GBS newsletter

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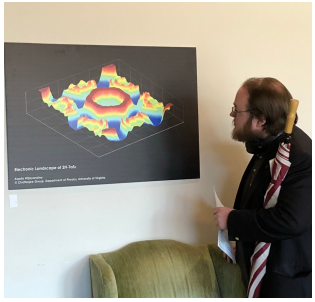
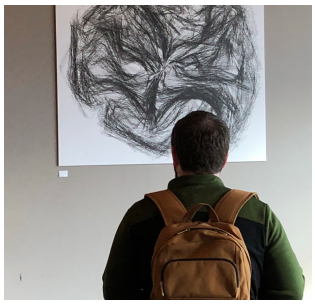
FIRST EVER ART+SCIENCE EXHIBITION A HUGE HIT!

BY TORI OSINSKI

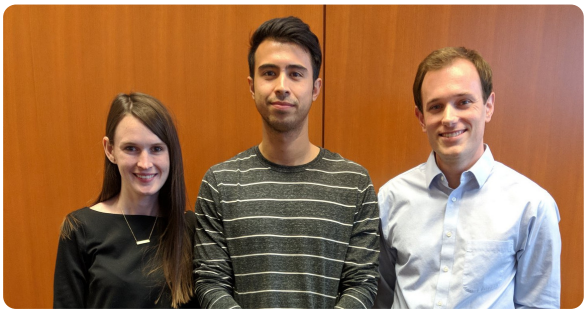




On Friday, April 27th, the local non-profit Cville Comm-UNI-ty held its first ever Art + Science Exhibition at the Shenandoah Joe's on Preston Ave. The event featured 18 different works of art created by local artists with backgrounds in a variety of arts and sciences. Members of the GBS community (including Jeremy Shaw, Irene Cheng, Lindsey Meuhler, and Andrew Chen) as well as Gina Park, another biomedical scientist, played an important in the planning and execution of this event. Organizer and rising third year UVA Physics graduate student, Grace Cummings, said they had multiple goals for the event: "As a graduate student organization event, it was to provide a different type of social event that forced seemingly disparate parts of the academic community at U.Va together. Finally, on a grand and idealistic human level, we wanted to show that creativity can manifest in many ways, not just in science, or art, and that these two methods, while different, can learn from and find community with each other." Goals accomplished? Yes! A broad range of individuals from the Charlottesville community stopped by the coffee shop to peruse the art and interact with the artists. "I think the most fun part for a lot of people was being able to ask questions about the pieces (and the science behind them) with the artists/scientists in attendance" says Cummings. Cummings has previous experience bridging the gap between the worlds of art and science. This includes a project from last summer in which she went to Fermilab with two photographer/filmmakers and created a multimedia sculptural art piece that featured large plexiglass images of the decommissioned Tevatron accelerator and recordings of the stories of the scientists that worked on it. Even with these terrific prior experiences, "this past Art + Science Exhibition event ... has been the most successful balance of those two worlds," says Cummings.

GBS SYMPOSIUM WINNERS

All awardees (l-r): Jessica Little, Kelly Barford, Irene Cheng, Chris Medina, Molly Kelly-Goss, Alex Keller, Rebecca Wilson, Vlad Serbulea, Pooja Sonavane



Outstanding Poster Award Winners (l-r): Jessica Little, Chris Medina, and Alex Keller

Outstanding Student Award Recipients (l-r): Shadi Khalil (Ex. Path.), Kelly Barford (Neuro), Molly Kelly-Goss (BME), Rebecca Wilson (BMG), Pooja Sonavane (Cell Bio), and Vlad Serbulea (Pharm)

Outstanding Student (MIC)
CJ Anderson

Molly Kelly-Goss (Hungerford Award Winner) with Nancy and Charles Hungerford (Dr. Jill Hungerford's parents)

Vlad Serbulea (Peach Award Winner) with Dr. Peach's daughter (Beth Ginter) and granddaughter (Abby Ginter)

GBS Student Leadership Award Winner, Irene Cheng

Green Labs Program helping labs become more eco-friendly!

BY TORI OSINSKI

Did you know that UVA laboratory makes up about 16% of the square footage on Grounds but accounts for about 33% of the University's energy expenditure? The Green Labs Program, run by the UVA Office of Sustainability, is an ongoing effort aimed at reducing energy expenditure, water use, and waste production in UVA laboratories. Green Labs, run by Christine Alencar, holds a series of events and efforts aimed at accomplishing these goals throughout the year. Some of these events include the International Lab Freezer Challenge and the Shut the Sash Competition, which are both held once each year. Additionally, Green Labs and UVA Recycling is currently piloting some new recycling efforts on the 7th floor of Pinn Hall. To accomplish some of these goals, Christine has also been working closely with some of our very own GBS students, Tom Moutinho and Laura Dunphy. Tom and Laura are biomedical engineering graduate students in Jason Papin's lab who became involved with Green labs in the last couple of years. Below is a little more information about their involvement with Green Labs. Additionally, if you'd like to get more involved or have any questions, feel free to contact Christine, Tom, or Laura!

FACTS AND TIPS

- One Ultra Low freezer consumes, on average, about as much energy as a single American home. That's 20 – 30 kWh / day!
- Tune your Ultra Low freezers to -70 instead of -80. This can decrease energy consumption up to 30% on old and new units alike while simultaneously preserving the life of the unit. MOST materials are safe at -70C, or sometimes even warmer! (email greenlabs@virginia.edu for literature and more information)
- Keep chemical fume hood sashes SHUT when not in use! This keeps the building HVAC systems from working harder than they need to, thus conserving energy. It's also the industry standard position and is the safest for room occupants.
- If suitable, change the "forever" setting in your PCR programs to 12C instead of 4C. This is very safe for double-stranded DNA product and significantly lowers energy consumption.Better yet, avoid running PCRs overnight.
- Visit Green Labs on the web and / or sign up for the Green Labs Working Group email list to stay tuned in!
- Email greenlabs@virginia.edu if you are interested in becoming one of UVA's FIRST CERTIFIED GREEN LABS! We are recreating our certification program and excited to recruit test subjects!

GREEN lab
University of Virginia

Why did you decide to start working with Green Labs?

Tom: I believe that sustainability is important in the lab, as well as everyday life, and I wanted to get involved with the current efforts to make UVA labs more sustainable.

Laura: I started working with them to see how just our lab could make a difference, but quickly realized that I could have a larger impact on labs across grounds.

What do you like best about working with Green Labs?

Tom: I enjoy knowing about Green Labs initiatives and other UVA Sustainability initiatives that are happening around Grounds, as well as learning about the current options for helping to make lab practices more sustainable.

Laura: I love how passionate Green Labs is about making a difference and how willing they are to work with graduate students!

Can you describe your involvement with the group a bit? What activities do you participate in? How do you help out?

Tom: For the past 8 months or so, I've been the Green Labs Working Group co-chair, working closely with Christine Alencar to research future Green Labs initiatives and to spread the word about sustainable lab practices.

Laura: I regularly attend Green Labs Working Group meetings where we discuss next steps for the program. Our lab also participates in the annual challenges including the Freezer Challenge and Shut the Sash Competition!

Has getting involved with Green Labs influenced your view of and work in the lab or your career goals at all?

Tom: I am more aware of the ways I can reduce the amount of energy we are using as a lab and the amount of waste we are producing. In terms of career goals, I haven't changed my direction much as a result of working with Green Labs, however I do intent to continue working on initiatives that promote sustainability in the future, after I graduate from UVA.

Laura: Green Labs has definitely helped our lab recycle more and use less energy! It's also helped me to get a better grasp on sustainability efforts and challenges at UVA as a whole!

Contact Green Labs

Christine Alencar, cda4k@virginia.edu
Laura Dunphy, ljd6ab@virginia.edu
Tom Moutinho, tjm4k@virginia.edu

Green Labs Program's website:
https://sustainability.virginia.edu/programs/greenlabs.html

Read more about them
https://sustainability.virginia.edu/news/blog/recycle-for-research.html

HOT TOPICS

CAN YOUNG BLOOD REVERSE ALZHEIMER'S?

BY BREANNA BRENNEMAN

The first scientific clinical trial to determine the effectiveness of blood plasma from young adults to reverse Alzheimer's disease is complete. In a study by Alkahest, led by Stanford neurologist Sharon Sha, 18 patients with mild to moderate Alzheimer's disease were injected with placebo (saline) or blood plasma from young adults weekly and then both groups were treated with blood plasma after 6 weeks. While medical staff assessments of cognitive ability showed no difference, caregiver surveys ranked patients receiving blood plasma slightly higher on their ability to perform simple tasks, such as making meals or traveling. The researchers were encouraged by the results; however, scientists remain skeptical.

The idea that blood from young individuals has beneficial effects comes from experiments done 150 years ago. Researchers stitched two mice, one young and one old, together to allow for circulation to be shared, also known as parabiosis. More recent studies have found that the old mouse's organs are revitalized when sharing blood with a young mouse. In 2014, Neuroscientist Tony Wyss-Coray's lab at Stanford University in Palo Alto, California discovered that injections of young blood plasma had antiaging effects and could improve the cognitive function of mice with a form of Alzheimer's disease. In 2015, Harvard stem cell biologist Amy Wager and cardiologist Richard Lee of the Harvard-affiliated Brigham and Women's Hospital in Boston discovered that blood levels of GDF11 drop in mice as the animals get older and that injecting old mice with GDF11 can partially reverse age-related thickening of the heart. The mechanism behind these miraculous reversals is still being researched.

Will injections of blood plasma from young adults reverse Alzheimer's in the future? That remains to be seen. While this first clinical trial had some minor improvements, more evidence is needed to warrant further studies.

Sources:
http://www.sciencemag.org/news/2017/11/blood-young-people-does-little-reverse-alzheimer-s-first-test
http://www.sciencemag.org/news/2015/10/antiaging-protein-real-deal-harvard-team-claims
https://clinicaltrials.gov/ct2/show/NCT02256306

THE GRADUATE STUDENT MENTAL HEALTH CRISIS:

The Problem and Possible Solutions

BY BREANNA BRENNEMAN

Since the UC Berkeley study found that nearly half of graduate students suffer from depression in 2014, several research studies assessing graduate student mental health have joined the conversation. Until recently, theses studies have been focused on local, institutional issues and failed to take into account the role of key variables (ie, gender, work-life balance, etc.). In a recently published report by a collaboration of institutions, 2,279 PhD and Master's students across 26 countries and 234 institutions were surveyed to better define the prevalence of mental health issues and factors that influence them. The study recapitulated data seen from single-institution studies, finding that graduate students are 6 times more likely to experience depression and anxiety compared to the general population. Two of the major factors influencing likelihood to experience mental health issues were an unhealthy work-life balance and a sub-par mentor relationship (See Figure 1 from Evans et al (2018) Nature).

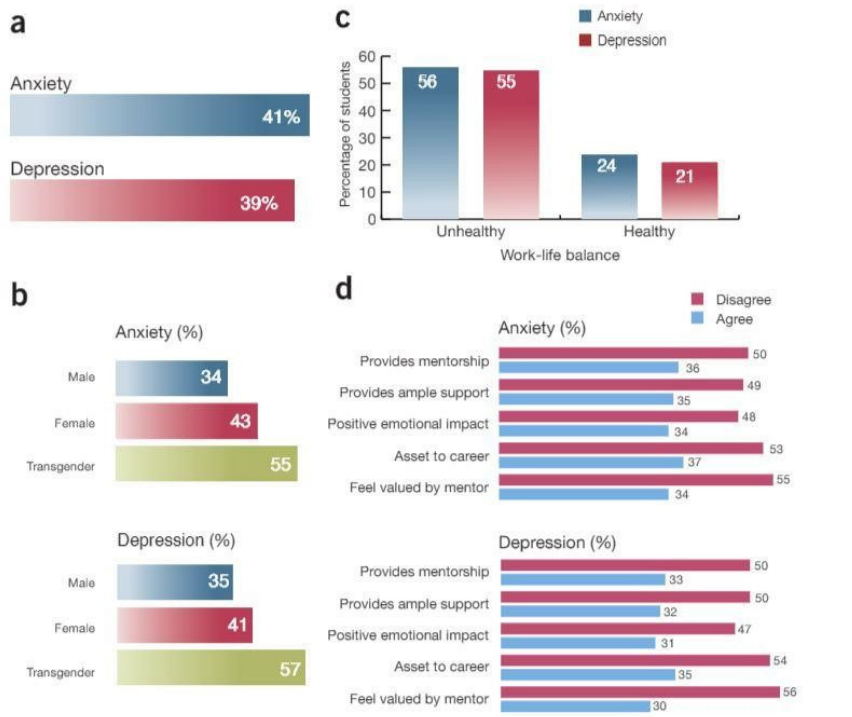


Figure 1 The prevalence of anxiety and depression within the population of graduate students studied. (**a**) Overall prevalence. (**b**) Prevalence of anxiety and depression by gender. (**c**) Effect of perceived work–life balance. (**d**) Effect of relationship with mentor (see **Supplementary Data**).

This most recent report emphasizes the need for mental health interventions for graduate students specifically. Generally, graduate students are lumped in with undergraduates when it comes to mental health resources. However, grad students are a unique population with needs different from that of a 18-22 year old. We need enhanced access to mental health support, better career development that emphasizes mental health, and a cultural change. Faculty need to be educated on the impact of graduate education on mental health. The authors emphasize the need for a cultural change, saying that "work-life balance is hard to attain in a culture where it is frowned upon to leave the laboratory before the sun goes down" (Evans, 2018). So, what can be done?

The National Institutes of Health (NIH) already has programs in place designed to improve the experience of graduate school for the future biomedical workforce. First, the Broadening Experiences in Scientific Training (BEST) award program is an effort by several institutions to explore ways of improving PhD student and postdoc career development programs across the United States. Career development can have significant impacts on mental health and should therefore be included in mental health interventions. Second, the NIH Office of Intramural Training and Education has modeled a train-the-trainers method to train career development leaders. In a similar vein, mental health professionals could train faculty in how to identify mental illness in graduate students and ways to best support those students. UVA has already begun some efforts to address these issues.

The Compassionate Awareness and Living Mindfully (C.A.L.M.) through the School of Medicine aims to promote self-care, resilience, and kindness in all aspects of life. C.A.L.M. organizes many free events for students to promote wellness as well as a weekly newsletter aimed at promoting mental health. Find out more by visiting their website: aMedicinalMind.com.

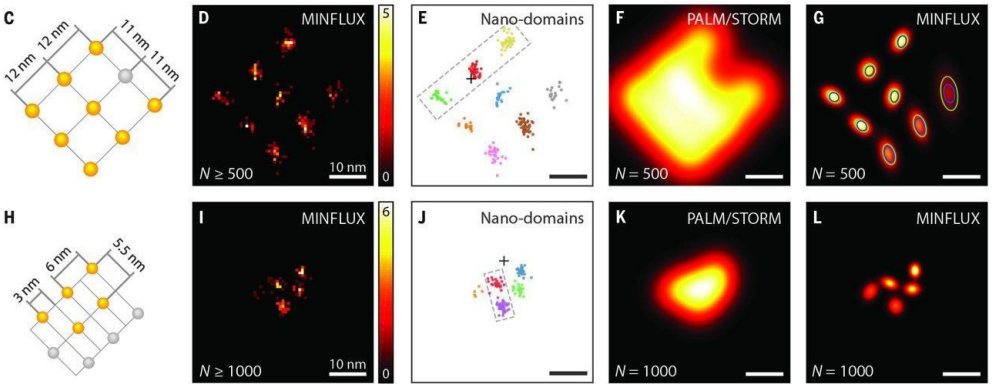
GBS has also started addressing the mental health crisis. We know how important mental health is for success and retention in grad school. As a first step, we established #MentalHealthMonday on our facebook page to raise awareness of the mental health crisis and provide resources for our fellow graduate students. Soon, we will be creating a Mental Health Resources page on our GBS webpage. GBS already provides career development programs and social activities that are important for grad student mental health. Look out for new updates of our mental health initiatives next year!

Have ideas for ways to improve grad student mental health? Leave them in the comments section below! We would love to work with you and for you!

Sources: https://www.nature.com/articles/nbt.4089.epdf

NEW BREAKTHROUGH IN THE RESOLUTION REVOLUTION

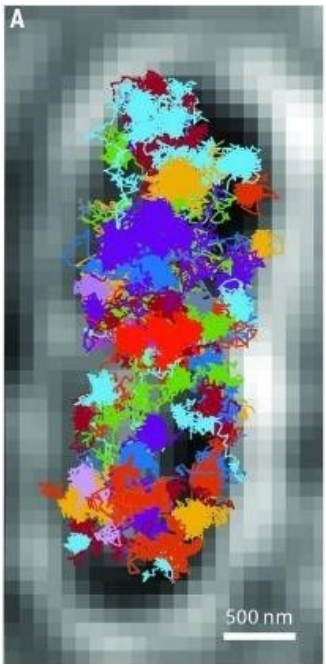
BY ALECIA ACHIMOVICH



Nano-domains of DNA PAINT are clearly resolved by MINFLUX microscopy

Microscopy provides a window into the microscopic world that cannot be seen with the naked eye. However, the amount of information that we can retrieve from a microscopic image is inherently limited by its resolution, the smallest distance between two objects required to differentiate them as separate entities. The theoretical resolution achievable by microscopy had been accepted as a hard, physical limit since physicist Ernst Abbe related the wavelength-dependent relationship in 1873, a seminal contribution to the field of microscopy that would one day be displayed as the epitaph on his gravestone. However, within the past 30 years, the independent contributions of Eric Betzig, Stefan W. Hell, and William E. Moerner have turned this paradigm on its head with the development of "super-resolution microscopy", which earned them the Nobel Prize in Chemistry in 2014.

The existing modalities for super-resolution microscopy are STimulated Emission Depletion (STED), PhotoActivation Light Microscopy/STochastic Optical Reconstruction (PALM/STORM), and, as of 2017, MINFLUX microscopy. MINFLUX, a novel method from the Hell lab, allows for unprecedented resolution, decreasing the previously achievable limit from ~10 nm to ~1 nm. All of the methods mentioned above allow for the identification and tracking of single fluorescent proteins within live or fixed cells by taking advantage of unique photophysical properties of a subset of fluorescent dyes and proteins. MINFLUX is fundamentally different from the other single molecule tracking techniques in that it localizes emitters based on fluxes of photon emission. This is important because it minimizes the number of photons required to localize a single molecule. Further, it alleviates the need to utilize bright fluorophores, expanding the detection toolbox significantly.



Tracking of ribosomal subunits (each copy coded in a different color) within an E. coli cell over time

MINFLUX not only localizes molecules with high uncertainty, but can also track them over time,with a temporal resolution as low as 200 µs. The spatial and temporal resolving power of the technique has been demonstrated on DNA origami (Figure 1) and diffusive ribosomes within bacteria (Figure 2). While this technique is currently the most powerful in its ability to localize single molecules, it remains limited in its ability to extend this determination to 3D space. This seems to be the next logical step in the progression of the technique in addition to tracking complex structures within live cells. The implementation of this technology will have a resounding effect on the field of microscopy and our ability to characterize dynamic processes at the molecular level.

Sources:
Balzarotti et al. 2017. Science 355, 606-612
https://www.nobelprize.org/nobel_prizes/chemistry/laureates/2014/

PROFESSIONAL INTERVIEW

BY MOUADH BENAMAR

DR. SHAHARYAR KHAN

Chief Scientific Officer
Gencia, Charlottesville, VA

GENCIA

Shaharyar Khan is one of the founders of Gencia and the Chief Scientific Officer. He has more than 20 years of experience and expertise in mitochondrial biology. Shaharyar pioneered multiple drug discovery programs, including large and small molecules, aimed at capitalizing on the unique role of mitochondria in the maintenance of cellular and organismal health. He leads a multidisciplinary team of talented mitochondrial biologists, computational and medicinal chemists, and clinicians in the pursuit of novel mitochondrial therapeutics. Shaharyar earned his PhD in Neuroscience from the University of Virginia.

http://genciabiotech.com

What is your background in terms of education and experience? What progression led to your current position?
I received my PhD in Neuroscience from UVa in 2005. I started a biotech company shortly thereafter and have been the CSO since.

What do you find most rewarding and/or challenging about your current position and/or career track?
Work in industry touches upon many facets of biology and medicine. We not only are involved in cutting edge basic research, but also leveraging discoveries for therapeutic ends. We also have to be aware of and sensitive to regulatory, patenting, legal and business issues. As a consequence, we wear many hats and are required to be proficient in many different disciplines.

Would you be able to speak to how your current company evaluates applicants? What is sought in applicants? Is there anything in a CV or resume that would jump out to an interviewer when interviewing for a position like yours?
Evidence of a dogged yet thoughtful pursuit of a question, acquiring the necessary skills and technology to help answer the question and evidence of a clever mind.

What are the most important skills and personal characteristics that make someone successful in your field? Did you learn any of these skills during graduate school?
Whether it's being a PI of a large group or an executive at a biotech company, being thoughtful, considerate, well-versed in a variety of disciplines, understanding the nuances of a successful enterprise are critical in being successful. These are skills that are continually being learned, especially in graduate school.

What specifically helped or hindered your success at getting a job after graduate school? What skills that you learned in graduate school were essential to you for acquiring your current position? What are some skills that you use now that were less emphasized or developed during your graduate career?
Careful and thoughtful pursuit of a question coupled with a strong desire to master new skills and techniques are critical in success in graduate school and beyond.

Is doing a post-doc advantageous for your current position and/or career track?
It can be if the right mentor is found.

Do you have any recommendations for actions that current graduate students can take now to learn more about or get experience in your current career path? What professional journals or organizations pertaining to your field should I be aware of?
Mentorship is the most critical decision in finding success whichever path is taken. I highly recommend finding the best mentors in a variety of fields that might (or might not) be of interest. Spend time with them and learn from them.

What advice would you give a graduate student interested in pursuing your career path?
Find someone who is the best at what they do. Learn from them and decide if that is what you want to do and who you want to become.

2018 GBS CAREER PANEL

BY MOUADH BENAMAR

RECAP

On Friday, March 9th, GBS hosted four BIMS alumni representing careers that span academia, industry, and government as part of our annual Career Panel of UVA alumni and biomedical professionals. This was a great opportunity to meet successful BIMS alumni who have followed a variety of career paths and get their advice on how students can chart their own direction post-graduation.

The panel was asked a series of questions by the moderator and the audience. Below is a summary of the main take-home points:

2018 GBS Career Panel
March 9, 2018 -- 3:30 - 5:00 pm
Claude Moore Medical Auditorium 3110

What skills do I need to develop to go into / be successful in your field, and how can I obtain them?

In general, all panelists highlighted the need to acquire leadership and mentorship skills, learn how to cope with failure, and the need for a curious proactive mindset. Below are some advice and tips offered to help students succeed in their post-grad school life

- Regardless at what stage you are in your career, never lose your scientific curiosity and appetite for learning.
- Always be proactive and seek additional opportunities. You need to take initiatives and be ready to start a new project or pursue a novel idea by seeking and finding the right person to ask (mentor, expert, or collaborator).
- Failure, whether it is a seemingly endless series of negative results or rejected grants, is a major and consistent theme you will continuously experience throughout your research career. Learning how to cope with failure is a crucial survival skill that will define your career. Dealing with failure requires you to persevere, never give up, and seek the right person to ask. Keep in mind that you are unable to persevere if you do not love your work!
- Improving your writing skills will undoubtedly help you improve the competitiveness of your grants, especially in our current funding climate. Also, trainees are expected to have experience presenting their work to an audience that is not entirely familiar with their research field. Dr. Riggins highlighted that her ability to write grants was the primary key that helped her secure a tenure-track faculty position.
- Networking! Make contacts (whether face-to-face or via LinkedIn), get connections, and follow up on them. Be persistent until you get to the right people.

An interesting remark was that the panelists noticed a surprisingly high number of candidates and recent hires, despite their technical competence, appear to have deficiencies in leadership, social or managerial skills. The panelists encouraged students to participate in mentoring programs, training undergrads, and other extracurricular activities and volunteer opportunities across campus. The panelists also highlighted the need to develop managerial and business skills through exposure, attending workshops, and taking online courses.

Dr. Steven Jacobs is currently a director at Janssen BioTherapeutics at Johnson & Johnson. Dr. Jacobs graduated from the Biochemistry and Molecular Genetics program at UVA in 2003.
Dr. April Alexandrow is currently working as an Operations Research Analyst and Facilitative Leader at Food and Drug Administration (FDA) since 2009. Dr. Alexandrow graduated from the Pharmacology program at UVA.
Dr. Antonio DiGiandomenico is currently a Principal Scientist at MedImmune. Dr. DiGiandomenico graduated from the Microbiology program at UVA in 2005.
Dr. Rebecca Riggins is currently an Assistant Professor of Oncology at Georgetown Cancer Center. Dr. Riggins earned her PhD in Microbiology from UVA in 2003.
(More details on the panelists can be found at the end of this article)

What do you look for in a competitive candidate/hire?

Overall, institutions and companies look for a variety of aspects in a candidate. Some look for expertise in a specific area or technique, while others prefer a well-rounded "trainable" researcher.
In addition to the quality and quantity of publications, the candidate needs to display intellectual curiosity (especially during the interview), have clear communication skills (can communicate the project details and tell a story), and be a well-grounded researcher (someone who knows exactly what he or she did and why). Having a well-rounded skill set is desirable in industry. However, even if the candidate lacks the techniques desired by the hiring institution, he or she should be "trainable" and have a research passion that can be translated to other fields. References acquired through networking can significantly help your application. Get to know and try to collaborate with as many researchers as you can in your career.

Is not having (or avoiding) a postdoc a deal-breaker for industry or government jobs?

The consensus of the panelists is that, although a postdoc is not necessarily required for non-faculty positions, it is highly recommended to acquire additional skill sets and maintain a competitive advantage. One panelist recommended pursuing a postdoc in a different field (or research focus) than that of your PhD to experience a different area and acquire additional skills. Have an individual development plan as early as possible. Write down your goals and envision where you will take your PhD and post-doc skills forward.

A post-doc is not required if you want to pursue a career in industry, however, it will give you a competitive advantage over the current pool of applicants, many of whom have years of postdoc experience. If you decide to do a postdoc, try your best to pick a location (institution, city) where you can easily network with other researchers/companies and use those opportunities to seek your future job. Be productive (both quality and quantity) over your postdoc years, otherwise it will affect your chances to move forward.

What are the pluses and minuses of your experience working in your career path?

All panelists spoke highly of their respective career paths and indicated that their current positions offer flexibility in their daily schedule. However, they prefer to work longer hours to remain competitive.

ACADEMIA: A major advantage is the continuous interaction with students and trainees, both in lab, and through teaching classes. One major challenge in the realm of academia is the funding climate. However, it is doable with the right approach and environment.

INDUSTRY: One of the most appealing aspects about industry in general is the relatively higher average salary and not having to worry about funding. Positions in industry, whether in the R&D or the management sector, tend to be very competitive. Therefore, depending on the company you work for and the stage of your career, entry positions may not offer employment security and flexibility regarding the type of research you would like to pursue or the biological question or project you are passionate about.

GOVERNMENT: Dr. Alexandrow emphasized that the happy environment provided by her current position with the FDA is key to her productivity and success. Her work covers a wide variety of public service projects directly connected to promoting and protecting public health. Her work provides many opportunities to grow by continuously learning new skills. However, the position is primarily an office/desk type of job with very limited bench research involved. Also, this work is heavily driven by policies which are continuously being challenged.

More details on the panelists:

Dr. Steven Jacobs

Director at Janssen BioTherapeutics at Johnson & Johnson. Dr. Jacobs graduated from the Biochemistry and Molecular Genetics program at UVA in 2003 before moving on to a Postdoc at the University of Colorado at Boulder in Tom Cech's lab. He subsequently joined Johnson & Johnson as a scientist in the Antibody Engineering group at Centocor in 2005. For the last 13 years he has continued to work on various aspects of antibody and protein therapeutic discovery at Johnson & Johnson, with a focus on protein engineering and biophysical characterization.

Dr. April Inyard Alexandrow

Currently working as an Operations Research Analyst and Facilitative Leader at Food and Drug Administration (FDA) since 2009. Dr. Alexandrow graduated from the Pharmacology program at UVA. She worked as a Licensing Associate at the UVA licensing & Ventures Group (2005-2007) then as a Patent Examiner at USPTO (United States Patent and Trademark Office) before joining the FDA as a Consumer Safety Officer on September 2009.

Dr. Antonio DiGiandomenico

Currently a Principal Scientist at MedImmune. Dr. DiGiandomenico graduated from the Microbiology program at UVA in 2005. He worked as a post doc fellow for three years before assuming a Research Assistant professorship at the Vanderbilt University Medical Center. On 2009, he joined the drug discovery program at MedImmune.

Dr. Rebecca B. Riggins

Currently an Assistant Professor of Oncology (tenure track) at Georgetown Lombardi Comprehensive Cancer Center. Dr. Riggins earned her undergraduate degree in Biochemistry, followed by a PhD in Microbiology from UVA in 2003. She immediately joined the Georgetown University Medical Center as a postdoctoral fellow in Tumor Biology, and then worked as a Research Assistant Professor on 2006.

MARCHING FOR SCIENCE IN CHARLOTTESVILLE: SCIENCE MARCHES ON

BY JEREMY SHAW

The historic downtown mall in Charlottesville is known to be home to long standing restaurants, quaint local shops, and... a massive gathering for all science lovers? Although that may not be the impression which comes to mind for most, that's exactly what visitors to the downtown mall saw in early April under the Sprint Pavilion.

On April 8th, the local nonprofit group CVille Comm-UNI-ty hosted their second annual March for Science. The event first took place last year in response to proposed budget cuts to many different scientific departments under the new administration. The goal last year was simple: bring out science lovers in droves to show support for scientific funding. A year later the event was scheduled to take place again, but questions as to the goals and new direction of the event began to arise in the absence of such severe proposed cuts to scientific funding. I sat down with CVille Comm-UNI-ty's Deborah Luzader to ask her about how she addressed these obstacles and other questions regarding the second annual March for Science.

How was this year different than last year's March for Science?
"Our goal was similar to last year's MFS in that we are trying to promote science outreach to our local Charlottesville community. Similar to last year, we invited a variety of different groups to appeal to small children and adults. This included booths describing everything from the science behind rainbows to the science of beer brewing. Planning was very similar. The biggest change was how we tried to inform the community of this event. The hype around the MFS this year was much decreased from last year, so we focused a lot of our efforts on advertising."

You mentioned 'a variety of different groups', what kind of groups were these? Are there any you would like to especially recognize?
"We had over 25 different local groups represented, from local non-profits, to local biotech companies, locally owned shops, and University groups. We also had great speakers, Drs. Bill Petri, Eric Harris, Sana Syed, and Ian Glomski, as well as Yash Tekriwal, Allison Garrett, and Andy Page. I would love to shout out the Sprint Pavilion that donated the use of the venue as well as Kirby and Broocks with the Pavilion who were invaluable with their help."

It is clear that CVille Comm-UNI-ty is certainly doing something right as evidenced by the estimated 400-500 people which attended the event. Deborah Luzader wanted to distribute the credit saying she "had a great team of volunteers who helped plan, organize, and host the event." She went on to say that some of the highlights of the event were seeing all of the families engaging in science, the talks by the great speakers, and seeing the random people come up to the event from off the street and enjoy themselves. Before leaving, I had one final question for Deborah.

Do you have any final thoughts or reflections on the event?
"It was so great! I hope that we can continue to hold this event annually as a fun way to engage the community in the fun science being done right here in Cville."

For more information on the March for Science, feel free to explore their Facebook Event page "Charlottesville March for Science: Science Festival" or look at their interviews with Cavalier Daily or Newsplex.
https://www.facebook.com/events/313684892371040/
http://www.cavalierdaily.com/article/2018/04/charlottesville-march-for-science-celebrates-and-advocates-for-evidence-based-policy
http://www.newsplex.com/content/news/Local-nonprofit-hosts-second-annual-March-for-Science-479095823.html

Thanks to everyone who contributed to the Newsletter!

Mouadh Benamar
Alex Keller
Jeremy Shaw
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