

THE VULCAN LETTER

Voice of the UAB MSTP

OCTOBER 2016

Director's Welcome

Dr. Robin Lorenz, Program Director



I first want to say a big UAB MSTP welcome to all of the applicants we are interviewing this year. Please use your time at UAB to get to know our MSTP family and to explore how UAB and the city of Birmingham can fit in with your future training plans. We will be interviewing 48 applicants this year and our current interviewees

include students from 22 different states and 34 different colleges/universities. The only schools that currently have more than one applicant in the interview pool are Harvard, University of Wisconsin-Madison, and University of Michigan. This year our applicants will again participate in the UAB School of Medicine Multiple Mini-Interview (MMI). The MMI offers applicants a series of short scenarios at 7-10 stations. There are no right or wrong answers, but

instead the MMI gives insight into critical thinking, communication, and decision making skills. In addition to these MMI's, MSTP applicants will also do a short research presentation to the MSTP Advisory Committee and have traditional interviews with those committee members. Please use these opportunities to show us your passion for research and your drive to become a physician-scientist.

This has been a fantastic year for physician scientists at UAB, as UAB became one of the only medical schools in the nation with a Physician Scientist Development Office (pg. 4 & uab.edu/medicine/physci/). This office supports and enhances the training of UAB Clinician Scientists as they develop their careers as future leaders of academic medicine. In addition to providing direction for programs that develop future physician scientists (K-12, undergraduate, MD summer research programs, and MD/PhD programs) a new comprehensive UAB Physician Scientist Training Program is being instituted to provide

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White Coat Ceremony 2016

Emily Hayward, Paige Souder

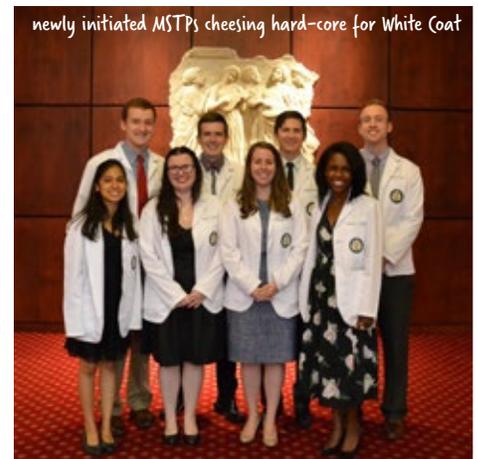
On August 14, the first year medical students participated in their White Coat Ceremony. This event celebrates the first-year class by presenting them with the white coat they will wear during their clinical work throughout medical school. It also involves students taking an oath and officially being welcomed into the health profession by generations of physicians before them.

For many, there was a palpable excitement surrounding the ceremony that day, as it was the first moment in which they realized they really were going to become doctors. "White Coat weekend was the glowing point that showed us that we really are in medical school... this isn't a dream!" first-year MSTP student Andrew Schroeder said. "It was an

unforgettable experience that marked our true entrance into the medical career."

For others, the ceremony was a mixture of excitement and nerves.

"I was elated to put on the white coat because it felt like a symbol of everything I had dreamed of and worked hard to achieve over the past few years,"



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How do you take your art? On the Rocks, Please!

Kristina Tymes-Wilbekin

I was waiting for a gel to run and scrolling through potential activities for the weekend when I stumbled upon Art on the Rocks (AOTR), a tri-yearly event at the Birmingham Museum of Art (BMA). The online description mentioned various art-related activities, a DJ, and the opportunity to try cuisine from various food trucks that would be at the venue. The promise of food and having recently finished an “Understanding the Visual Arts” class was all the motivation I needed to check it out.

When I showed up to the museum, I was greeted by a long line of patrons dressed in cocktail attire (sadly I did not catch the memo on that tiny detail). The atmosphere inside was alluring and the outside courtyard was decorated with enchanting white lights. In addition to the exhibits that are available for viewing in the daytime, there were rooms set aside for performance art, a photography seminar, and a dance floor with cool lighting.

What makes this event so special? This summer was the 12th season for Art on the Rocks. The event



photo cred: BMA

brings together local artists, musicians, and businesses to expose the community to some of the greatest aspects of Birmingham and its culture. Three separate AOTR events are hosted throughout the summer and each time there is something new to see. Jake, one of the new additions to the UAB MSTP, attended AOTR in July and August this past summer. “It was a great event with a lot of younger people. I would

definitely recommend it to everyone next year,” he reflected. Many students attend AOTR and some opt to become members at the BMA (discounted tickets are one of the many perks!).

AOTR can be enjoyed by a broad spectrum of art surveyors, including both art aficionados and those of us that have taken one visual arts course and think they know more than they really do.

Either way, it’s a great chance to get a feeling for the art scene in the ‘Ham and learn about our city.

Director’s Welcome, continued

career development seminars and workshops for any research-focused MD, DMD, MD/PhD, or DMD/PhD resident, fellow, or junior faculty in all clinical departments of the SOM or the School of Dentistry. The office will help trainees to develop their research portfolios, establish mentoring teams, obtain independent external grant funding, and develop into future leaders of our academic medical centers and will synergize with the available seminars offered by the UAB CCTS. The office will also help with oversight of these trainees to monitor progress through their established career development plans and milestones. This office also is supporting the 2016 Southeastern Medical Scientist Symposium (southeasternmdphd.org) and will be hosting one of the 2017 Regional Building the Next Generation of Academic Physicians (BNGAP) meetings (February 3-4, 2017; bngap.org).

I also want to say thanks to all of our student committees and student representatives. This is a fantastic way to develop your leadership skills and

to become involved in the UAB MSTP. There are many more students to thank than I can easily list, but special thanks goes to the students who are organizing SEMSS 2016 (Muhan and her excellent team consisting of MSTP students Patrick, Jacelyn, Jeremie, Corey and MD students Carolina, Benjamin, and Michael), to those who have put their efforts into our fantastic and nationally recognized UAB APSA chapter (MSTP students Tyler, Muhan, Paige, Alex, and Corey, as well as MD students Sebastian and Adam), to the leaders of the Griffin Society (Evida, Will, Stephen, and the rest of the Griffin Society committee), to the students organizing the CAMS seminars (Shima and her CAMS committee), to the student planners for our admissions weekends (Morgan and Vincent, and the rest of the Events committee), and to the students who have contributed to our blog, UnABridged (Paige and Emily). Your efforts help to make our MSTP a fantastic program and I am looking forward to our next year together.

Unique Pre-Clinical Experience: Equal Access Birmingham (EAB)

Emily Hayward

When I first stepped foot into Equal Access Birmingham (EAB), UAB's medical student-run free clinic for the underserved, I was nervous. I had only been a medical student for a month. If I were to hand you a list of everything I knew about treating patients... you'd probably be holding the world's tiniest piece of paper. But that day, I had the unique opportunity to volunteer as a clinic leader, which meant that I would be responsible for patient care.

Before the shift started, the other first year student and I received a crash-course on patient care at EAB. We learned about where we would take our patients and how the clinic runs each day. We learned how to operate the clinic's sphygmomanometer and blood glucose meter, and even practiced the finger prick on each other.

Additionally, our MS-1 clinical course trained us in taking a patient history and conducting a brief review of systems. Still, using these skills with a real-life patient seemed completely different. I was nervous, but I felt ready to take on the challenge, and was often comforted to see the names of other MSTP students as I began reviewing patient charts.

Once I felt like I properly understood the patient's medical history and any pressing issues, I went over to the waiting room and called for him or her. In a silly way, this was perhaps one of the hardest parts of the day. Do I announce the patient's first name? Last name? Both? And how do I introduce myself and my role? I found that none of these details really mattered, and with even a couple more months of experience, I'm already laughing at my naïve self!

Next, I brought each patient into the clinic area. I recorded vital signs and led patients into an examination room. I inquired about the patient's reason for visiting EAB, making sure to take detailed notes about his or her chief complaint and associated issues. Before leaving, I summarized the information to the patient just to make sure I had the details right.

Of everything I did that day, piecing together the patient's story was my favorite. I felt somewhat like a detective. In many ways, I think that is what drew me to medicine in the first place. The patient had an experience (or multiple seemingly unrelated experiences) to share, and I could brainstorm the right questions to ask that would illuminate ways in which we could help.

After leaving the examination room, I took a few minutes to jot down some notes and collect my thoughts into a coherent story to present to the physician who was volunteering his time that day.

Equal Access Birmingham



- ◊ Opened in 2012 by UASOM students
- ◊ Clinic run by UAB medical students, primarily in their first or second year
- ◊ Provides free healthcare to underserved and uninsured populations
- ◊ Services: primary care, pharmacy, health education, physical therapy, social work
- ◊ 1-2 physicians present per clinic day (Sundays and Wednesdays) to oversee students and provide treatment

Ways to learn more and keep up with EAB:

1. "UAB Students Run Clinic for the Underserved in Downtown Birmingham", article by the Birmingham Times
2. Facebook (Equal Access Birmingham)
3. Website (eab.path.uab.edu)

I explained that I was a first year medical student, so these were my first patients. Still, I asked him if it would be okay for me to try my hand not just at presenting the cases, but also at analyzing the situations and drawing up treatment plans.

Fortunately, the attending was extremely kind and patient with me. Even better – he encouraged me to practice fully managing each patient's care. As a mere first-year, I had the opportunity to tell him about Patient X, who came in to the clinic with complaints of dizziness and disorientation. After viewing vitals and lab reports, I suggested my first (correct!) diagnosis and proposed an adjustment to her current medications. Later, I would enter the complete analysis that the doctor and I conducted into the patient's electronic medical record.

At times, the shift was definitely a learning experience. There were moments where I left the room only to quickly return because I forgot to ask a question, or when I failed to write the appointment time on the door. Yet when I speak with friends at other institutions, many do not believe the independence EAB granted me. I was honored to play a critical role in diagnosing, treating, and documenting records for real patients. To hold this privilege was such a gift, and I have no doubt it will help me be a better physician in the coming years.

Fit and Fabulous

Kristina Tymes-Wilbekin

Coming from a school that had about 2500 students total, you can imagine the campus gym was nothing to brag about. The recreation center at UAB, however, is massive and offers numerous activities to students, faculty, and employees. One thing I've learned about my peers over the last few months is that the majority of them are fairly active. Some students have even been known to run during a lunch break before heading back to class!



Paige (left) and Muhan (right) after finishing the Mercedes Half-Marathon in February

In addition to the awesome recreation facility, Birmingham has a number of trails and hikes and free weekly evening classes at Railroad Park for the community to enjoy.

I caught up with a few of the MSTP students and asked about their personal fitness regimen or activities they enjoying doing to stay active. Tyler McCaw (GS2) has tried a number of activities, but highlighted his involvement with the UAB organized club soccer. "I've been playing with the club soccer team since coming to UAB and it's been great fun...well, when I'm not busy playing with mice or studying for tests," he stated. Ashleigh Irwin (MS1) has been regularly attending power yoga in the campus recreation center, a Monday evening class that seems to always be crowded with students

and faculty alike. "It is a great, guilt-free break from studying and the stress of medical school. I get physical activity in an environment that actively promotes letting go of the mental stress that builds up after a long day," said Ashleigh. Muhan Hu (GS2), completed her first half-marathon in Birmingham this past February with fellow MSTP Paige Souder (GS1). "Since starting the MSTP program, I'm the most fit I've ever been. With the gym right down the street, and so many opportunities for outdoors activities, like hiking, paddle-boarding, and frisbee, it's been so easy to squeeze in workouts on a weekly basis. I could barely run a mile in college, but now have a half-marathon under my name," said Muhan.

There is a strong sense of community amongst our students and a lot of MSTPs have been known to lift weights, run, play soccer, and rock climb together during their free time. With so many activities available, it's fun to get out of your comfort zone. My personal explorative moment was taking a yoga course in the grass at Railroad Park, just a mile from UAB's campus. Even though I'm a novice yogini, the moves weren't too difficult and it was a relaxing way to wind down the day.

In addition to all the activities mentioned, there are also camping trips scheduled through the recreation center and individually amongst students, various intramural sports, badminton, a pool (that contains a lazy river, whirlpool, and lap swim all in one), and don't forget the steam room inside the locker rooms! Birmingham and UAB have great opportunities to keep you active and having fun, so get out there and try something new.



"The office will help trainees develop into future leaders of our academic medical centers."

-Dr. Robin Lorenz

UAB Physician Scientist Development Office (PSDO)

- Residents, Fellows, and Junior Faculty**
 - Established portal for funding opportunities
 - Work closely with UAB Departments and Division Chairs
 - Open to MD, DMD, MD/PHD, DMD/PHD, MD/MPH
 - Involvement with on-campus events (e.g., Judging at MSRD)
- Multipurpose Office Environment**
 - Lounge, Study Areas, Library,
 - Computer and Printing Needs
 - Video Conferencing (GoToMeeting/Skype Capability)
 - Casual Area (Board games, Wii)
- Outreach and Integration**
 - Physician Scientist Symposium (Nov 5-6, 2016)
 - UAB APSA Chapter (monthly events)
 - e.g., "Drinks with a Physician Scientist"
 - Medical Student Research Day
 - Pre-MD/PHD Summer Programs and recruitment
- Current Pre-doctoral Physician Scientists**
 - MSTP, Medical Students, and Residents/Fellows
 - Integration among groups (e.g., Physician Scientist Symposium and APSA Events)
 - Continuing Clinical Education and Skills (GS years)
- Funding Opportunities**
 - Website repository of both Institutional and external opportunities
 - Collaboration with CCTS: Seminars, Grantsmanship, Training Opportunities
 - Grant creation and submission support (F30s, AHA, K-Awards)
- Social Media and Listservs**
 - Publicizes news, research accomplishments, presentations, and publications by UAB physician scientists, medical students, and MD/PhD pre-doctoral fellows
 - PSDO Listserv (all groups) and direct emails to med students

**Awesome figure created by the one and only, Randy Seay

Medicine Gone Rogue

Paige Souder

Wilderness Medicine: using practical medical knowledge to tackle real-world problems in the absence of modern day medical technologies. Sound intriguing? Second year MSTP students, Asher Krell and Patrick Molina, think yes. These trailblazers put their interest to action by attending the Advanced Wilderness Life Support (AWLS) course over the summer at Ruffner Mountain Nature Preserve (a top-notch hiking spot, if you haven't been). This was a course intended to provide attendees with training in medical techniques that you can use when you're not in a traditional healthcare setting, i.e. UAB Hospital. The course lasted ~2.5 days (Friday afternoon—Sunday) and consisted of half lecture-based and half experience-based learning. The course attracted a multidisciplinary audience, ranging from EMTs to nurses to physicians (including Asher's dad, Dr. James Krell) to medical students like Patrick and Asher. "One of the most valuable parts of the experience was to bring people from these different disciplines together and facilitate discussion," said Asher. Particulars learned in the

White Coat Ceremony, continued

first-year Emily Hayward said. "Still, I was incredibly nervous. To me, the coat carries so many values with it—empathy, compassion, and knowledge. I felt an incredible, exciting amount of pressure to embody those characteristics as I begin my training."

Beyond the personal excitement of wearing the white coat, many students felt that the ceremony was a particularly excellent chance to see family. Although the introductory "Patient, Doctor, Society" course began in August, the MSTP students moved to Birmingham in May to begin their first summer laboratory rotation.

"Most of the other medical students had only been away for two weeks, but the MSTP students had been away for two months," Schroeder explained. "After a time of many changes and amazing experiences, a visit from family was welcome."

Due to the recent storms in Baton Rouge and other areas of the country, some family members could not make the trip. Shreya Kashyap was hoping her father would be able to watch her receive her white coat, but the weather prevented his visit. Kashyap explained that the support she felt from her new MSTP family made a real difference to her.

"It's amazing how much of a community the MSTP really is," Kashyap said. "Whether it was Corey's encouraging words, or Emily's cheering when my name was called, or the fact that Ryan was upset

course included acronyms to help guide patient care in

wilderness situations, such as M.A.R.C.H. (major hemorrhage, airway, respiration, circulation, head injury/hypothermia). "There are situations when something could go wrong on the trail when it would be very valuable to know what response to have in those situations, beyond the textbook," said Asher.

One concept that was emphasized in the course was being able to react to unanticipated situations and "think out of the box." Simulations were designed to challenge participants to pool their innovation/resourcefulness and tackle a problem. "I was wrapped up and dragged around in a *well-insulated* sleeping bag to simulate the treatment of hypothermia. But that was one of the most exciting parts of the course,"

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that I didn't tell him that my father couldn't make it so that he could come watch me. I didn't feel alone."

For Kashyap, her unique white coat ceremony experience really reinforced what she loved most about UAB as an applicant just a few months prior.

"The people here make it what it is," Kashyap said. "The ceremony reinforced the feelings of family and togetherness that drew me to UAB in the first place."

Many students agreed with Kashyap, echoing the ceremony's ability to capture the essence of what they believe makes UAB special.

"White Coat was surreal and made me feel so grateful," Hayward said. "The speaker embodied the values to which I aspire, and the friendship and family-type atmosphere is exactly what I always dreamed of being surrounded by. I'm grateful to have found such a great group of people to learn and grow with over the coming years."

With this unforgettable experience under their belts, students plan to remember the true meaning of the coat as they move forward.

"White Coat was perfectly scheduled, beautifully planned, and well-executed," Kashyap said. "It helped me realize that this ceremony, this initiation so to speak, also has to happen within myself. It is important to wear this coat with humility and grace. Getting the coat is one thing—wearing it is another."

Asher (left) and Patrick (right) interviewing for this article. See video footage on our blog, UnAbridged



Where to Find Coffee in Birmingham

Emily Hayward

...in order of awesomeness. Disclaimer: All coffee in Birmingham is awesome.

1. Lucy's Coffee and Tea

Location: On campus! If you're at UAB, Lucy's is definitely the place to go.



Perks: Friendly servers. After you've visited a few times, you've likely met Lucy and discovered that the Wifi password is her dog's name.

Recommended drink:

The Viennese. Lucy's uses Ghirardelli chocolate (AKA rainbows and sunshine in a cup). This drink is essentially an iced mocha, but they use half-and-half instead of milk and it's surprisingly delicious.

2. The Abbey

Location: A hidden gem in Avondale (3 mi. from campus). Most of the time, you will be one of the only people there (so it's quiet!).



Perks: Deceptively huge on the inside with lots of couches, comfy chairs, and large tables to sequester for your study needs. Also, delicious food and pastries. The homemade cinnamon rolls can be heated up and will melt in your mouth. The sandwiches are also far above average.

Recommended drink: Nutella frosty, a blended drink made with Nutella (AKA chocolate gold) and a fair amount of espresso – not too overpowering but definitely has a kick!

3. The Red Cat

Locations: Railroad Park and Pepper Place, both 1-2 miles from campus. I personally favor the Railroad Park location.



It is always easy to find free parking and is just feet away from a gorgeous park.

Perks: Unique and amazing signature lattes, each of which has a cat-related name.

Recommended drink: Any signature latte. My favorites are the Burmese (vanilla and coconut) and the Persian (white chocolate and almond). I'll also frequently order what I call the "Permesse"—white chocolate and coconut. The baristas are flexible!

4. Urban Standard

Location: Uptown of UAB. It can be tough to find street parking, but the coffee is 100% worth it.



Perks: Unique and spunky. Hipster-esque vibe that makes it a fun place to meet friends (I feel 10x cooler when I walk inside).

Recommended drink: Just about anything. I haven't gone wrong here yet.

5. Church Street Coffee and Books

Location: Mountain Brook, a suburb of Birmingham. Quaint, peaceful, beautiful.



Perks: Lots of books to read if you need a study break, and excellent snacks/

pastries. Try the "Break-Up Cookie" (chocolate chip with sea salt) or any of the super huge bagels.

Recommended drink: Vanilla latte. The vanilla syrup is homemade.

6. Octane

Locations: The Homewood suburb (very convenient for those who live just south of UAB) and Uptown. Easy to find parking at the Homewood location and a pretty quick in/out.



Perks: The Homewood location is right next to Steel City Pops, a.k.a. the best popsicles (cream- or fruit-based) ever.

Recommended drink: Vanilla chai. One of the best versions of it I've tasted.

7. O'Henry's

Locations: One in Highland Park—an area ~5 minutes from UAB where many students live—and two in Homewood near shopping areas. Grab some coffee as you shop!



Perks: Unique flavors from a company that also sells its own brew.

Recommended drink: Not in the mood for coffee? The hot chocolate is great and can be made frozen!

Avoiding Authorship Disputes

Anna Joy Rogers

It doesn't take long for anyone interested in scientific research to realize that authorship is academic currency. It may take even less time before a budding scientist gets embroiled in a dispute about authorship.

When I was fresh out of undergrad, I naively accepted an invitation to participate in a paper. Fortunately, it was an excellent experience – I did a bunch of the grunt work, had a little intellectual contribution, and was glad to be placed squarely in the middle of the authorship list. My next experience, just a few months into graduate school, was far less positive. I made what I thought was a fair contribution to a manuscript, was listed as an author on

the first few drafts, but then never heard back about the publication. About a year later, I came across the article in a top journal; my name was tucked unobtrusively into the “acknowledgement section.” I learned my lesson to bring up the authorship question early and often.

For someone who has ever been part of an authorship battle—or been caught in the crossfire—they may wish they had taken proactive steps to order the authorship list early, before the first experiment was run or the first word of the introduction written. Amber Dance, in an article

in *Nature*, offers some tips for “aggravation-free authorship.”

It is crucial to recognize that authorship issues are not petty. The parties involved are often justified in their desire to receive credit for their intellectual and time contributions. Reputations can be built through being placed at certain spots on the authorship list. Job, fellowship, or promotions offers

When many scientists work together, determining authorship isn't always easy. Here are some tips for settling the line-up:

- ◊ Make sure you choose collaborators with whom you can work well.
- ◊ Discuss authorship early, and keep doing so often as a project evolves. Put it in writing.
- ◊ When there are disputes, first try to talk it out amicably and understand the other person's point of view. For example, try to work out how the idea first came about.
- ◊ If you must approach your supervisor about an authorship decision that you don't like, keep the tone inquisitive, not accusatory. Explain that you want to understand how authorship was decided.
- ◊ If a contributor's authorship is in question, it can help to consider what the paper would have looked like without their efforts, and whether someone else could have made the same contribution.
- ◊ Familiarize yourself with your institution's or journal's authorship guidelines, or those of the International Committee of Medical Journal Editors. Use them to back up your case.
- ◊ Be prepared to compromise or share credit.
- ◊ If you can't agree among yourselves, engage a supervisor, trusted colleagues or an ombudsman to investigate the matter and make a recommendation.

Source: Table 1; Dance, A. Authorship: Who's on first? *Nature*. 2012 Sep 27; 489 (7417) 591-593.

are often contingent on demonstrated publication success. Thus, it is crucial to hear the other party out in such a dispute. Find out what is at stake for them, and how they perceive their contribution to have been more substantial than you perceive it to have been.

Ultimately, prevention is better than cure. Avoiding authorship disputes altogether involves deliberate, up-front planning. It requires a willingness to broach the subject—as awkward as

it might feel at the time. Make sure to keep a contingency clause in the authorship listing in case some co-authors end up contributing more or less than they initially anticipated. Above all, stay professional even when emotions run high.

Team science is here to stay, meaning that authorship issues aren't going anywhere either. So, bite the bullet, ignore the awkwardness, and discuss authorship early, often, and respectfully.

For more info, see the full *Nature* article quoted above, or look up “Co-authors gone bad: how to avoid publishing conflicts” on elsevier.com.

“Getting the coat is one thing—wearing it is another.” -Shreya Kashyap, MS1

Don't Ask for Whom the Nobel Tolls

Hayden Pacl

The highest honor for a physician scientist is arguably receiving the Nobel Prize in Physiology or Medicine. On more than one occasion, the greatest questions that scientists seek to solve have been broached by my professors saying, "if you can answer this, you'll win the Nobel Prize." Admittedly, I perk up when I hear such a promise, but it also makes me ask why some questions are so crucial and so difficult to answer. So difficult, in fact, that this year's Nobel Laureate in Physiology or Medicine—Yoshinori

Ohsumi—felt the need to share that with us young folks.

Dr. Ohsumi received the Nobel Prize for his seminal work on autophagy—a process that is near and dear to all

of us and our understanding of human physiology. Among other things, he described the morphology of autophagy in yeast as well as essential genes necessary for the process. Upon acceptance of the award, he had a message for aspiring scientists: "I'd like to tell young people that not all can be successful in science, but it's important to rise to the challenge." This wasn't exactly the run-of-the-mill message of inspiration I expected when I started reading the interview. The more I thought about it, however, the more it resonated with me.

If you are reading this, there is a good chance that you already know science is hard; you don't need a Nobel Laureate to tell you that. The correlate to that is of course what Dr. Ohsumi says—that not everyone will be successful on such a grand stage. It would seem that such things require a lot of hard work and no shortage of good fortune, as the saying goes. While I knew this already, I tend to put it out of my

Medicine Gone Rogue, continued

Patrick commented. The hands-on aspect covered topics from hypothermia to hemorrhage, leaving students feeling comfortable to tackle these issues in the wild. "It really takes you back to the art of medicine, making a gross diagnosis to stabilize the patient as much as possible." Asher followed that an intimate knowledge of anatomy is required to know how to handle these situations in the absence of modern medical equipment and pharmaceuticals.

The most enthralling thing they learned in the

mind until it creeps up in the form of negative data, botched experiments, or getting scooped by another lab. Hearing someone at the summit of scientific success bring this up, though, made me take a good look at a serious reality. But within the same breath, Dr. Ohsumi candidly inspired me. It's true that science is challenging, but rising to the challenge can be a considerable source of motivation.

To get where you are now—whether you are applying to the UAB MSTP, are already interviewing here, or even have a position—you have pursued at least this one challenge. You are also willingly entering into the daunting career of medicine, the challenges of which are perhaps better known than those of research. You clearly have a thing for rising to challenges.

Why is this pursuit important? First, if you're anything like me, it is important to you. If that is not enough, it is important to those who may one day benefit from your research, or the research of someone in your field. And of course, where would that leave us if no one rises to this simultaneously strenuous and stimulating challenge? For this reason, too, it is important.

I wouldn't ask anyone to undertake such a career for any single one of these reasons, nor do I think Dr. Ohsumi would do so. It is perhaps a combination of these reasons—and any combination of others—that I also think it is important to rise to such a challenge despite the promised difficulty. I applaud Dr. Ohsumi on his tremendous success and I am grateful for his contribution to our knowledge; personally, I would like to thank him for the inspiration he has spread that forces us to reflect on the challenges of our career choice and use those to guide us, rather than to ignore them. Thank you!

course? "If you're going to drown, drown in freezing water because you have a better chance of saving your brain . . . plan wisely," Patrick and Asher mused.

Drs. Burnett and Schradig (rad-onc and ER) from UAB were also involved and are helping Asher—who leads the Wilderness Medicine Interest Group at the medical school—take the knowledge they learned from the course back to their colleagues. "No matter what specialty you're in, you can apply the tools from wilderness medicine in your field."

"I'd like to tell young people that not all can be successful in science, but it's important to rise to the challenge." -Dr. Yoshinori Ohsumi

Student Sketch: Alice Weaver, MS-3

Paige Souder

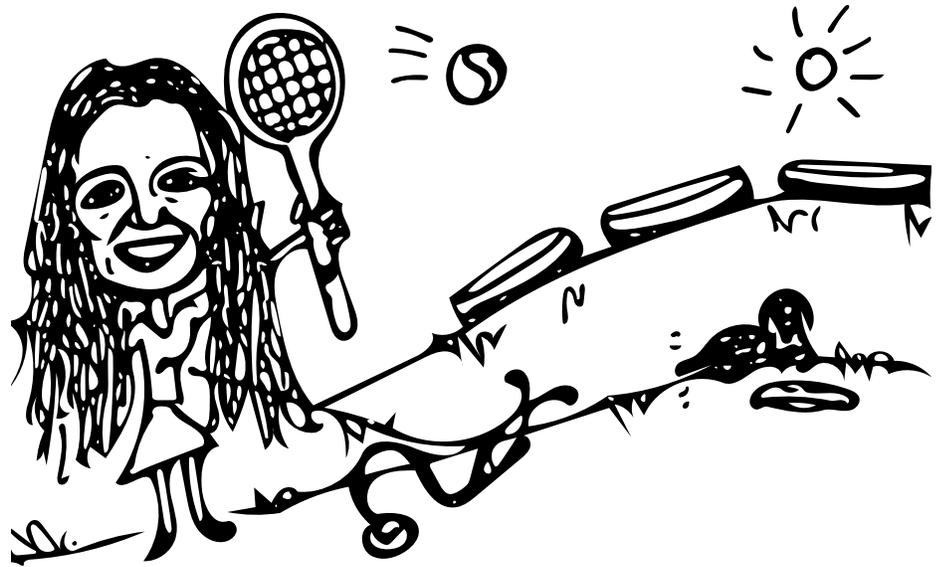
Alice grew up in eastern Kentucky, where her dad is Assistant Dean at the University of Kentucky School of Medicine. While in high school, she hopped over the state border to Indiana University, where she heard a “new age” genetics lecture and fell in love with that science. This led her to pursue a bachelor’s degree in genetics at University of Georgia (the only program of its kind in the southeast)—that and the football culture. She got into research at UGA and liked it well enough to talk to another student in her lab about applying to MD/PhD programs. She decided to apply—despite the advice of her dad to choose a different career path—and chose UAB because it felt like a “good fit” and had a good cancer center, which her research at UGA had focused on. Since starting at UAB, Alice has been successful in both the classroom and laboratory, and has been active in extracurricular activities including APSA and Griffin Society, working to improve the UAB MSTP for current and future students. She recently started her MS3 year and has several pearls of wisdom for any one currently enrolled in or considering an MD or MSTP program. Below are a few of those pearls she shared with me in our interview, as well as more information about Alice:

Paige: You mentioned your dad discouraged you from doing an MD/PhD program, what made you end up choosing it, despite this advice?

Alice: I had done research and shadowing and liked them both and wanted to combine them both into one career. That being said, I think I envisioned something very different than what a physician-scientist career actually ends up being when I first considered applying. Now, I’m glad I did it because I have a different approach to problems that will allow me to be a forward motion in medicine and research, rather than following others. I like being a leader and working hard.

Paige: You’ve definitely found the right place here, then. What about UAB stood out to you when you were choosing a school?

Alice: I liked the students here. We went to dinner the first night of my interview and found that everyone was way more normal than anywhere else I had interviewed. I also liked Dr. Lorenz (our program director) and that she lets students do things other than just be students.



Paige: Your involvement in APSA and Griffin society speak to that! You’ve pretty recently finished your PhD (congrats!), how did you decide which lab to join when you were starting out?

Alice: I wanted to do translational research in cancer focusing on cell signaling, which narrowed my search quite a bit. I rotated with Dr. Yang, my thesis mentor, and felt there was a lot of autonomy and opportunity for clinical translation, and also thought that his career was similar to the one I wanted to have. I had a background in genetics and cancer is a genetic disease, and had done most of my shadowing and undergraduate research in oncology, so it made sense for me to stay there. I will say that the research is really unimportant, though. If you like research you should find any good research question interesting. The mentor is important and needs to be someone who will promote you as a person during the PhD, and who will be your advocate afterwards. They should have experience in and the ability to train you in writing papers and getting grants, and help you get a foot in the door in whatever scientific field you want to be a part of.

Paige: Mentors are such a key part of our training. Do you have other advice for finding mentorship?

Alice: Find a clinical mentor in a related field and have meetings with them to talk about what’s going on in that field and what they’re doing to contribute. I would also recommend trying to get involved in an outcomes or chart review study. Both of those things will help you establish commitment to a clinical field - if you can find out what you want to do clinically earlier rather than later, you can start developing relationships that will help you in the future. It’s easy to find someone doing a clinical trial at UAB and most investigators

continued on pg 10

Student Sketch, continued

will appreciate having someone who knows research. It can be unrelated to your PhD project, too. Aside from that, I would say there are always people willing to sit down and talk with you and you can never have too much advice.

Paige: UAB has a great collaborative atmosphere for that kind of advice. Shifting the focus to your work during your PhD now, can you give us an elevator pitch of your thesis project?

Alice: I studied cell signaling pathways that contribute to differential clinical outcomes for head/neck cancer patients and strategies for targeting those differences therapeutically to improve patient outcomes.

Paige: Sounds very cool. You finished in 3 years, which is shorter than the average PhD or even MSTP student. Did you have any strategy in place to finish ahead of schedule?

Alice: The time it takes to finish is largely out of your control, because you have to have a project that yields positive data in a short amount of time. I didn't have to design protocols and had a relationship with someone who could get me clinical data and patient samples, which makes a manuscript more appealing to journals. I also didn't work with animal models, which inherently takes time. Other people are pushed into shorter or longer PhDs based on their mentor leaving UAB or changing lab environments. It's a very individual process, but you can always work hard and it will sometimes pay off and set you up for opportunities that you can't really plan. Staying on top of deadlines is important, like seeing your committee every six months.

Paige: Good to know! Now that you've finished that stage of your training, what has your experience coming back to clinics been like?

Alice: It hasn't been as bad as I thought it was going to be. The first couple of weeks you feel like you don't know the answers to any questions and feel very behind, but everyone forgets stuff. I found that reading through case files (advice from previous Sketch, Stephanie Robert) was helpful and would recommend doing that in the first week to quickly figure out what's going on. It's also important to get a feel for your audience. I have been told by preceptors that I give good oral presentations, specifically organizing information and presenting it in front of a group of people. That is a skill you learn in the PhD. Your experience depends on the medical school class you join, as well, and mine has been super chill so that has helped.

Paige: You are joining a great class. Do you have any specific advice for students starting clinics in the

next couple of years?

Alice: I would recommend starting on pediatrics. They value effort and interest and don't care if you don't get all the "pimp" questions right. I also shadowed a medical student for an entire day before I started on the rotation, which helped because I understood the expectations and responsibilities on inpatient service. If anyone wants to shadow me, they're welcome to.

Paige: Thanks, Alice! Looking back over your time in the program, what has been your favorite phase so far?

Alice: They are all good in different ways. Year 2 of lab (GS2 year), which culminates with your medical school classmates graduating, is by far the worst. Aside from saying goodbye to friends, lab has reached a point where the original plan has run its course and it's not as well planned out. But throughout the program as a whole it's nice to have a change of pace and goals. The evolution throughout the program is interesting; I now have people coming to me for advice, which feels weird.

Paige: You give great advice, if that helps. Would you recommend being involved in extracurriculars?

Alice: It's good to have something to emotionally attach to when lab isn't going well, so yes.

Paige: Solid. Any other lessons learned in the program you want to share?

Alice: 1) Shadowing is helpful, particularly shadowing the same people in a given field on inpatient and outpatient service, so you can make sure you like all of the responsibilities of that field. 2) Ask everyone's advice about anything. People at UAB are willing to help you and it makes you better in the decision-making process. And develop relationships with those people.

Paige: Good advice is irreplaceable. So what's the next step for you after finishing up the last two years of medical school?

Alice: I'm planning to do an ABIM or PSTP program, which are basically the same thing, with a fellowship in hematology-oncology. I want to eventually run a Phase 1 clinical trials unit and have a lab. I find clinic less interesting than inpatient medicine, so I want some component of my career to be inpatient.

Paige: Awesome, best of luck pursuing that, and I know you've set yourself up well to do so. Finally, what do you do when you're not "on the job"?

Alice: I like ultimate frisbee and have recently gotten more into tennis. When I'm not doing that I hang out with my dog, Brahm. Dogs are a good thing.

See Alice's sketch and previous Sketches of our students on our blog, UnABridged (unabridgedmstp.wordpress.com)

Expanding the Family



Joe Ladowski is our newest MSTP transplant, joining us as a GS3. He is originally from Fort Wayne, Indiana and graduated from the University of Chicago in 2012 with a degree in Biological Sciences. Following graduation, he started as a straight MD student at the Indiana University School of Medicine, then took a year off in 2014 to pursue a Master's degree in Translational Research. He then joined the IU MSTP in 2015. He moved with his

mentor, Joseph Tector (MD/PhD and boss liver transplant surgeon... nbd) from IU in July and joined our MSTP and the GBS PBMM theme. He brings with him from Indiana a wife and son. Be sure to welcome him to the crew!



Awards

- ♦ **Joe Ladowski:** Finalist, UAB 3 Minute Thesis (3MT) Competition
- ♦ **Corey Duke & Sushma Boppana:** 2016 Inductees into the Gold Humanism Honor Society
- ♦ **Steven Witte:** 2016 International Biomedical Research Alliance Innovation Award for Novel Solutions in Biology or Medicine
- ♦ **Mark Pepin:** Dean's Research Award Program Grant recipient for "Microsoft Surface Pro as a tool to enhance lecture delivery and student engagement in the pre-clinical sciences"
- ♦ **U.S. Citizens:** Survived three gut-wrenching presidential debates in the past few weeks. TBD if they will survive the upcoming election. GO VOTE NOVEMBER 8TH, PLEASE.

Dissertations

Congratulations to the new docs in the house!

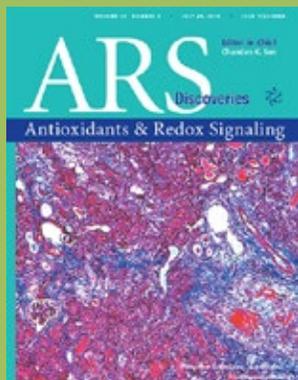
David Figge, PhD
Mika Guzman Karlsson, PhD
Jason LeGrand, PhD
Alice Weaver, PhD



Upcoming Events

- ♦ Medical Student Research Day and Southeastern Medical Scientist Symposium (SEMSS), Nov. 4-6—brought to you for the first time by the PSDO. *Will not disappoint.* #bethereorbesquare
- ♦ MSTP Applicant Interviews (4 Rounds): **1.** Oct. 27-29, **2.** Nov. 2-4, **3.** Nov. 30-Dec. 2, **4.** Jan. 11-13
- ♦ **HALLOWEEN!** Go to Atrix or Sloss to get spooky.
- ♦ **THANKSGIVING!** Turkey/tofu, corn, pie, FOOD.

In Other News...



GS2 Jeremie Lever's histology art featured on the cover of Antioxidants & Redox Signaling journal.



MS3 Alice Weaver featured alongside her dad in a podcast interview with Real Life Science.



Newly-dubbed MS3 David Figge's research featured in a UAB News Innovation and Development article.



GS1 Morgan Zipperly featured by UAB for her mentorship in the PARAdiGM Summer Research Program.

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