On Friday, May 6th the BCDB Training Grant and the Winship Cancer Institute, Cancer Cell Biology Program will be hosting two seminars by Zena Werb. The first will be a Career Workshop titled “Preparing for the next stage in your career” and the second will be a formal seminar titled “Of Mice and Women: How Studying Development Gives Us Insights Into Cancer”.

Every year the BCDB Training Grant looks to invite a predominant scientist who has not only achieved great academic accomplishments, but has also played an active role in improving the scientific community as a whole. Dr. Werb is a member of The National Academy of Science and has received multiple honors and awards for her scientific achievements. Her lab is internationally recognized for discoveries on the molecular and cellular basis of the extracellular matrix (ECM) proteolysis and its role in the normal function and pathogenesis of tissues.

Dr. Werb had a very diverse training experience starting with her BS in Biochemistry at the University of Toronto. Then completing her PhD in Cell Biology from Rockefeller University investigating cholesterol metabolism in the microphage. She went on to complete her post-doctoral work at Strangeways Research Labs in the United Kingdom before settling in at University of California San Francisco (UCSF). Dr. Werb joined UCSF at the age of 31, and remains there today. Her expertise in breast development, breast cancer, and the ECM has been developing over decades. Dr. Werb is one of the first scientists to link the extracellular matrix with the cytoskeleton and observe the signaling properties of integrins. She has since focused on breast cancer and metastasis investigating the mechanism allowing cancer cells to revert to a stem-cell like state. She has concentrated on the molecular mechanisms involved in extracellular matrix remodeling and inflammatory cell function in mammary development and breast cancer. Dr. Werb describes her research program as “characterized by innovation and thoroughness”. The Werb lab has published over 450 scientific papers.

In addition to her extensive publication record and academic achievements, Dr. Werb has been honored for her role in training students and speaking out for women in science. She has put a considerable effort into mentoring young scientists and has trained over 70 students and postdoctoral fellows. Dr. Werb has dedicated herself to being a mentor for all students. Having battled sexism in the scientific community at an early age, she works to educate and inspire young women into pursuing their scientific goals. She has published many works such as “The Joy of a Career in Cell Biology”, and run programs for the Women in Cell Biology Committee. In her research, Dr. Werb, marries her activism and her passions, studying factors which lead up to the development of metastatic breast cancer and speaking out as a leader in the field for both her research and women in science.

The BCDB Training Grant encourages everyone to attend Dr. Werb’s seminars on Friday May 6th. If you are interested in a small group meeting with Dr. Werb please contact the training grant students. Also, all are welcome to attend a reception after Dr. Werb’s second seminar at 2:30pm in the Winship Cancer Center.
was visiting another lab and, as small talk often goes, I asked one of the students about his overall career plan. He sighed and said he really wasn’t sure and it was bothering him, even though his project was going well and he liked what he was doing. I remember that feeling, especially as a postdoc. At that time, the expectation was much more focused on academic careers. My friends who were in the same boat and I used to commiserate over large bowls of cheap fried rice for lunch at the local hole in the wall down the street on Euclid. The fried rice was good and came in either half or whole orders. I don’t recall anyone ever ordering something else off the menu, I have a feeling that the quality of the rest of the food there ranged from bad to toxic and, more critically, was a bad value.

Limited menu aside, it was a great relief for us to get together, compare notes and complain a little about the crappy job market. And it was a chance to admit that we had some uncertainty in our lives, maybe not quite out loud, but the feeling was there. Maybe you’ve found this type of get-together to be cathartic as well. Of course it’s important to think about future goals and aspirations and to have a specific plan to achieve those goals. I think that our program covers the mechanics of that well through our Professionalization Workshops. We also have a very supportive group of students and faculty that helps too.

While thinking about this Director’s Corner, I was working on a manuscript revision which involved typing the word “flux” quite a few times. No surprise there, since paracellular flux through tight junctions is one of my favorite output variables. But I also was struck by the shape of the word. Sort of like the word “parallel” actually has parallel lines in it, the “X” in flux seemed to represent a crossroads to me and how the flux in our lives requires us to choose a direction. We have a concept of where the different directions will lead us, but you can’t know for sure.

So we’re stuck with uncertainty. Maybe not complete cluelessness, but to quote Stewart Udall: “Any change or reform you make is going to have consequences you don’t like”. And I think it is the fear of bad outcomes that makes people fixate on changes and the future. But the corollary to that quote is that change often has positive unintended consequences as well. Those positive effects are what drives us forward, leads us to new discoveries and enables us to make connections that influence our lives as well as the lives of others.

The converse of change is static equilibrium. Stable, yes, but is that a preferable place to be? Maybe for a day, a week or even a year. But consider that a planet at static equilibrium would be a dead one. For anyone choosing graduate school I cannot imagine that they would be satisfied with a completely predictable life experience. OK, maybe it would be nice if experiments always gave us interpretable results. That aside, the need to explore and find new things and make new connections is a strong driving force. And every question answered leads to many new ones to be posed.

While it can be a challenge, I think it’s important to keep thoughts and feelings about the positive and negative effects of uncertainty alongside oneself, as opposed to being an overwhelming force. And to think about the future and plan for it, but also live in the moment. There are great things going on and one of the best times to appreciate them is as they are happening. Taking even just a minute or two a day for a brief moment of reflection can be a powerful experience. ◊
The Laney Graduate School (LGS) at Emory is continuing its investment in graduate student career development with a new initiative known as Professional Development and Career Planning (PDCP). The graduate school has a storied history of advancing student career development, showcased by conducting workshops such as the Pathways Beyond the Professoriate and various alumni events. The most recent investment was the Broadening Experiences in Science Training or BEST Program, a 5-year grant awarded from the NIH to development enhanced career training for graduate students and post docs. As the BEST program grant is coming to an end, the graduate school is taking what it has learned from the BEST program and creating this new PDCP effort to better graduate students.

The PDCP initiative will feature year long events that target key student areas. These areas include: skill development, career exploration, job search, communication and writing, ethics and teaching. Each month will feature different seminars and events that target these key areas. Already existing workshops such as the Pathways Beyond the Professoriate will continue as always and be incorporated into the new PDCP events. As a new form of student engagement, the graduate school is also planning on doing career development popup events across campus. This approach will help to spread the word about upcoming events and the new resources available at the graduate school.

One of the major new career resources is the graduate student career resource center. The center, which is located in the graduate school building is filled with tons of career resources and offers a nice setting where students can get help with career decisions. The goal of the center is to offer resources that focus on the key areas of the PDCP initiative in order to enhance graduate training. Using resources carried over from the BEST Program, the staff at the center can even help with career exploration and skill development. The new center also offers services such as resume review, mock interviews, and many more. All of these services are open to all graduate students in Laney. All one needs to do is set up an appointment.

With all these newly available resources, the graduate school is continuing to show its commitment to student career development. The enhancements to the series of workshops brought on by the PDCP initiative and the creation of the career resource center has really strengthened grad school’s approach to career training. For more information on what the graduate school is doing for career resources, visit their newly update website.

Eating my way up Buford Highway... and beyond

~Kevin Morris

Anyone seriously interested in the dining scene in Atlanta must give a long hard look to Buford Highway. And you will be very much better off for doing so. We are not talking about Iron Chef kind of dining, that involves liquid nitrogen or amuse bouche, but rather a more Anthony Bourdain-type cheap street food that has on menus parts of animals most of us do not want to find on our plates. I am talking about Buford Highway between Clairemont Rd and the I285 beltway. The number of options for great food is huge and opinions vary as to where to find the best pho, or bahn mi (aka Vietnamese sandwiches), or dim sum, or Korean barbecue, or crispy duck, or tofu. But now you can relax because I am here to answer these questions for you.

I should perhaps mention before we start our tour that I did not start out life with much of an interest in such foods. Being the product of a parents with Jewish (father) and Polish (mother) roots, my sibs and I would occasionally be treated to ethnic foods such as gefilte fish, pickled herring, pickled pigs feet, or dishes with lots of beets. Thus, fear and loathing was more my attitude to foreign fare as a child. Thankfully, my food tastes have matured.
Let’s start with dim sum, which is pretty safe for novices to Asian dining. Dim sum is basically Cantonese (thus, not very spicy at all) appetizers that roll by on a cart and if you see something you like, you point and they drop it off on your table. So go with a group, sample lots of different things, but take someone like me, who will eat anything left over. Chicken feet are the most exotic thing you will see here and I recommend giving them a pass. The best in my view is Canton House on Buford Hwy, though Hong Kong Harbor on Cheshire Bridge also good and closer. My daughters and I go mostly for various dumplings and what we call “slimy noodles” because they are large, flat, white rice noodles that are hard to pick up with any utensil. Typically come with shrimp inside and a nice soy sauce drizzle.

Next on the list of very tasty but not very spicy or weird is pho. This is my comfort food, and a must when recovering from flu or hangover. Basically soup with a great broth, noodles, and your choice of meat. Here is where things can get a little off-putting, but just go with the eye round or flank steak if you are not a fan of tendon or tripe. Pho Dai Loi 2 on Buford is the only place I go for pho and I almost always start off with the steamed spring rolls because I love the slightly sweet peanut sauce that comes for dunking. I once made pho at home and it involved making the broth from ox tails (which we found at the DeKalb farmer’s market (!)) but it was nowhere close to the wonderful broth at Pho Dai Loi.

Next on the list is Vietnamese sandwiches (bahn mi). I still prefer Lee’s Bakery for these; really good and still only $3.00 each. But I also like Quoc Huong; both are on Buford Hwy. The real problem is that one sandwich is not quite enough for a growing boy or girl and two is too much for me. So bring a friend. These are simple sandwiches with chicken or pork (or other things like tofu) with a few vegetable type items, but it is the good bread and better meat filling that makes it good. The other issue with Quoc Huong is that it is further away, but worse it is in the same strip mall as Ming’s BBQ, which is my absolute favorite these days. Not for bahn mi but for Chinese barbecue and specifically crispy duck (OMG!!!). Why make that drive and not eat duck??!! I cannot get enough and go almost once a week. Just cut up roasted, crispy duck on rice and I am one happy camper. Ming’s is basically a bbq joint so while I also like their other foods, I would stick with the meat: duck, spare ribs, roast pork, all hanging in the window and all outstanding. Note that these are all best eaten on site and even the crispy duck is less crispy by the time you get home, which is not to say I haven’t enjoyed each the next day. Just prefer to eat on site with some hot tea.

The Evolution of Tenure

"[Tenure was like a] golden fleece [that] glittered so brightly [it was] impossible not to try for it".
-Alvin Kernan, Professor of English, author “In Plato’s Cave"

The concept of tenure, which has become one of the main pillars of academia, stems from a complex history and still is evolving to this day. Academia is often the source of culture and innovation which can lead to the influencing of public opinion. Because of this, American universities have long sought to protect their professors from consequences of sharing controversial ideas. In the 1800’s, the majority of the universities in the United States were religious-based. At these religious institutions, dismissal could result from anti-doctrine teaching or secular ideas leading to many professors wanting protection. Although there was a general feeling that professors held their positions with some sort of permanence, they were still subject to the whims of the board of trustees and financial donors who held strong sway at these institutions because of their deep pockets and extensive power. As academic professors became increasingly frustrated with the lack of control they felt in their careers, they began to think of ways to achieve academic freedom, the linchpin of tenure.
Academic freedom is the ability of a professor to voice unpopular opinions without fear of persecution and (most importantly) any repercussions from the university. It allows researchers to explore various lines of inquiry that may be considered not worth while or controversial in the eyes of the public. Academic freedom is also believed to be good for the general public as many of the fruits that come from this uninhibited intellectual inquiry leads to benefits for all, for example nuclear energy. With academic freedom it is thought that more original ideas may arise as intellectuals do not feel the pressure to fit within the box of “safe” ideas, giving them the power to operate within their own realms of thought. Prior to the establishment of tenure, if a professor were to express an unpopular idea, his career was subject to the views of those who had power over the university. One case that highlights this issue occurred in 1903. George Bruce Halsted, a prominent mathematician at the University of Texas at Austin wrote scathing letters criticizing the university for not hiring one of his promising pupils despite the fact the pupil was the most qualified for the position. Even though Halsted worked for 19 years at the university and made significant contributions to the field of geometry, he was fired. This case and many others led to professors wanting to exert more control over their positions and to have a set protocol in place that would allow them due process. The first move towards this idea of protecting intellectual freedom came in 1900 when Harvard, Columbia, and the University of Chicago determined that professors were no longer under the sway of the board of trustees.

In 1915, The American Association of University Professors (AAUP) was established and released the “Declaration of Principles”. These declarations established what they desired for academic professors from universities: professors should have higher salaries and more academic freedom; professors should be more self-governing where their careers are dictated by their academic peers; and especially for professors to have formal contracts that specified the terms of their employment. This declaration suggested that academics could not be fired without just cause. In order to revoke tenure, a formal dismissal letter must be presented and the professor allowed a chance to argue their case. The practical proposals presented in the declaration have served as the basis for our current tenure system. In 1940, the AAUP released their “Statement of Principles” which elaborated further on the ideals of tenure. An example of the items proposed is the standard seven year tenure clock which is still commonly used today. This tenure clock was designed to raise the performance standards of new professors to that of the university. As a result, the concepts of the tenure committee and faculty governance arose from this proposal. Also within this document, the concept of academic freedom was elaborated on. It stated that professors are entitled to freedom in research, in the classroom, and to freedom of speech outside the university without fear of consequence. Ironically, a caveat in this declaration is the recommendation that professors should “be careful to avoid controversial matter that is unrelated to the subject.”

Tenure became incredibly popular and was used as a bargaining tool for universities after World War II. In the 1940s, formal tenure agreements started to be added as a benefit to professors when the influx of students into universities was seeing exponential growth from returning soldiers. The bottle-neck of tenure occurred in the 1970’s when the amount of tenure tracked professors reached critical mass and university administrators began to realize they may be producing too many doctorates. The result was that the trend in tenure significantly declined from 1975 as the number of available tenure-track positions fell from 57% to less than 30% in 2005. This decrease in tenure-track positions has also lead to an subsequent increase in non-tenure track positions such as adjunct professors and staff researchers. In the 1970s, about 22% of faculty at an academic institution were non-tenure track. Just two decades later, that number rose to approximately 40% of positions with that number reaching close to 50% today.

Tenure is still evolving as the academic institution itself is changing. As a part of this system, it is the duty of this newsletter committee to participate in the conversation and to be aware of how it affects us at every turn. This article is the first of a series that will look behind the scenes of academia and discuss many of the concepts, issues and debates that rage on. Stay tuned…. ◊

http://www.aaup.org/file/Teichgraeber_0.pdf
https://www.higheredjobs.com/higheredcareers/interviews.cfm?ID=459
http://www.nea.org/home/33067.htm
http://www.ethosreview.org/intellectual-spaces/history-of-tenure/
https://en.wikipedia.org/wiki/Academic_tenure_in_North_America
Meal completion with Rick Kahn...

And once you learn where to find Ming’s you are just across the street from our other favorite Chinese food at North China Eatery (NCE). This is important because NCE is tucked away on the back and side of Italian Optical (?) and you are likely to drive right by it the first time you go looking for it. My brother and I have a long standing love of handmade noodle and dumpling foods and NCE is as good in this genre as you can get. If anyone finds hand-pulled Korean noodles please let me know, as these are great and a bit different from the noodles they make at NCE but so far I have not found them here in Atlanta. They also have the best steamed pork buns in town, even better (less doughy) than the ones at the Canton House. So again, NCE is appetizer type dishes that are best shared amongst a larger group but is also great for 1-2 diners as you can take home leftovers. All their dumplings are good and I believe you can also get a bag of handmade frozen dumplings to take home. You get about ~60 of them for $22-26 as I recall and I can make a quick and delicious meal out of 6-8 of those any night. Just throw them into a steamer and 8-10 min later dinner is served.

A very similar place is Chef Liu’s just up the road from NCE. They have lots of good appetizer type foods, including several types of dumplings and soups and handmade dumplings for eating in or taking home. My favorite here is a dumpling that includes a stuffing but also liquid broth that adds to the experience, but requires it be eaten in one bite.

For Korean food, I stick to Sokongdong Tofu House, still on Buford but almost up to I285. I usually end up spending a little over $20 per person as I don’t go often and like their combination meat barbecue and other things. They come with a collection of things to nibble on (kimchi, daikon, etc) that I also love but are a bit of an acquired taste. Things here can get a little spicy hot so be careful if not something you like.

In addition to the mostly Chinese places I mentioned on Buford Hwy there is also outstanding Mexican food and taquerias as well as foods from other nations, but I tend to stick to my rotation of duck, pho, duck, NCE, duck, pho, duck, Tofu House, duck. Enjoy! 

Women in Science: Conversations, Topics, and Issues

One of the big topics in STEM careers is representation, especially when it comes to women in science. This is an issue that has been discussed in the main media for past few years, especially in the past year with the onslaught to stories involving power inbalances in STEM. The Leading Edge will be writing a series of articles that will discuss the issues that women in science face and different topics associated with these challenges. Stay tuned....
Running Recruitment:  
A Student Perspective

Have you ever wondered what it’s like to plan a small wedding? That’s the best analogy I can come up with for what it takes to plan each year’s recruitment. There’s the guest list—always a hot topic for debate. How many people can we invite? Who should we prioritize? Then there’s the accommodations—where will they stay and what will their schedule be for their visit? There’s the rehearsal dinner—like a real rehearsal dinner, where will it be? What food will we have? We always want that to feel intimate and welcoming. Then of course there’s the wedding itself—which I equate to the interviews! And last but not least, the reception, aka Friday night’s dinner, where you want everyone to have a good time and relax. See what I mean? Each of the main parts of a wedding has an analogous component during recruitment!

Like planning a wedding, it takes a small village to make recruitment a success and I was simply one part of that this year. While the basics stay the same, each year we have to decide what worked well in previous years, what didn’t, and what can we do to make this year better. This year, Recruiter Rick added a new step to the application process. Rather than having an informal phone interview, Rick Skyped each of the applicants prior to extending any invitations to the weekend visit. While this was incredibly time intensive on his part, we were able to eliminate candidates who were clearly uninterested in the program so that we weren’t wasting our time or theirs. We had a really top notch class of recruits this year, so many kudos on that. Additionally, we made a few changes to the other events during the weekend. We changed the location for both of our dinner events—many thanks again to Anita for opening her lovely home to us for the Thursday night dinner! For the past several years, Friday night’s dinner was located at Ormsby’s but this year we chose to stay close to campus at Marlow’s Tavern. This received mixed reviews, so please share if you have any suggestions for new options next year. Another new component this year was an afternoon tour of the CDC museum, which I heard was “gross but interesting”. I certainly want to check it out myself sometime!

Recruitment is a massive undertaking with a huge number of details to keep straight. It’s two intense days of shepherding 20 recruits, 20 buddies, and lots of faculty: a lot of moving parts that all need to be in the right place at the right time. To have a weekend as successful as I think we did this year is a testament to how strong our program is and how well we can work together toward a common goal. I’m proud of how we represented Emory and BCDB. We put our best foot forward so the recruits could understand who we are and what we do, resulting in a class of 7 incoming students for Fall 2017!

\( \text{Congratulations to our Recent Graduates!} \)

Katie Williams  
Shea Caldwell  
Marc Schureck  
Megan Allen  
Dawn Barnes
I am a biophysicist, although I started my undergraduate training in Italy as an industrial chemist. As such, I delved into organic, inorganic and polymer chemistry, including elements of industrial reactor design. When I was about to graduate, I was recruited by Carlos Bustamante to the graduate program in chemistry at the University of New Mexico. Carlos is a Biophysicist, now at UC Berkeley and a member of the U. S. National Academy of Science. In his laboratory, I worked on exciting macromolecular science dealing with biological samples I had never prepared before, like chloroplasts, DNA, and chromatin, and I built a differential polarization confocal microscope having had almost no previous hands-on experience with optics or large instruments. Of course, I had help from several talented students in the lab, and it was an extremely friendly and supportive group. That wide-ranging experience was a terrific model for my approach to research. When Carlos moved to the Institute of Molecular Biology at the University of Oregon, I did a short stint with him as a postdoc, participating in the development and application of the first magnetic tweezers setup before moving to the lab of Jeff Gelles at Brandeis University to study the lac repressor-mediated DNA loop using the tethered particle motion (TPM) technique. Jeff was also a terrific mentor and intrepid scientist who helped push single molecule experimentation to the forefront. A short time after that I had a chance to move back to Italy to start an academic career in the biology department of the University of Milan. There I was able to secure my first independent grant to investigate the molecular mechanisms of transcriptional regulation. In 2005, I accepted a position in the Physics department at Emory University, where I am now a professor.

The research in my lab is quite interdisciplinary. We tend to rely on single molecule experimentation to tackle questions, but we embrace literature and techniques from a wide swath of the biological, chemical, physical and engineering sciences. Members of my lab come from different backgrounds and collaborate to address open questions about transcription. Besides traditional biochemical and biomolecular methods, we use and develop atomic force microscopy to image DNA-protein complexes, and tethered particle microscopy and magnetic tweezers to study the mechanochemistry of transcriptional regulation. Because our research is so interdisciplinary, it lends itself to collaborations and we always have and continue to collaborate with various scientists. For example, David Dunlap and Yonggang Ke here at Emory, Francesca Storici at GATech and Pat Higgins and David Schneider at UAB, as well as others around the world.

I joined the BCDB graduate program a year ago, and last semester, I co-taught a Foundation module on “single molecule approaches to transcription and replication” with Professor Bill Dynan. The discussion-based format of this class creates a unique opportunity for the students to develop the tools to critically read scientific literature and work together to achieve a deeper intellectual understanding of papers. This format and the small class size offer the instructor a unique vantage point from which to observe each student’s learning style and logic, and discuss, in my case, the state-of-the-art, quantitative methods for the study of protein-mediated regulation of DNA transactions. It was a rewarding experience.
Between juggling lab hours, writing grants, grading papers and trying to maintain somewhat of a social life, many graduate students might put off “career development” opportunities until the end of their PhD. We all know presenting our work at conferences is just as important as writing grants and publications, but we might not be aware of all the wonderful opportunities for career development that are available to us outside of this or even how to take advantage of these throughout our graduate career rather than at the very end.

TRAINING COURSES
There are many opportunities available for graduate students to get training in specific methods or fields of research. Though these courses are not covered by PDS funds, individual fellowships or institute specific awards can cover them. The benefits of such courses aside from the technical are the ability to engage with experts in your field that you might not have the opportunity to interact with otherwise.

Emily Kuiper took a 16 day intensive course on X-Ray Methods in Structural Biology at Cold Spring Harbor that consisted of daily lectures and hands on laboratory sessions covering the history, the technical, the practival and the cutting edge methods and applications of crystallography taught by leaders in the field.

Paul Donlin-Asp took a 2-part course this Spring abroad. The first was a theoretical course about post-transcriptional gene regulation that was sponsored by Institute Curie in Orsay France, and a practical course on iCLIP and ribosomal profiling taking place in Barcelona which is sponsored by the Center for Genomic Regulation (CRG).

NON-TRADITIONAL CONFERENCES
There are many conferences you can attend that provide you with more than an opportunity to disseminate your work. These can be career development specific or interdisciplinary.

“It was a major highlight of my PhD career. It was a cross between a science summer camp and the hardest two weeks you’ve ever worked.”
– Emily Kuiper

“I was fortunate to be selected as a science writing scholar for the 2015 National Academies Keck Future Initiatives (NAFKI) conference on Art and Science, Engineering, and Medicine Frontier Collaborations in Irvine, California. The conference brought together scientists and artists to address targeted problems ranging from education to the environment. The NAKFI conference was truly a unique opportunity as I was surrounded by so many talented scientists and artists and was able to witness the formation of many innovative ideas.”
– Kevin J. Morris

~continued on page 11
OUTREACH
Many of us study diseases affecting real people, but might not have opportunities to engage with patients or the community directly. Fundraisers and awareness events are the perfect opportunity to engage those who are affected by the diseases we study and whom may one day benefit from findings in our field of work.

SCIENCE POLICY
“The CureSMA fundraising event was a really exciting opportunity to actually move from simply talking about the disease model I study as just a model, but to be reminded of the humanity behind the disease. And most importantly, how truly invested the organizers and those who came out to support the event were for supporting the advancement of biomedical research.”
– Paul Donlin-Asp

As graduate students, we aware of declining NIH and NSF budgets and the need to engage politicians on the importance of basic science research funding. One venue for this is Capitol Hill Days, which are offered by every major science organization. Hill Days consists of participants flying out to Washington D.C. to participate in training sessions and congressional meetings with Representatives and Senators. Many societies sponsor students through travel awards.

“This is the perfect opportunity to get involved in science advocacy and also get a glimpse into how the government works.”
– Josh Lewis

RESOURCES

TRAINING COURSES
2. ASCB Biotech Course http://www.ascb.org/biotech-course/
3. The Jackson Laboratory Genomic Training Courses https://www.jax.org/education-and-learning/course-and-conferences/courses
4. EMBO Practical Courses http://www.embo.org/events/practical-courses

OUTREACH
1. ASBMB https://www.asbmb.org/Outreach/
2. AAAS STEM Volunteer Program http://www.aaas.org/senior-scientists-and-engineers/programs-dc
3. AAAS Public Engagement Programs http://www.aaas.org/pes/public-engagement-activities

SCIENCE POLICY
1. ASCB Hill Day http://www.ascb.org/science-advocate-day/
2. ASBMB Hill Day http://www.asbmb.org/Advocacy/Events/Hill_Day/
This year, the Division Student Advisory Council (DSAC) hosted its 13th Annual Student Research Symposium. Each year, the students that make up DSAC organize and execute the entire symposium. This astounding event offers graduate students from across the Graduate Division of Biological and Biomedical Sciences (GDBBS) the opportunity to competitively showcase their graduate work for an audience of peers and graduate faculty.

The symposium comprises an entire day filled with talk and poster presentation and even includes a scientific image competition sponsored by Emory’s Intercellular Imaging (ICI) Core. As in previous years, there was an enormous amount of participation, as DSAC received over 100 abstract submissions from students and a record number of image submissions.

The symposium featured talk and poster presentations from all eight of the GDBBS graduate programs. Amongst these programs, BCDB had a strong representation. Our very own, Emily Weikum, a fourth year student and Jared Whitlock, a third year student were competitively selected to give talk presentations. Emily presented a talk on her work with the Glucocorticoid receptor entitled “Untethering Glucocorticoid Receptor-Mediated Transcriptional Repression of Inflammatory Genes”. Jared also presented his work with a talk entitled “Anoctamin 5: Implications in Muscular Dystrophy and Membrane Signaling”. Emily and Jared gave phenomenal talks earning them first and second place respectively in the talk category. In addition to BCDB dominating the talk presentations, the program also had a strong showing in the image completion. Amanda York, a fifth year graduate student in the Zhang lab and Jadiel Wasson, a sixth year student in the Katz lab received 2nd and 3rd place for there incredible scientific images.

With every year the symposium continues to grow into an even bigger success. This event is so important as it not only allows students to share their research but also allows for other students to listen and engage in all the tremendous research at Emory. So many amazing students volunteer to participate in the symposium and so many other students come out to support. All in all, the symposium is a true treat for all those in attendance and a reminder of the strong caliber of students within the GDBBS.
For the past three years, Emory, Georgia Tech, and the Metro Atlanta Chamber have partnered with over 100 different community organizations to bring the Atlanta Science Festival to life. The Festival involves week long activities, ranging from trivia nights, public performances, interactive food chemistry, and even a Zombie Outbreak game, and culminates with the Expo. Located at Centennial Olympic Park and free to the public, the expo draws families from all over the metro area. The Expo this year featured over 100 exhibitors, including 14 booths sponsored by Emory.

I created a booth based on the concept of a smartphone microscope; you can turn your own phone or any device with a rear-facing camera into a microscope with the simple addition of a lens from a laser pointer! Building the microscopes, picking samples and playing with them was a ton of fun, so I hoped the visitors to our booth would also be interested. The connections we made with the kids and adults alike who came into the booth turned out to be so much more than I expected! One of our first visitors jumped for joy when the sample image appeared on the phone screen. Most spent several minutes at the booth trying all of the samples—things like coins, foam, plants, flowers, salt, fabrics and feathers! Occasionally there was a parent who would appear giddy with excitement to play with the scope, but mostly it was the quiet fascination of the younger kids that touched me. Many of them were clearly shy, but would stare at the screen and soak in all the details of what they were seeing. They would softly point to another sample, or gently slide it on to the stage themselves.

Exposure to science from a young age is so important to the future of STEM education and can kindle a passion and love for exploration and critical thinking. While I’ve read the articles and understood the importance from an objective perspective, watching their faces light up and the sparkle come into the eyes of these children as they saw something new and thrilling made the outreach experience personal. If only one of those kids considers science in a new way after visiting our booth, I’ll consider that a success! My other hope is that the people who said “we could build that!” actually do it. It wasn’t a difficult project, nor is it expensive, and the experience is so much more rewarding than opening a box and pulling out a prefab kids microscope. There were also a number of teachers who were excited about building scopes with their physics class, or building one to bring into their own classroom.

When I think about doing outreach and going into a classroom with a whole bunch of kids, I always worry if the idea I have planned will be interesting or if they’ll be bored and distracted. This Expo really highlighted that there’s nothing to worry about! These kids were brimming with curiosity and just waiting for you to reach out and engage them. The Festival is growing every year and I know I’ll be going back next year just to experience that excitement again.

If you have questions about the Atlanta Science Festival or creating a booth, feel free to email me.
Summer in Atlanta is no joke; between the humidity and the scorching sun why not cool down in the great outdoors? There are many scenic and refreshing bodies of water within a short drive!

1. Raven Cliff Falls Trail
Richard B Russell Scenic Hwy, Helen, GA
This 5-mile hike in North Georgia takes you to a 40-foot tall waterfall nestled in the crevice of a large cliff with several smaller cascading waterfalls accompanying you along the trail. Enjoy the shade provided by the trees and gaze at the wildflowers that cover this trail.

2. Panther Creek Falls Trail
Old US Highway 441 North, Clarkesville, GA
This 7-mile hike takes you through a series of waterfalls along Panther Creek in North Georgia. Midway through the trail, the waterfalls spill into a pool of water where you can take a dip and relax for as long as you’d like. If you’re feeling extra adventurous, you can trek up the waterfalls to the top where the water flows off and leaves you with nature’s own infinity pool.

3. Lanier Islands
7000 Lanier Islands Parkway, Lanier Islands, GA
If you just want to enjoy the water without having to trek through the woods or break a sweat, take a day trip out to Lake Lanier. This is the largest lake in Georgia and boasts a beach, waterpark and numerous restaurants and bars.

Spring and summer in Atlanta are also peak season for festivals. From music to food to arts, there’s a festival in town catered to your interests.

Shaky Knees (May 13-15) and Shaky Beats Festival (May 20-22)
Centennial Olympic Park
Shaky Knees is a musical festival dedicated to indie rock bands both established and new. This year’s line up boasts more than 75 bands performing on five stages. Grab some bites from the food trucks, lay a blanket down on the grass, and rock out to your favorite bands. If you prefer electronic music with some hip-hop sprinkled in, check out the new Shaky Beats Festival the following week.

Decatur Arts Festival, May 28-29
Downtown Decatur
Enjoy art shows, live performances, music and an artist market in this weekend dedicated to all things art and culture.

Atlanta Food and Wine Festival, June 2-5
Midtown
This festival is a celebration of the wonderful food and drink traditions of the South. Take part in culinary classes, tasting sessions and dinner parties from 83 award wining Southern culinary experts. ♦