriguing stories he and his fellow students have encountered throughout medical school. He will now complete his PhD in neuroscience as part of the MSTP. When he's not on active duty, he enjoys playing guitar and mandolin.



Ryne Ramaker (GS3) featured in UAB article on the SIBS/ PARAdiGM Undergrad Research Programs



APSC students featured for their partnership with the Birmingham YMCA Youth Center doing science experiments with the kids

Dissertations

Congratulations, **Carson Moesley**, PhD!

Alice Weaver will defend her thesis on June 23, 2016 at 2pm in WTI 101.

Publications

- ♦ **Cohen JL**, Glover ME, Pugh PC, Fant AD, Simmons RK, Akil H, Kerman IA, Clinton SM. Maternal Style Selectively Shapes Amygdalar Development and Social Behavior in Rats Genetically Prone to High Anxiety. *Dev Neurosci*. 2015;37(3):203-14. doi: 10.1159/000374108. Epub 2015 Mar 17. PMID: 25791846. PMCID: PMC4485591.
- ♦ Burge WK, Griffis JC, Nenert R, **Elkhetali A**, DeCarlo DK, Ver Hoef LW, Ross LA, Visscher KM. Cortical thickness in human V1 associated with central vision loss. *Sci Rep*. 2016 Mar 24;6:23268. doi: 10.1038/srep23268. PMID: 27009536. PMCID: PMC4806312.
- ♦ Engel KL, Mackiewicz M, **Hardigan AA**, Myers RM, Savic D. Decoding transcriptional enhancers: Evolving from annotation to functional interpretation. *Semin Cell Dev Biol*. 2016 May 22. pii: S1084-9521(16)30140-9. doi: 10.1016/j.semcdb.2016.05.014. [Epub ahead of print]. PMID: 27224938.
- ♦ **Hull TD**, Boddu R, Guo L, Tisher CC, Traylor AM, Patel B, Joseph R, Prabhu SD, Suliman HB, Piantadosi CA, Agarwal A, George JF. Heme oxygenase-1 regulates mitochondrial quality control in the heart. *JCI Insight*. 2016;1(2):e85817. PMID: 27110594.
- ♦ Aslibekyan S, **Lauffer VA**, Arnett DK, Bridges SL Jr. A Novel Genetic Association With Systemic Sclerosis: The Utility of Whole-Exome Sequencing in Autoimmune Disease. *Arthritis Rheumatol*. 2016 Jan;68(1):27-30. doi: 10.1002/art.39451. PMID: 26473989.
- ♦ Zhang W, Wu M, Kim T, Jariwala RH, Garvey WJ, Luo N, Kang M, **Ma E**, Tian L, Steverson D, Yang Q, Fu Y, Garvey WT. Skeletal Muscle TRIB3 Mediates Glucose Toxicity in Diabetes and High Fat Diet-Induced Insulin Resistance. *Diabetes*. 2016 May 10. pii: db160154. [Epub ahead of print]. PMID: 27207527.
- ♦ **Nwaobi SE, Cuddapah VA, Patterson KC**, Randolph AC, Olsen ML. The role of glial-specific Kir4.1 in normal and pathological states of the CNS. *Acta Neuropathol*. 2016 Mar 9. [Epub ahead of print]. PMID: 26961251.



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