



The ASPIRE Program



2018-2019



Annual
Report



ASPIRE



VANDERBILT®
SCHOOL OF MEDICINE

Biomedical Research Education and Training Office of Career Development

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(July 2018-June 2019 Locations)



Our Summary

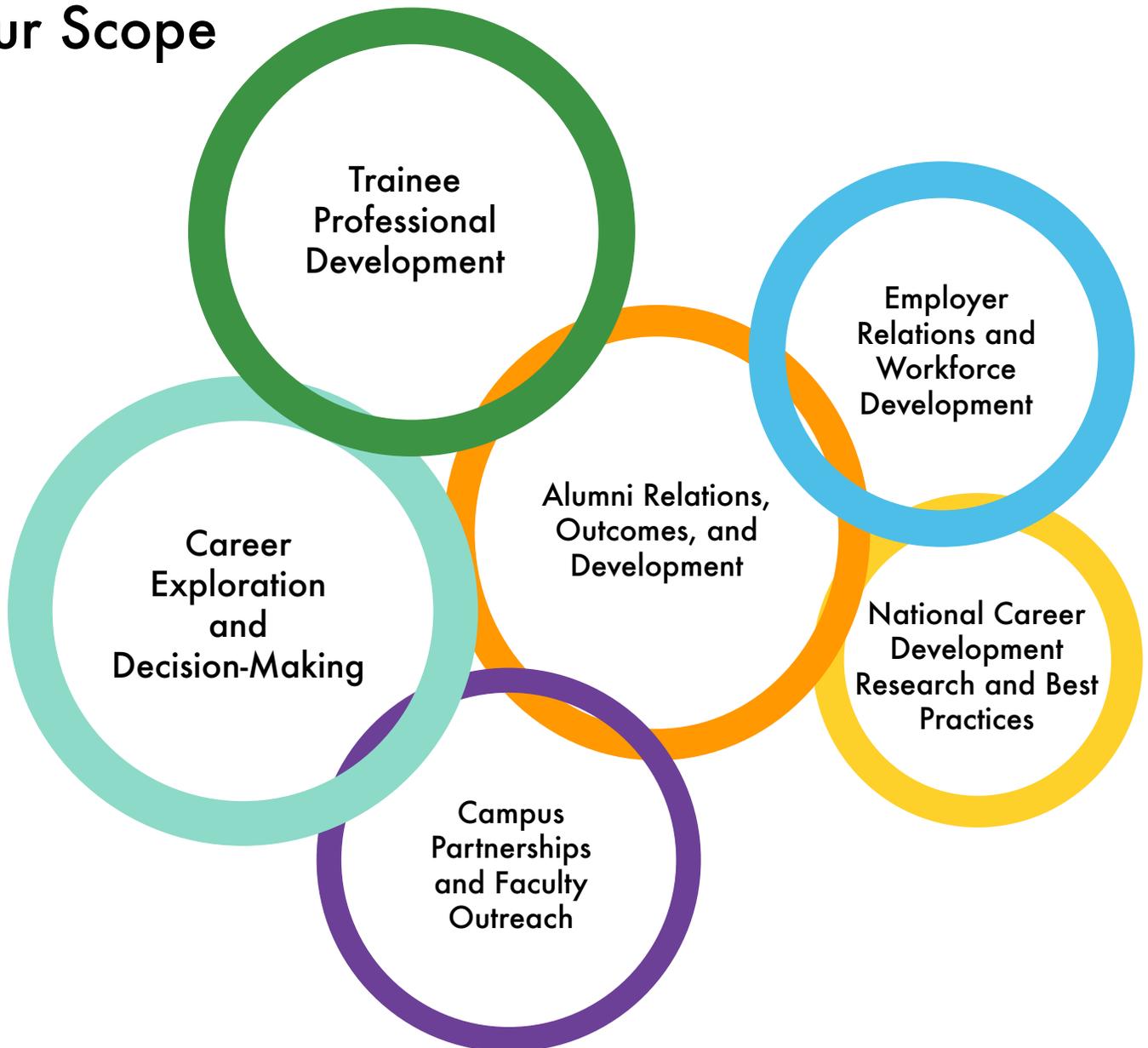


Established in 2005, the BRET Office of Career Development provides career and professional development enrichment activities for Vanderbilt University and Vanderbilt University Medical Center graduate students and postdoctoral fellows. The office was recognized in 2013 for its commitment to career development for biomedical sciences PhD students and postdocs through a BEST award, a \$1.2 million, 5-year grant from the NIH Common Fund.

Dr. Kathy Gould oversees the Office of Career Development ASPIRE Program, Dr. Kim Petrie is Assistant Dean of Biomedical Career Development, Dr. Ashley Brady is Assistant Dean of Biomedical Career Engagement and Strategic Partnerships, Kate Stuart is Assistant Director focusing on communications and special initiatives, and Angela Zito is Program Manager of professional development opportunities. Dr. Roger Chalkley oversees other BRET Office initiatives and spearheads the BEST Consortium. Dr. Abigail Brown conducts outcomes evaluation and research with the project efforts of Dr. Janani Varadarajan.

*ASPIRE Program • Office of Career Development • Biomedical Research Education and Training
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Our Scope



Trainees We Serve

The ASPIRE Program serves PhD students and postdoctoral fellows in the biomedical sciences. Our events are open to the Vanderbilt community. ASPIRE activities and individual advising are specifically designed for BRET PhD graduate students and postdocs.

629
Graduate
Students

94%
US Citizens/
Permanent Residents

1,097
Total

468
Postdoctoral
Fellows

49%
US Citizens/
Permanent Residents

POSTDOCTORAL DEPARTMENTS SERVED

Allergy, Pulmonary, and Critical Care
Anesthesiology
Biochemistry
Biomedical Informatics
Biostatistics
Cardiovascular Medicine
Cardiac and Thoracic Surgery
Cell and Developmental Biology
Clinical Pharmacology
Dermatology
Diabetes, Endocrinology, and Metabolism
Endocrinology and Diabetes
Epidemiology
Gastroenterology
General Internal Medicine
Genetic Medicine
Health Policy
Hearing and Speech Sciences
Hematology/Oncology
Infectious Disease
Kennedy Center
Molecular Physiology and Biophysics
Nephrology
Neurology
Ophthalmology & Visual Sciences
Orthopaedic Surgery and Rehabilitation
Otolaryngology
Pathology, Microbiology, and Immunology
Pediatric Cardiology, Endocrinology, Gastroenterology,
Infectious Disease, and Nephrology
Pharmacology
Psychiatry
Psychopharmacology
Radiation Oncology
Radiology & Radiological Sciences
Reproductive & Development Biology
Rheumatology & Immunology
Section of Surgical Sciences
Surgical Oncology

PHD PROGRAMS SERVED

Biochemistry
Biological Sciences
Biomedical Informatics
Biostatistics
Cancer Biology
Cell & Developmental Biology
Chemical & Physical Biology
Epidemiology
Hearing & Speech Sciences
Human Genetics
Interdisciplinary Graduate Program (IGP)
Microbe-Host Interactions
Molecular Pathology & Immunology
Molecular Physiology & Biophysics
Neuroscience
Pharmacology
Quantitative and Chemical Biology Program (QCB)



Career Exploration and Decision-Making

Mapped

Career Exploration and Decision-Making

Providing opportunities to explore careers is paramount to the ASPIRE Program. Many of the foundational activities of the office are aimed at instilling confidence and facilitating career decision-making among graduate students and postdoctoral fellows.

929 Attendees at Career Exploration Events

196 Individual Advising Appointments
120 PhD Students • 61 Postdocs • 15 Alumni

490 Followers of @VUBRETPhDJobs

76 Beyond the Lab Videos

37,738 Beyond the Lab Video Views

43 Beyond the Lab Podcast Episodes

10,000 Beyond the Lab Podcast Downloads

133 Books in the Career Development Lending Library

295 Blog Posts

21 Participants in ASPIRE on the Road: Washington, D.C.
and San Diego

21 Trainees Participating in Internships

91 Trainees Placed in Internships Since Program Inception in 2015
180 total applications

Highlights

Beyond the Lab
8 New Videos
43 New Podcast Episodes



9 PhD Career Connections
212 Attendees



Annual Career Symposium
359 Attendees
9 Speakers



**Special Workshop:
Transitioning to
a Career in
Regulatory Affairs**
20 Attendees
from Vanderbilt University (14)
and 3 Other BEST Institutions (6)



**ASPIRE on the Road:
STEM Policy
and Advocacy**
9 Participants



**ASPIRE on the Road:
San Diego**
12 Participants



Vanderbilt Takes on Capitol Hill

A Look Inside Science Policy for Students and Fellows

By Colbie Chinowsky, Graduate Student

The BRET Office of Career Development and the Graduate School took to the road in October 2018 to further their combined mission of empowering and preparing PhD and postdoctoral trainees for careers within the biomedical sciences. The trip, hosted by the Vanderbilt University and Vanderbilt University Medical Center Offices of Federal Relations, took 20 Vanderbilt graduate students and postdoctoral fellows to Washington D.C., where they were given the opportunity to explore how policy and science influence one another. The two-day seminar provided insight into how policies are designed and promoted. Furthermore, participants had the opportunity to advance their future careers via networking events.

“I didn’t really know what science policy entailed,” said fifth-year graduate student Meagan Postema. “This trip helped clarify what a science policy career would look like. It also gave me connections and ideas for what steps I should take post-graduation if I want to continue to pursue a career in policy.”

The trip began with a panel discussion from a variety of speakers, including Tobin Smith, Vice President for Policy at the Association of American Universities, who outlined key points in the history of science policy in the U.S., such as how the NSF and NIH came to their current form. He also spoke about the difference between science for policy (science that informs policy decisions) as opposed to policy for science (policy that affects how science is done). After lunch, we engaged in a lively conversation with VU alumnus Sam Feist, CNN Senior Vice President and Washington Bureau Chief. Topics included in our meeting ranged from Election Night coverage at CNN to the accuracy of scientific discovery coverage by news networks.

After a quick walk to the Capitol, the group filed into a Senate committee room to learn first-hand about careers on Capitol Hill. We heard from panelists, including several Vanderbilt alumni, who worked in the legislative offices of various senators and congresspeople. This session was particularly interesting as we got an opportunity to understand how science is communicated to members of Congress by their legislative team and how this communication can influence policy decisions. The first day ended with a networking reception attended by 19 Vanderbilt alumni who now work in a variety of science policy roles. Many of the attendees found the reception both helpful and fun, as it



PhD students and postdoctoral fellows at the Capitol during their trip to Washington D.C. for the Federal STEM Policy: An Inside the Beltway Look sponsored by the BRET Office of Career Development and the Graduate School.

allowed us to connect on a personal level with individuals in a wide range of policy-related jobs, get a sense of their day-to-day life, and see how their career paths developed after graduate school.

The second day kicked off with a budget appropriations case study that allowed participants to experience first-hand how the federal budget for science is determined as they simulated the negotiation and debate that happens within the budget appropriation committees. The day continued with a panel on science and technology policy fellowships, which many trainee participants said they found very helpful as they think about moving forward in their careers. The trip ended in an exercise in advocacy, in which small groups came together to brainstorm ways to convey the importance of basic science funding to the public.

This workshop provided an excellent opportunity for our group to learn exactly what science policy entails. Everyone returned to Vanderbilt having learned a great deal about who influences policy, how science can help, and why we, as scientists, should be involved in science policy advocacy on both a state and federal level. We found that scientists work at all levels of government, from congressional offices to agencies such as the U.S. Geological Survey or the Environmental Protection Agency, where they perform a variety of roles. For those interested in careers involving policy, we learned about fellowships offered through AAAS and many professional organizations, such as the American Astronomical Society or the American Chemical Society. As we reflected on this trip, we found that this experience gave each of us valuable new knowledge, connections in a new arena, and furthered our interest in the world of science policy.

This article was originally printed in Spring 2019 Results and Discussion newsletter.

Beyond Grant Writing: Exploring Career Opportunities in Scientific Communication through the Vanderbilt ASPIRE Program

By Natalya Ortolano, Graduate Student



I had an interesting discussion about future career options with my six-year-old niece recently who asked a question I ponder daily, “What do you want to be when you grow up?” I explained in kid-accessible terms that I was currently a researcher, working tirelessly in the lab doing experiment after experiment, and I wasn’t sure if I wanted to keep researching or mentor

people on how to do that as the principal investigator of my own lab. Uninterested in my dilemma, she asked how long you had to be in school to become a mermaid. As unremarkable as this conversation may seem, this conversation stuck with me. What if I wasn’t even aware of the career best suited for me?

Identifying my scientific passion

In preparation for my graduate school qualifying exam, I wrote an NIH style NRSA grant application to submit to my committee proposing my dissertation work. From that moment forward, I became entranced with writing grants, developing a story from my data, and proposing exciting new venues for my research. Grant writing had reignited my passion for writing.

Discovering the world of scientific journalism

To get myself back in the habit of writing, I signed up for a course offered through the ASPIRE program, which provides meaningful opportunities and experiences for graduate students in biomedical research programs to explore diverse career opportunities. One of the ways that the ASPIRE program facilitates exposure to a variety of career paths is through modules, brief non-credit electives that provide training in a specific field outside of the lab.

I was able to take two courses: “Practical Strategies for Strong Writing” and “Biomedical Research and Media;” the former greatly improved my writing skills. In the course, the instructor gave us short writing samples and asked us to edit the articles sentence by sentence to improve the structure and overall flow of the pieces. This course was instrumental in helping me read my work with an editorial mindset, helping me improve my writing.

“Biomedical Research and Media” went a step above and taught me not only how to become a better writer but introduced me to the world of science journalism. We would read an article from magazines and discuss how the author was able to take the complex scientific concepts in a highly technical publication and turn it into an exciting and accessible story for the public to read. To put our newly learned skills to the test, the instructor assigned everyone a small and a large article to write for the *VUMC Reporter*. To write these articles, I first had to interview the researchers and determine

which of their publications to highlight.

We spent time in the class discussing how to interview someone about their science, how to select quotes for your article, and how to encourage those to whom you are talking to break down their science into easily digestible terms. This course showed me that I could find a career combining my passion for writing with my scientific knowledge to tell researchers’ unique stories to the public.

Since the course, I have continued to be an active scientific writer by identifying opportunities, mostly facilitated through the ASPIRE program. Most notably, I have been a productive writer for the *Results and Discussion Newsletter*, which highlights the research of fellow graduate students. Additionally, I was able to write an article for the *Vanderbilt Magazine* highlighting the research of a recent PhD graduate.

The ASPIRE program has also already begun helping me to identify potential internships, which I hope to apply for either after my dissertation defense or shortly before. Their team has also connected me with others who have participated in internships like the AAAS Mass Media Science and Engineering Fellowship.

Continuing exploration in scientific communication

Since pursuing my interest in scientific journalism, I have begun to explore other careers in scientific communication. Another resource the ASPIRE program offers is a monthly seminar series where speakers are invited to discuss their career path and professional experiences called “PhD Career Connections.” I was able to make a valuable connection during one of these seminars with Tiffany Farmer, PhD, an alumna now the Director of Education and Community Engagement at the local science museum Adventure Science Center. After seeing Tiffany’s seminar, I became interested in careers in scientific outreach. While I had always done scientific outreach, I didn’t realize there were career options in that field beyond teaching. I was able to contact Tiffany directly and meet with her one on one to discuss her career and see if scientific outreach was a good fit for me.

Overall, the ASPIRE program helped me realize I could do more with my passion for communicating science than write grants. If I so choose, I can use my love for communication to promote scientific literacy through scientific journalism and/or advocacy. Although my favorite part of my graduate career has been writing grants for fellowship applications and presenting my work at conferences and in committee meetings, the ASPIRE program showed me what I could do with my interests and strengths outside of academia, without discouraging me from pursuing academia. Although I am still in the process of determining if science communication or academia are the best fit for me, the ASPIRE program and the incredible staff that work there are helping me figure that out.

Originally published on the NIH Broadening Experiences in Scientific Training (BEST) Blog, May 14, 2019

Trainee Professional Development



Mapped

Trainee Professional Development

Skill-building, networking, negotiation, and managing a professional image are important aspects of a trainee's professional development. Our workshops, seminars, modules, and informal cafés help equip trainees for the next step in their career path.

907

Attendees at Professional Development Programs

102

Attendees at ASPIRE to Connect

196

Professional Photos Captured at 6 Headshot Days

234

Participants in 9 Different Modules

260

Followers of @VUBRETASPIRE

110

CV/Resume Drop-in Clinic Visits

19

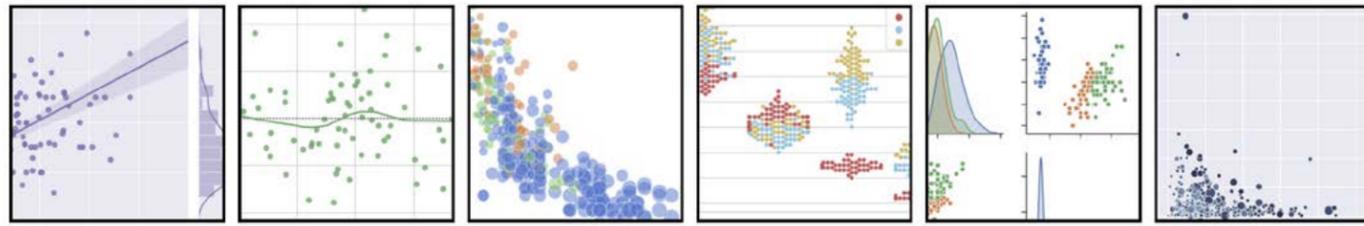
ASPIRE Postdoctoral Cafe Sessions

255

Attendees at ASPIRE Cafe for Postdoctoral Fellows

1,839

E-Newsletter Subscribers



Data Science Essentials Module Wraps Up a Successful First Year

The Vanderbilt ASPIRE Program piloted a new initiative in partnership with the Nashville Software School to enhance the readiness and confidence of biomedical trainees to pursue data science careers. Data Science Essentials combined project-based didactic exposure to data science with communication training and case sessions presented by data science professionals. Program participants developed a deeper understanding of data science career paths, increased their knowledge of data science tools and approaches, and enhanced their networking and communication skills. We anticipate that the resulting better-trained local workforce will attract partnerships with local industries and enhance career opportunities for our trainees in Nashville or elsewhere. This program was supported by a 2018 Career Guidance for Trainees award from the Burroughs Wellcome Fund.



By Iliza Butera and Mabel Seto, Graduate Students

Last August, over 40 graduate students and postdoctoral fellows at Vanderbilt answered the call for applications to a new ASPIRE module for biomedical trainees considering careers in the relatively new and booming field of data science. For the next two semesters, an initial cohort of 18 of these trainees (including us) took part in the three-section program.

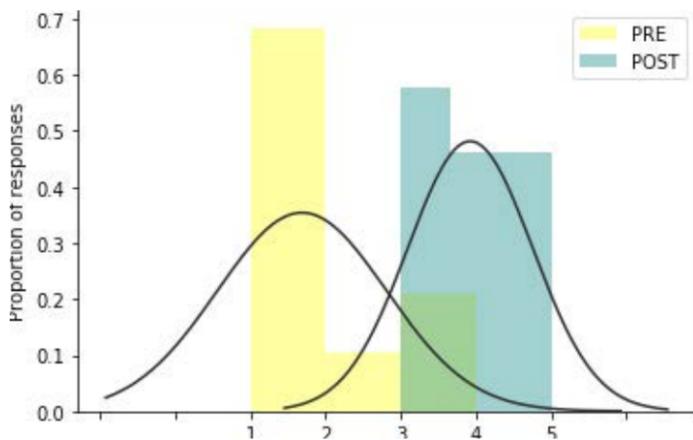
The first section consisted of hands-on technical training in Python, which is a common coding language for data scientists. Nashville Software School instructor Mary van Valkenburg taught us the basics, beginning with setting up Jupyter Notebooks as a kind of virtual sandbox for testing out our newly-acquired Python skills.

By importing several public health data sets and a national census, we started to learn an important step of corraling data into the right structure—a skill aptly named data wrangling. We then utilized

many of the powerful visualization tools from Python libraries and even machine learning for our final projects that asked questions such as ‘How well can we predict regional differences in cancer-related mortality using publicly-available data sets?’

According to van Valkenburg, “The only way to really become fluent in coding for data science is to roll up your sleeves and try it.” When asked how she recommends that students continue to gain experience, she said, “There are huge amounts of online resources for open-source languages like R and Python, and there’s also a great community of data scientists here in Nashville. I always encourage my students to start side projects and join local meet-ups for collaborating and networking in the field.”

After learning these essential technical skills, the next section of the module was led by Ashley Brady, a co-author on the Burroughs Wellcome Fund grant that supported this pilot program and part of the leadership team in the BRET Office of Career Development. In planning the module, she says, “local data scientists emphasized to us that networking, communication, and storytelling were critical and often underappreciated components of a successful career in data science.” As a result, this second



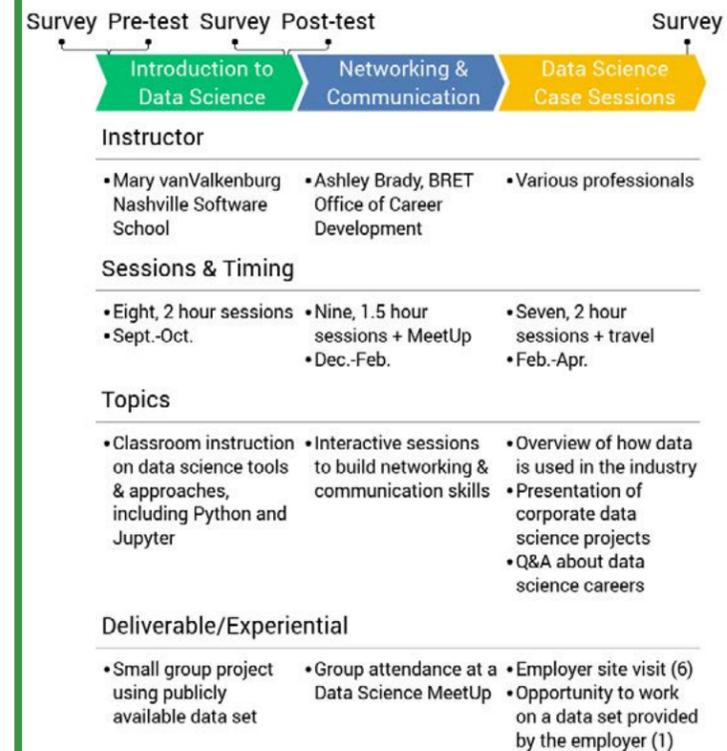
Top: Photo of the first 2018-2019 Data Science Essentials cohort visiting HCA Healthcare, Nashville, for one of seven case studies with data scientists at local companies. Above: In survey responses before taking this module (yellow), over half of all participants reported that they were ‘not at all comfortable’ making visualizations in Python. In contrast, afterwards (blue) the majority of the class reported feeling either moderately or extremely comfortable. Case in point: we made this plot in Python!



Top: The class met regularly for the school year. Below: Participants visit Ingram Content Group for a Case Session.



Program Approach and Evaluation



section of the module focused on sharpening these infrequently-taught but very important “soft skills” such as professional communication online, in casual settings like networking events or informational interviews, as well as during formal job interviews and business presentations.

Finally, this spring we all piled into a chartered mini-bus and took field trips across town in a series of case sessions with local businesses. Now seeing data science in action, this final section of the course was an excellent culmination of everything we had learned. From identifying patients with cancer, to helping solve the opioid epidemic and streamlining Medicaid applications, these case sessions gave us direct insight into what a data science career actually looks like.

For instance, data scientist and Vanderbilt alum Christi French, gave us a unique perspective on her path from bench science to data science, remarking that, “a training module like this absolutely would have accelerated my transition to data science after I finished my PhD.”

Brady echoes that, “finding patterns, building hypotheses, and solving problems are key components of both lab-based bench science and data science, and we want to provide our trainees with all the opportunities for a smooth transition between the two.”

Interestingly, of the seven companies we visited, six were located less than 20 miles from Vanderbilt’s campus. As the field continues to grow in Nashville and worldwide, it’s likely that we’ll be seeing many more graduates swapping out bench science for data science. For any others interested in these training opportunities, stay tuned for more info from the ASPIRE Program this fall, as plans are underway for a second cohort of future biomedical data scientists.

“
Learning the tricks of the trade, buzzwords, and career development aspects required for a successful career in data science was invaluable. I have many tangible things to improve upon and investigate further.
”



Look & Act the Part: The Importance of Professionalism in One's Career Development

By Christopher Smith, PhD, former Postdoctoral Fellow, now Postdoctoral Affairs Program Manager, North Carolina State University



Above: Practicing professionalism while making interview prep fun with StoryMason© cards. Right: A scene from the annual Lab to Lunch: Business Savvy for Scientists event with speaker Malika Williams.

Landing a dream job can be a daunting task for even well-seasoned scientists. However, with underdeveloped soft skills, such as effective communication and emotional intelligence, or an inability to act professionally in a variety of situations, this becomes significantly more difficult. The BRET Office of Career Development ASPIRE Program in the Vanderbilt University School of Medicine offers many useful events, modules, and workshops focused on honing those soft skills that are necessary for career success. Programming ranges from dining etiquette covered in the Lab to Lunch event, ASPIRE Postdoctoral Cafes on job negotiation and the interview process, to modules focused on improving networking skills.

According to Kathy Gould, PhD, Associate Dean for Biomedical Sciences, ASPIRE professionalism programming grew out of feedback from trainee exit surveys regarding skills and experiences they wish they had while at Vanderbilt. What became apparent to the BRET staff is that trainees did not have a standardized set of professional experiences, and therefore do not necessarily know what is expected in various professional settings. Once these processes are demystified and trainees know how to interact with people at a networking event, or how to dress for an interview, they become empowered and more confident in their ability to navigate these situations.

Kathryn Trogden, a postdoctoral fellow in Cell & Developmental Biology, found that the networking pacing module helped her

gain the skills and confidence necessary to approach and interact with colleagues. The capstone project “provided a real-world opportunity to network with professionals working in biotech in Tennessee by attending the Life Science Tennessee annual conference in November 2018.” Teddy van Opstal, a recent PhD recipient in Biological Sciences, also took part in the networking pacing module and pointed out that many jobs are found by those who expand their networks. “As scientists, we spend a very small amount of our time communicating with people outside our specific area of interest and don’t develop the necessary skills to build lasting networks with people we meet at meetings and conferences. The module trained me to introduce myself and discuss my research in a memorable, engaging way. I also learned to utilize social media platforms such as LinkedIn and Twitter to set up meetings or conversations that connect me with colleagues.”

While the BRET Office offers many programs to help trainees act the part, ASPIRE Headshot days help one look the part. A professional headshot is critical for a LinkedIn profile, a necessary web presence for any potential job hunter. Approximately 45 trainees get headshots at each ASPIRE Headshot day and 3 graduate student and 3 postdoctoral fellow headshot sessions will be offered in the 2019-2020 academic year. Roslin Thoppil,



Top: Alumna Lindsey Morris, PhD, second from right, speaks to current trainees in the Data Science module at a recent networking event. Above: Speaker Jean-luc Doumont, PhD, gives the keynote address at the annual ASPIRE to Connect workshop that focuses on building professional relationships. Left: Networking events are paramount to the BRET Office of Career Development programming opportunities. Below: Headshot Day examples from a recent shoot.

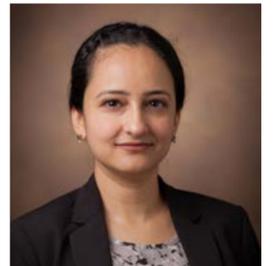
a postdoctoral fellow in Cell & Developmental Biology, tells every trainee she knows to take advantage of this opportunity. “Putting up a quality photo helps make the right impression and maximize the number of people who view your profile on LinkedIn. Getting a professional picture taken is usually an expensive affair, but Vanderbilt’s headshot day is an amazing opportunity for Vanderbilt postdocs and graduate students to get one for free and the entire process is a breeze.”

Key to the success of ASPIRE programming is faculty support. Faculty across the School of Medicine are aware and supportive of the work being done through the BRET Office to prepare trainees, as evidenced in a recent survey across several institutions. “Faculty want to see their trainees rise to their potential and have a productive career after Vanderbilt, regardless of what field (academic, industry) they end up in,” according to Gould.

The professionalism offerings are certainly working to help in this regard. Lindsey Morris, a BRET postdoctoral alumna and current director of data science at Axial Healthcare in Nashville, used networking skills learned through ASPIRE programming to get hired early on in the company’s lifecycle. Now, Morris routinely interviews candidates for data science positions at Axial. Some points she highlights that set successful job applicants apart are communication skills, emotional intelligence (i.e., eye contact in the interview, not disparaging a past employer), and reputation (being known for your work on a local/national level).

Professionalism and networking are a continual process. Justine Sinnaeve, a Cancer Biology PhD candidate, noted that, “With every experience I learn at least one new way of approaching networking, building confidence in myself and my skills, and tips for maintaining a professional demeanor.” The key is to just get started. Morris elaborated on this point, saying, “Volunteer to organize and present at meetups and seminars in topic areas that interest you. By doing so, you will start to be associated with the career area you want to transition into.” The BRET Career Development ASPIRE offerings can give you valuable tips and a kickstart. It is up to you, though, to seize the opportunity, do good work, be positive and professional, and distinguish yourself from the pack. Eventually, people (future employers, colleagues, etc...) will notice.

This article was originally printed in Spring 2019 Results and Discussion newsletter.



National Career Development Research and Best Practices

...increased their understanding of approaches, and enhanced their knowledge of data science tools. We anticipate that the resulting better-trained local workforce will attract trainees in Nashville or elsewhere. This program was supported by a 2018 Career Guidance for Trainees award from the Burroughs Wellcome Fund. We are grateful to Kate Stuart and Angela Zito for programmatic support.

APPLICANTS & PARTICIPANTS

Data Science Essentials
43 Applicants
 (26 postdocs, 17 PhD students)

13 Participants in full program*
 (6 postdocs, 7 PhD students)

7 Participants in 2nd & 3rd sections only*
 (6 postdocs, 1 PhD student)

*3 did not complete the program due to getting a job.

PROGRAM APPROACH AND EVALUATION

Introduction to Data Science → **Communication & Networking (C&N)** → **Data Science Case Sessions**

Instructor

- Mary vanValkenburg, Nashville Software School
- Ashley Brady & Kate Stuart, BRET Office of Career Development
- Various professionals in different industries and companies

Sessions & Timing

- Eight 2-hour sessions • Sept.-Oct.
- Nine 1.5-hour sessions + Meet-Up • Dec.-Feb.
- Seven 2-hour sessions + travel • Feb.-Apr.

Topics

- Classroom instruction on data science tools & approaches, including Python and Jupyter Notebooks, and understanding the data science process
- Interactive sessions to build networking & communication skills
- StrengthFinder assessment
- Overview of how data science is used in the industry
- Presentation of corporate data science projects
- Q&A about data science careers

Experiential Component

- Small group project using publicly available data sets
- Group attendance at a Data Science Meet-Up
- Employer site visit (6)
- Opportunity to work on a data set provided by the employer (1)

Evaluation

Survey (Pre-test, Post-test, Survey, Survey, Survey)
 Case session evaluations
 Surveys & tests were administered online via SurveyMonkey (IRB #181521)



Awards

Administrative Supplement for Cellular, Biochemical, and Molecular Sciences Training Grant Implemented
"Maximizing Your Potential: Leading and Managing Organizations, Teams, and Your Career"

Burroughs Wellcome Fund Career Guidance for Trainees Grant Implemented
"Data Science Essentials"

Earl Sutherland Prize for Achievement in Research

Awarded to Dr. Kathy Gould



Mapped

National Career Development Research and Best Practices

Career and professional development trends and best practices are constantly changing. To continue to provide outstanding services and be at the forefront of graduate and postdoctoral career development, we cultivate partnerships and engage in professional organizations to share our work.

Papers

Applying Inter-rater Reliability to Improve Consistency in Classifying PhD Career Outcomes. Stayart CA, Brandt PB, Brown AM, Hutto T, Layton RL, Petrie KA, et al. bioRxiv (2018)

Faculty perceptions and knowledge of career development of trainees in biomedical science: What do we (think we) know?

Watts SW, Gould KL, Brown AM, Chalkley GR et al. PLOS ONE 14(1): e0210189. (2019)

Workshops Presented at Selected International Conferences

It's a Good Thing: Sustaining the Progress Made by the Vanderbilt ASPIRE Program

Annual BEST Consortium Meeting
Bethesda, MD
October, 2018

Kim Petrie

Vanderbilt's ASPIRE Program: Broadening Training Experiences for Biomedical Scientists

From PhD to Employee Symposium
McGill University Health Centre
Montreal, QC, Canada
June, 2019

Ashley Brady

Emerging Best Practices for Tracking Trainees and for Data Utilization

AAMC-GREAT group Annual Meeting
Atlanta, GA
September, 2018

Roger Chalkley, Kim Petrie

National Leadership

Kim Petrie served as the Secretary of the Graduate Career Consortium, a national organization of PhD and postdoc career advisors from universities across the US and Canada.

Dr. Petrie was invited to participate in the Burroughs Wellcome Fund workshop on professional growth in the PhD-level career development field.

Vanderbilt also serves as the organizing center to coordinate NIH BEST Consortium activities through an administrative supplement. Roger Chalkley oversees consortium initiatives, Laura Daniel is the manager of consortium activities.



Alumni Relations, Outcomes, and Development

Mapped

Alumni Relations, Outcomes, and Development

The Office of Career Development engages biomedical PhD and postdoctoral alumni once they leave Vanderbilt. Beyond asking alumni to volunteer their time at career exploration or professional development events, the office facilitates connections to current trainees. Furthermore, our alumni network helps us better understand career outcomes, informs our career programming, and shapes our advice to current trainees.

1480

Number of Alumni Tracked in Outcomes Database

15

Alumni Attendees at STEM Policy Happy Hour in D.C.

38

Alumni Attendees at ASPIRE on the Road Happy Hour in San Diego

800+

PhD Student Exit Surveys Administered to Date

1,091

LinkedIn Group Members

Vanderbilt University Biomedical Research Graduate and Postdoctoral Trainees & Alumni

23

Alumni Participants at Career Symposium Networking Huddles



Results and Discussion Newsletter

Published twice annually • Written by current trainees • About trainees, faculty, and alumni • Distributed to alumni and Vanderbilt community

In March, Vanderbilt alumni Travis Smith, PhD; Aaron Derdowski, PhD; and Erik Prentice, PhD, visited campus as guest speakers of the Management and Business Principles module retreat as well as to give an employer info session for current trainees.

Pin Drop: Alumni Employer Proactive Worldwide Visits Campus

By Justine Sinnaeve, Graduate Student

Proactive Worldwide wants to know how job candidates have been fire-tested and how they have learned from those experiences. The good news is that the management consulting firm is all too familiar with the challenges that Vanderbilt PhD students and postdoctoral fellows have faced and how those challenges prepare Vanderbilt University alumni for a career at Proactive Worldwide.

Vanderbilt welcomed back three alumni for an employer information session on Proactive Worldwide in March. Drs. Erik Prentice (Chief Operating Officer), Aaron Derdowski (Associate Vice President, Health Care & Life Sciences), and Travis Smith, (Associate Vice President, Health Care & Life Sciences) spoke about their current positions at Proactive Worldwide, a management consulting firm that recognizes the benefit of PhD training, especially from Vanderbilt. Drs. Prentice, Derdowski, and Smith all started their careers outside of consulting but found their way to Proactive Worldwide and to a miniature Vanderbilt reunion.

Proactive Worldwide is a market and competitive intelligence consulting firm founded in 1995 on evidence-based intelligence, using primary and secondary research sources to obtain hard-to-get information to improve the position of their clients and their products in the marketplace. Over the past two decades, Proactive Worldwide has continued to excel in this arena, while adding valuable consultative interpretations on top of their hardcore research. Proactive Worldwide's ability to interpret the research and give recommendations has expanded greatly, especially as they hire Ph.D.s. Clients, too, appreciate the expertise and careful problem solving that Proactive Worldwide employees bring to the table. Although Proactive Worldwide has primarily been hiring Ph.D. trainees into their health care and life sciences division, all three Vanderbilt alumni predict that Ph.D.s will be hired across the board as they continue to prove their versatility and added value.

Unlike other consulting firms that travel to client sites, the majority of work done at Proactive Worldwide is done virtually and remotely. This presents the largest transition obstacle for graduate students who are used to giving oral presentations in front of their slides, often with the use of a laser pointer. At Proactive Worldwide, slides have to be able to stand on their own as analysts may not be in the room with their presentations. Creating slides that can convey the information in this way, as well as voice over audio when necessary, presents a learning curve for new hires. However, new analysts are closely mentored by more senior employees and are gradually given more and more responsibility, along with creative license. As



analysts work their way up in the company, they increasingly have client-facing roles and become engagement managers.

Why, then, have PhD students, and Vanderbilt students in particular, thrived at Proactive Worldwide? All three executives agree that it comes down to the training. PhD students quickly learn how to tell a compelling story, how to confidently deliver information to various audiences, and how to respond to feedback and questions in a variety of settings. Because they have each experienced the rigor of PhD training at Vanderbilt, they are confident in hiring additional Vanderbilt graduates as team members, knowing they will be ready to handle the demands of a job at Proactive Worldwide.

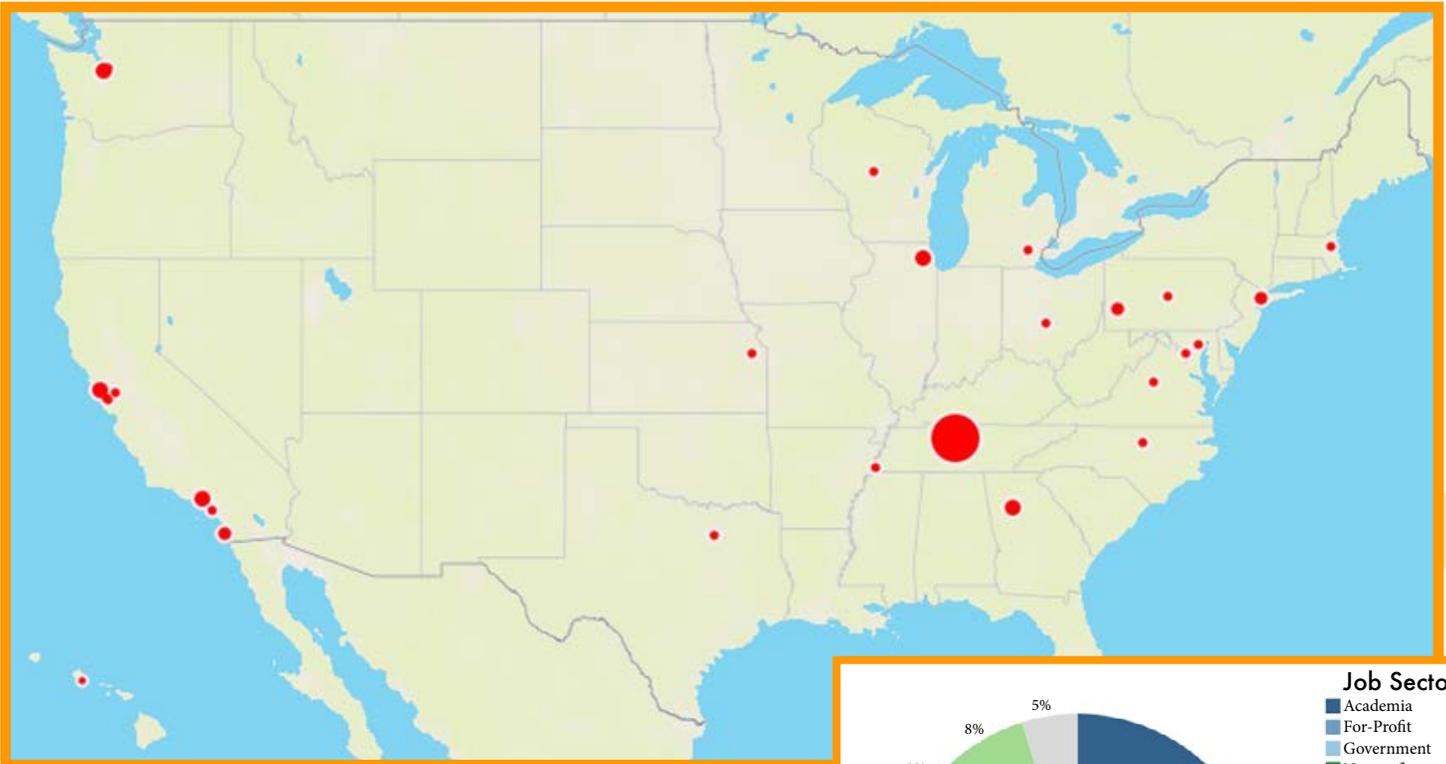
Working with Vanderbilt alumni also makes the job more fun as they are able to commiserate about graduate school and reminisce about favorite Nashville haunts and old jokes. These shared experiences give the team a level of trust and open communication that might otherwise require more intentional work. So, what does one do to join in on this fun? Dr. Derdowski says, "Step outside of your comfort zone, yesterday," even if that means taking on a new role or responsibility in lab, trying a new sport, or speaking in front of a new crowd. Constantly pushing yourself to be in new situations that require new skills will make you ready for anything a client can throw your way. Dr. Prentice urges practicing presenting, and not necessarily just on your project! Journal clubs, lab meetings, seminars, and conferences are great opportunities, but any public speaking on any topic can similarly prepare you for a position as an analyst. Quickly reading the audience and getting comfortable not knowing all the answers, but being able to thoughtfully offer information is key to success in this role.

Over the years, Proactive Worldwide has built a strong relationship with the BRET Office of Career Development. Dr. Prentice has filmed a Beyond the Lab video and participated in the Annual Career Symposium. The relationship has been mutually beneficial as Vanderbilt PhD students continue to be competitive candidates for their growing business.

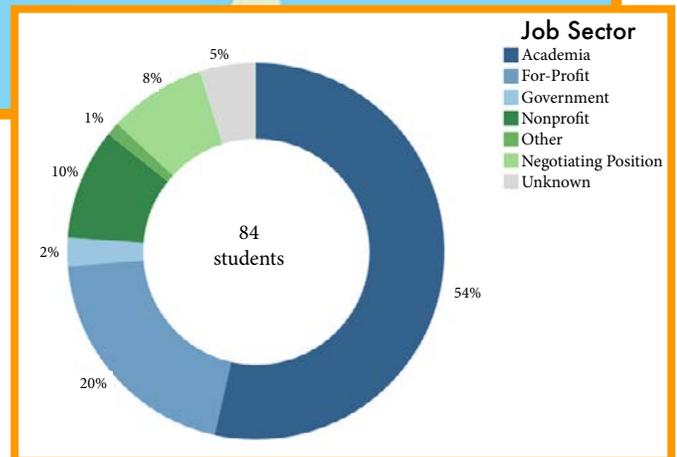
Pin Drop: Outcomes Outlook

Employment Sectors of Biomedical PhD Graduates

(July 2018-June 2019 Defense Dates)



Size of the red circle represents number of graduates employed in that location.



Pre-doc Exit Survey Feedback about the ASPIRE Program

Indispensable. Through ASPIRE, I was able to learn about different career options that were available and I was able to identify new areas of interest. I am certain I would not be where I am today without ASPIRE.

ASPIRE has had a profound impact on my student life in terms of training me outside my lab with experiences I would have never gotten otherwise.

The ASPIRE program positively impacted my career, and the availability of these resources impacted my decision to attend VU for my training. I have taken the ASPIRE opportunities seriously while here, and have landed my job because of the career office.

The ASPIRE program had a huge impact on my career. From the clinical microbiology module, I decided to pursue clinical micro as a career path, and will be starting in a clinical microbiology fellowship this July.

A group of seven people, four men and three women, are standing in a line on a paved walkway in front of a modern building. The building features a prominent glass facade and a curved, metallic structure with vertical slats and red accents. The scene is brightly lit, suggesting a sunny day. The text 'Employer Relations and Workforce Development' is overlaid in white on the left side of the image.

Employer Relations and Workforce Development

Mapped

Employer Relations & Workforce Development

Partnerships with companies and organizations lead to exciting company visits, internships, and externships for our trainees. Employer Relations and Workforce Development also includes:

- Meetings with potential and current employer contacts
- Hosting employer information sessions
- Speaking at conferences and giving invited talks
- Serving on committees to represent Vanderbilt needs

62 Employer Partner Meetings

7 Employer Case Sessions for *Data Science Essentials*

9 Employer Hosts for Internships

26 Employer Partners for ASPIRE on the Road

5 Employer Campus Visits

4 Employer Hosts for Externships

26 Employers Participating in Annual Career Symposium
Networking Huddles



Internship Hosts at a Glance

Adventure Science Center • American Heart Association of Middle Tennessee • Belmont University • Fisk University • Health Research Alliance • Life Science Tennessee • Nashville Biosciences • Sarnoff Cardiovascular Research Foundation • Tuberous Sclerosis Alliance • Utilize Health



Pinned: ASPIRE Trainees Fly to San Diego

By Lorena Infante Lara, PhD, with contributions from Salma Omer, graduate student

La Jolla, San Diego, CA, is home to a sizable life sciences cluster, housing over 1,200 life sciences companies and more than 80 independent and university-affiliated research institutions. For trainees interested in developing a career in the biotech or pharmaceutical industries, La Jolla is a networking and informational gold mine – if they can get there.

The ASPIRE Program prides itself on providing career exploration and development opportunities to trainees that would not normally be available to them. Last month, ASPIRE on the Road took 12 trainees to La Jolla to visit 6 pharma and biotech companies, where they met and interacted with industry postdocs, research scientists, and executives, many of them Vanderbilt alumni. These interactions afforded the trainees the opportunity to learn first hand what it is like to work in this sector, and to get informed on whether or not that path is for them.

Over a period of two days at the end of April, the nine graduate students and three postdocs visited Fate Therapeutics, Sirenas, Biocom, Janssen, the Eli Lilly Biotechnology Center, and Illumina, as well as the start-up incubator JLABS. The trainees had the opportunity to interact with many of the alumni they met during the company tours in a more informal setting during a happy hour, which also brought together many San Diego-area biomedical sciences alumni working in a variety of industries including academia, consulting, business, and more.

Also on the trip were Ashley Brady, Assistant Dean of Biomedical Career Engagement and Strategic Partnerships; Larry Marnett, Dean of Basic Sciences; Kathy Gould, Associate Dean for Biomedical Sciences; Taylor Wood, Associate Dean of Development & Alumni Relations; and Aaron Conley, Director of Corporate and Foundation Relations.

ASPIRE on the Road is in its second iteration. The first trip occurred last spring and took trainees to Boston.



Tracked

by Salma Omer, graduate student attendee

Wednesday, April 24
12:00-2:00pm
Fate Therapeutics <ul style="list-style-type: none"> • Understanding R&D, manufacturing, quality control, and translational science • Question and answer session and tour of the facility
2:00-3:00pm
Sirenas <ul style="list-style-type: none"> • Tour of facility • Question and Answer Session
3:30-5:00pm
BIOCOM <ul style="list-style-type: none"> • Welcome and Orientation to San Diego Biotech Ecosystem
Thursday, April 25
9:00-12:15pm
Janssen & JLABS <ul style="list-style-type: none"> • Meet and Greet with a Scientific Director • Tour of Janssen, Tour of JLABS • Meet and Greet with panel of Janssen postdocs
2:00-4:00pm
Lilly Biotechnology Center <ul style="list-style-type: none"> • Lilly Biotechnology Center Short Talks on Functionality • Panel discussion with research scientists • Automation Lab Tour
5:30-7:30pm
San Diego-area Alumni Networking Happy Hour
Friday, April 26
9:00-11:30am
Illumina <ul style="list-style-type: none"> • Company Overview • Campus and Lab Tour • Employee Career Panel and Networking



Fate Therapeutics



“What’s really interesting is that cell culture media is transferred into IV bags to reduce exposure to air and contamination. They also require getting in full hazmat suits before entering a culture room.”

BIOCOM

“This meeting [at BIOCOM] was really helpful in putting into perspective the kind of pharma in California and the quantity of one specific sector (consumer, medical parts, R&D etc).”



Lilly Biotechnology Center

“There was a panel discussion with scientists in different positions. The group asked informative questions about their career trajectory and lessons learned from pursuing postdocs in academia or industry.”



San Diego-area Alumni Networking Happy Hour

“This was one of the most useful networking events I have attended. There were about 40 Vanderbilt alumni who work in the San Diego, CA, area in a mixture of fields (academia, industry, consulting, business, etc.)... Each person I met made a profound connection.”



Illumina

“After the overview, we were given a tour of the campus, which was the largest campus we visited that trip (they had a soccer field, basketball courts, volleyball courts, and an amphitheater). We were also shown an exhibit of the Illumina DNA sequencing machines, which felt like a mini Illumina museum.”



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Campus Partnerships & Faculty Outreach

STAR Method

- Situation- set the
- Task- what wa
- Action- what o
- Result- what na

Mapped

Campus Partnerships & Faculty Outreach

The BRET Office of Career Development strives to maintain partnerships with departments and programs across campus. Speaking opportunities, serving on university committees, and providing resources are the many ways we partner.

34 Invited Campus Talks and Presentations

10

Postdoc Mentor Lunches held with VU and VUMC Faculty

29

Training Grant Sponsors for the 2019 Annual Career Symposium

18

Presentations to IMPACT Groups



Campus Partners

Vanderbilt School of Medicine Basic Sciences
Vanderbilt University Medical Center
Vanderbilt Graduate School
Training Grants in the Biomedical and Biological Sciences
Vanderbilt Center for Science Outreach
Vanderbilt Center for Teaching
Vanderbilt Center for Tech Transfer & Commercialization
Vanderbilt Corporate & Foundation Relations
Vanderbilt Creative Services
Vanderbilt Development & Alumni Relations
Vanderbilt Graduate Development Network
Vanderbilt Institute for Digital Learning
Vanderbilt International Student and Scholar Services
Vanderbilt Managerial Studies Program
Vanderbilt Office of Federal Relations
Vanderbilt Office of Public Affairs
Vanderbilt Office of Postdoctoral Affairs
Vanderbilt Postdoctoral Association
Vanderbilt Research Cores and Shared Resources
Enabling Innovation Initiative
Vanderbilt School of Engineering
Vanderbilt University Advanced Degree Consulting Club
Vanderbilt Science Policy Group
Vanderbilt University Psychological & Counseling Center
Vanderbilt Writing Studio

Additional Campus Roles

The ASPIRE Team served as Faculty or Staff Adv. to a number of campus organizations:

- Vanderbilt University Advanced Degree Consulting Club •
- Life Science Tennessee Academic Alliance •
- Vanderbilt Science Policy Group •
- Vanderbilt Editors' Club •
- Vanderbilt Postdoctoral Association •

Meet the Team



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Director, Graduate Student Support
Louise B. McGavock Professor
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Appendix

A1 Annual Career Symposium

Speaker	Role
Melanie Sinche (Keynote)	<i>Director of the Career Development Center, Executive Director of the Women's Leadership Center, University of Saint Joseph, author of Next Gen PhD</i>
Maria Alfaro, PhD	<i>Clinical Laboratory Director, Institute for Genomic Medicine, Nationwide Children's Hospital</i>
Melody Davis, PhD	<i>Managing Partner, Versant Learning Solutions</i>
Odaine Gordon, PhD	<i>Senior Scientist, Pharmacyclics (an AbbVie company)</i>
Chad Jackson, PhD	<i>Senior Scientist and Innovation Advisor, Biological Technologies, Defense Advanced Research Projects Agency (DARPA)</i>
Lindsay Marjoram, PhD	<i>Director of Technology Development, Affinergy</i>
Nora Sanchez, PhD	<i>Data Product Manager, Real World Data Operations, Foundation Medicine</i>
Chase Spurlock, PhD	<i>Founder and CEO, IQuity</i>
Jill Weimer, PhD	<i>Associate Scientist and Senior Director of Therapeutic Development, Sanford Research</i>
Networking Huddles	
Alexander Antonison, Data Scientist, axialHealthcare	W. Hayes McDonald, PhD, Research Assistant Professor of Biochemistry, Associate Director of the Proteomics Laboratory of the Mass Spectrometry Research Center, Vanderbilt University
Jennifer E. Ayala, PhD, Project Manager, All of Us Research Program, Institute for Clinical and Translational Research (VICTR), Vanderbilt University Medical Center	Bryan Millis, PhD, Research Assistant Professor, Departments of Cell and Developmental Biology and Biomedical Engineering, Center of Excellence, Cell Imaging Shared Resource (CISR), Vanderbilt Biophotonics Center (VBC), Vanderbilt University Schools of Medicine and Engineering
Heather Bloemhard, PhD, Assistant Director of Federal Relations, Office of Federal Relations, Vanderbilt University	Clarissa Muere, PhD, Licensing Analyst, Vanderbilt Center for Technology Transfer and Commercialization (CTTC)
Chastity Bradley, PhD, Medical Writer Entrepreneur and Owner, BioMed Writers, LLC	Joshua Neuman, PhD, Pediatric Endocrinology Medical Liaison, Field Medical Affairs, Novo Nordisk
Courtney Bricker-Anthony, PhD, Academic Editor II, Editing Division, Research Square	Raymond C. Pasek, PhD, Senior Research Data Scientist, Research and Development axialHealthcare
Elizabeth Conrad, PhD, Senior Specialist, Medical Information and Pharmacovigilance, Product Development, Cumberland Pharmaceuticals	Amy L. Pyle-Eilola, PhD, DABCC, FAACC, Director of Core Lab and Clinical Chemistry and Adjunct Assistant Professor of Clinical Pathology, Pathology & Laboratory Medicine, Nationwide Children's Hospital & The Ohio State University Wexner Medical Center
Tiffany Farmer, PhD, Director of Education and Community Engagement, Adventure Science Center	Jenny Schafer, PhD, Managing Director, Research Assistant Professor, Cell and Developmental Biology, Cell Imaging Shared Resource (CISR), Vanderbilt University
Jodell E. Jackson, PhD, Manager of Translational Resources, Vanderbilt Institute for Clinical and Translational Research (VICTR), Vanderbilt University Medical Center (VUMC)	Shruti Sharma, PhD, Team Lead Data Science Team, Application Services, Ingram Content Group
Aaram Kumar, Associate Director, Scientific Innovation, FORCE Communications	David Shifrin, PhD, Director of Research and Content, Health:Further
Christian Marks, PhD, Health Policy Analyst, CGS Administrators	Jamie Wenke, PhD, Genomics Scientist, Nashville Biosciences

A2 PhD Career Connections

Month	Topic	Attendance	Speaker
August 30, 2018	Management Consulting with Putnam Associates	61	Mallori Burse, PhD, and Ben Diop, PhD, Consultants, Putnam Associates
September 10, 2018	Entrepreneurship, Politics, and Python: Balancing Greed, Empathy, and Curiosity in the 21st Century	42	Chris Moth, PhD, Scientific Software Developer and Entrepreneur
October 26, 2018	Government Administration and Defense	53	Efrain Garcia, PhD, Biomedical Advanced Research and Development Authority, US Department of Health and Human Services
	Lunch with Efrain Garcia, PhD	4	
November 9, 2018	Biotechnology and Discovery	50	Shannon Harlan, PhD, BioTechnology Discovery Research, Eli Lilly and Company
	Lunch with Shannon Harlan	3	
November 30, 2018	Technical Sales and Support	20	Juliana Lewis, PhD, Miltenyi Biotec
January 18, 2019	The Tenure Track at Teaching (PUI) and Minority Institutions (MSI, HBCU, HSI)	29	Steve Damo, PhD, Assistant Professor of Chemistry, Biochemistry and Molecular Biology, Co-director MARC U*STAR Program, Coordinator, Chemistry, Department of Life and Physical Sciences, Fisk University
February 15, 2019	Entrepreneurship	27	Margaret Read, PhD, General Manager, Corporate Alliances, Vanderbilt Center for Technology Transfer and Commercialization
April 12, 2019	Bioinformatics	34	Akshata Udyavar, PhD, Senior Bioinformatics Scientist, Arcus Biosciences
	Networking Breakfast with Akshata Udyavar, PhD	3	

A3 Other Career Exploration Events

Date	Topic	Attendance	Speaker
October, February, March	EI2 Lunches	3/each	Sinaed Miller, PhD; Edward D. McGruder, DVM, PhD; Kevin Ward, PhD
October 11, 2018	Perspectives from Kendall Square: A Window into Boston's Biopharma	58	Francis Prael and Jessica Overstreet, PhD, ASPIRE on the Road: Boston; Bethany Dale, Biogen Drug Development Conference; Sean Moran, From Academia to Industry: An Amgen Perspective
October 31, 2018	Informational Breakfast	8	Jeff Johnson, PhD, Vice-President, Academic Relations, Cayman Chemical Company
March 20, 2019	PhD & Masters Virtual Career Fair	N/A	In partnership with the Graduate Career Consortium
March 8-9, 2019	Transitioning to a Career in Regulatory Affairs: a Two-Day Campus Workshop	20 (capped) 14 trainees from Vanderbilt, 2 from University of North Carolina, 2 from University of Rochester, 2 from University of Chicago	Linda Bowen
May 16, 2019	Applying to AAAS Science & Technology Fellowship	20	Teddy van Opstal, Shilpy Dixit, Phil Ko, former and current graduate students

A4 ASPIRE to Connect

March 8, 2019	Attendance: 102		
<i>Time</i>	<i>Session Title</i>		
8:30-9:00am	Coffee and Connections Networking Event		
9:00-11:00am	Networking for Researchers <i>Keynote with Jean-luc Doumont, PhD</i> <i>A success factor for any career, networking can be daunting for shy people, who then envy the “people-oriented” ones. In fact, both the introverted and the extroverted can benefit from a more systematic approach to professional networking. This session reviews the types of networks worth considering and the approaches to effective networking, both face to face and online, each time offering concrete, readily applicable tips.</i>		
11:15am-12:00pm	Breakout Sessions		
	LinkedIn is Your Friend <i>with Ruth Schemmer, PhD</i>	Informational Interviewing <i>with Ashley Brady, PhD</i>	Etiquette Express <i>with Kate Stuart</i>

A5 Lab to Lunch

December 13, 2018	Lab to Lunch: Business Savvy for Scientists	Malika Williams, <i>Founder of Excuse Me, Please Etiquette</i>	60 (capped)
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A6 Headshot Day

Headshot Day for:	Participants	Date
Graduate Students	32	August 2, 2018
Postdoctoral Fellows	35	October 4, 2018
Graduate Students	32	December 6, 2018
Postdoctoral Fellows	31	February 7, 2019
Graduate Students	34	April 4, 2019
Postdoctoral Fellows	32	June 6, 2019

A7 Trainee Professional Development Additional Events

Date	Topic	Attendance	Speaker
November 12, 2018	Difficult Conversations in the Research Workplace: Fundamentals of Negotiation	35	Carl Cohen, PhD , <i>speaker and author of Lab Dynamics</i>
March 6, 2019	Making the Most of Your Presentation	25	Jean-luc Doumont, PhD , <i>founding partner, Principae</i>

A8 Modules

Enhanced Career Exploration

Course Title	Director	Participants	Frequency and Dates
Data Science Essentials	Mary van Valkenburg , Analytics and Data Science Program Manager, Instructor, Nashville Software School Ashley Brady, PhD , Assistant Dean for Biomedical Career Engagement and Strategic Partnerships (Kate Stuart also assisted with sessions)	11	4 hours a week, 6 weeks June 15-August 7, 2018
Technology Commercialization	Mike Villalobos, PhD , Manager, Vanderbilt Center for Technology Transfer and Commercialization Tom Utley, PhD , Licensing Officer, Vanderbilt Center for Technology Transfer and Commercialization	24 (A&B) 3 (A only) 2 (B only)	Section A: Sept 25-Oct 16, 2018 Section B: Oct 16-Nov 20, 2018
Introduction to the Principles and Practice of Clinical Research (IPPCR)	NIH Clinical Center (VU BRET Office served as a registered remote site)	35 (11/12 passed the final exam)	October, 2018- June, 2019
Biomedical Research and the Media	Wayne Wood, MLAS , Executive Director of New Media Productions, VUMC News and Public Affairs	5 (capped)	8 sessions Sept 19-Nov 28, 2018
Clinical Microbiology: Applying Your PhD to Patient Care	Jonathan Schmitz, MD, PhD , Instructor, Pathology, Microbiology, and Immunology Jennifer Colby, PhD, DABCC , Associate Director, Clinical Chemistry & Assistant Professor, Pathology, Microbiology, and Immunology Ferrin Wheeler, PhD , Medical Director, Cytogenetics	6 (capped)	Individual Rotations Winter 2019
Management and Business Principles for Scientists	Joe Rando, MBA , Associate Professor of the Practice, Managerial Studies, Vanderbilt University	22	2 hours/week, 10 weeks Jan 16-Apr 17, 2019

Essential Skill Building

Creating Effective Scientific Talks and Delivering Them with Confidence	Kathy Gould, PhD , Associate Dean, Biomedical Sciences	18 (Fall session) 17 (Spring session)	3 Fall sessions Sept 17-Oct 1, 2018 3 Spring sessions Jan 21-Feb 4, 2019
EQ + IQ = Career Success	Kate Stuart , Assistant Director, BRET Office of Career Development	9	6 sessions January, February 2019
Networking Pacing	Ashley Brady, PhD , Assistant Dean for Biomedical Career Engagement and Strategic Partnerships	8	6 sessions September 25- November 20, 2018
Practical Strategies for Strong Writing	Beth Estes, PhD , Academic Support Coordinator, The Writing Studio, Vanderbilt University	25 (Fall) 24 (Spring)	3 Fall sessions September 20, 27, and October 4, 2018 3 Spring sessions January 22, 29, and February 5, 2019
Maximizing Your Potential	Joe Rando, MBA , Associate Professor of the Practice, Managerial Studies, Vanderbilt University	25	September 10- December 10, 2018

A9

ASPIRE Cafe for Postdoctoral Fellows

Date	Topic	Presenter	Attendance
7/12/18	Setting Up and Running a Lab	Vivian Gama, PhD; Erin Calipari, PhD; Yi Ren, PhD	28
7/26/18	Orientation to BRET Career Development Resources for Postdocs	Ashley Brady, PhD	9
8/9/18	Preparing a Faculty Application Package	John Karijovich, PhD and Chris Wright, D. Phil.	23
8/23/18	K Awards: Which One is Right for You?	Abby Brown, PhD	19
9/13/18	Grant Resources at Vanderbilt	Abby Brown, PhD	14
9/27/18	Preparing for a Teaching Demo	Cynthia Brame, PhD	15
10/11/18	LinkedIn Powerboost	Ashley Brady, PhD	13
10/25/18	Orientation to BRET Career Development Resources for Postdocs	Ashley Brady, PhD	8
11/8/18	What to Expect from a Faculty Interview	David Cortez, PhD, Alyssa Hasty, PhD, and Chris Wright, D. Phil.	9
12/13/18	How to Give a Chalk Talk	Ron Emeson, PhD, Ann Richmond, PhD and Chris Wright, D. Phil.	22
1/16/19	Negotiating Your Faculty Compensation and Start-Up Package	Kathy Gould, PhD	11
2/6/19	From CV to Resume	Kim Petrie, PhD	6
2/20/19	A Fair Look: How to Review A Paper	Kathy Gould, PhD	11
3/20/19	Orientation to BRET Career Development Resources for Postdocs	Ashley Brady, PhD	2
4/3/19	Informational Interviewing: Your Most Powerful Networking Tool	Ashley Brady, PhD	7
4/17/19	Securing and Maintaining Collaborations	Jonathan Gilligan, PhD; Thomas Palmeri, PhD; and Chuck Sanders, PhD	14
5/1/19	Writing Diversity and Teaching Statements	Eric Smith, PhD and Alex Oxner, Center for Teaching Fellow	23
5/15/19	Critical Conversations: Dealing with Conflict	Stacey Satchell, MEd, M.A.	7
6/5/19	Writing the Science of a Grant	C. Michael Stein, M.B. Ch.B.	14

A10

ASPIRE Advisory Committee

The ASPIRE Program Advisory Committee consists of external advisors from various industries, as well as Vanderbilt faculty and trainees. The annual meeting serves as an opportunity to seek input, celebrate milestones, and learn from our partners. The Advisory Committee met on September 7, 2018.

ROB CARNAHAN (*Vanderbilt University*)

DALE EDGAR (*Eli Lilly*)

EFRAIN GARCIA (*Health & Human Services*)

KEN HOLROYD (*Vanderbilt University*)

DANIEL HUTCHESON (*Indivior*)

BRIAN LADEN (*TriStar Technology Ventures*)

LORENA INFANTE LARA (*Vanderbilt University*)

KEVIN LEE (*The Lawrence Ellison Foundation*)

INES MACIAS-PEREZ (*Cumberland Pharmaceuticals*)

ALAN MARNETT (*Benchfly*)

RICHARD O'BRIEN (*Vanderbilt University*)

STEVE ROBERDS (*Tuberous Sclerosis Alliance*)

KEENAN TAYLOR (*Vanderbilt University*)

LAURIE VANDERVEEN (*Nektar Therapeutics*)

NANCY WALL (*Lawrence University*)

CHRIS WRIGHT (*Vanderbilt University*)

A11 Invited National and Regional Talks and Participation

07
2018

July 24, 2018
Invited Mentor
Leadership Alliance Annual Professional
Development Meeting
Hartford, CT
Kim Petrie

08
2018

August 28, 2018
*"Exploring Cooperation,
Scholarship, and Professional Growth within the
PhD-level Career Development Field"*
Invited Burroughs Wellcome Fund Workshop
Participant
Kim Petrie

09
2018

September 27, 2018
*"Emerging best practices for tracking trainees and for
data utilization"*
AAMC-GREAT group Annual Meeting
Atlanta, GA
Roger Chalkley, Kim Petrie

10
2018

October 24, 2018
*"It's a Good Thing: Sustaining the Progress Made by
the Vanderbilt ASPIRE Program"*
Annual BEST Consortium Meeting
Bethesda, MD
Kim Petrie

October 25, 2018
Panelist
*Creating Sustainable Organizations: Sustainability
and Lessons Learned from the National Stage"*
Annual BEST Consortium Meeting
Bethesda, MD
Kim Petrie

11
2018

November 11, 2018
Panelist
"The Subtleties of Purposeful Networking"
Southeastern Medical Scientist Symposium
Nashville, TN
Ashley Brady

November 30, 2018
Invited Participant
GCC and I3IDP Partnership Information and
Focus Group Session
GCC New England and Eastern Canada Regional
Meeting
Toronto, Canada
Kim Petrie

02
2019

February 5, 2019
"Career Resources at Vanderbilt University"
Fisk to Vanderbilt Master's to PhD Bridge Program
Forum
Ashley Brady

February 7, 2019
Invited Participant
GCC and I3IDP Partnership Information and
Focus Group Session
GCC Southeastern Regional Meeting
Duke University, Durham, NC
Kim Petrie

06
2019

June 6, 2019
"Art of the Follow-up"
Career Stories, University of Rochester
Rochester, NY
Ashley Brady

June 13, 2019
*"Vanderbilt's ASPIRE Program: Broadening Training
Experiences for Biomedical Scientists"*
From PhD to Employee Symposium
McGill University Health Centre
Montreal, QC, Canada
Ashley Brady

A12 In the Press

"How to Review a Paper"
ASPIRE Cafe for Postdoctoral Fellows seminar summary written
by Rebecca Helton
Edge for Scholars Blog
July 19, 2018

"Why Your Career Path is a lot like a Game of Plinko"
Ashley Brady
University of Rochester URBEST Blog
May 31, 2019

"Writing, Teaching, and Diversity Statements"
ASPIRE Cafe for Postdoctoral Fellows seminar summary written by Rebecca Helton
Edge for Scholars Blog
June, 2019

A13 Conference Poster Presentations

<p>2018 “Applying Inter-rater Reliability to Improve Consistency in Classifying PhD Career Outcomes” Abigail Stayart, Patrick Brand, Abigail Brown, Tamara Hutto, Rebekah Layton, Kim Petrie, et.al AAMC GREAT Group Annual Meeting, Atlanta, GA, September 2018</p>	<p>2019 “Data Science Essentials: A Career Exploration Program for Biomedical PhDs” Ashley Brady, Kim Petrie, Abigail Brown, John Wark, Mary van Valkenburg, and Kathy Gould. Graduate Career Consortium Annual Conference, New Orleans, LA, June 2019</p>
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A14 Peer-Reviewed Publications and Grants

<p>Administrative Supplement <i>Cellular, Biochemical, and Molecular Sciences Training Grant</i> Created module “Maximizing Your Potential”</p>	<p>Burroughs Wellcome Fund <i>Career Guidance for Trainees Grant</i> Created module “Data Science Essentials”</p>
<p>“Applying Inter-rater Reliability to Improve Consistency in Classifying PhD Career Outcomes” Abigail Stayart, Patrick Brand, Abigail Brown, Tamara Hutto, Rebekah Layton, Kim Petrie, et.al bioRxiv (2018)</p>	<p>“Faculty perceptions and knowledge of career development of trainees in biomedical science: What do we (think we) know?” Watts SW, Gould KL, Brown AM, Chalkley GR et al. PLOS ONE 14(1): e0210189. (2019)</p>

A15 Annual Report Contributors

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A16 Employer Information Sessions

Date	Company/Event	Attendees	Speaker
October 26, 2018	Employment Opportunities at the US Food and Drug Administration	38	La’Nissa Brown-Baker, PhD , Associate Director for Scientific Staffing, Office of the Commissioner, Office of Medical Products and Tobacco (OMPT), FDA, DHHS
February 4, 2019	Whitsell Innovations Informational Webinar	22	Robin Whitsell , President, Whitsell Innovations, Inc.
March 13, 2019	Proactive Worldwide Employer Info Session	39	Erik Prentice, PhD , Chief Operating Officer Aaron Derdowski, PhD , Associate Vice President, Health Care & Life Sciences Travis Smith, PhD , Associate Vice President, Health Care & Life Sciences
March 19, 2019	Boston Consulting Group (BCG) Information Session	67	Siwei He, PhD , Consultant, Boston Consulting Group
June 27, 2019	McKinsey Employer Info Session	103	Laura Terry, PhD , Principal, McKinsey and Company

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Data Science Essentials Employer Case Sessions

Date	Company	Speaker/Host
February 14, 2019	HCA Healthcare	Jesse Spencer Smith, PhD, Director, Enterprise Data Science, HCA
February 21, 2019	Digital Reasoning	Christi French, PhD, Senior Data Scientist, Digital Reasoning
February 27, 2019	Abbott Laboratories	Peter O. Wiebe, PhD, Manager, Data Analytics, Abbott Laboratories, Chicago, IL (virtual)
March 28, 2019	Vanderbilt Institute for Clinical and Translational Research, Vanderbilt University Medical Center	Kelsey Mayo, PhD, All of Us Program, Vanderbilt Medical Center
April 4, 2019	axialHealthcare	Lindsey Morris, PhD, Director of Data Analytics, axialHealthcare
April 11, 2019	Concert Genetics	Gillian Hooker, PhD, VP of Clinical Development, Concert Genetics
April 18, 2019	Ingram Content Group	Shruti Sharma, PhD, Software Engineer, Ingram Content Group

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Internships

ASPIRE internships provide hands-on experience with a project in a professional work environment. Internships are part-time. ASPIRE travel scholarships help offset travel expenses that are associated with participating in an internship.

Internship Opportunity	Role/Title
Adventure Science Center	2 TWISTER Interns
American Heart Association of Middle Tennessee	3 interns, Tennessee Advocacy (2), Health Strategies (1)
Fisk University	1 Teaching Intern, Biochemistry I
Health Research Alliance	2 interns, HRA Members' Meeting Program Coordinator (1), Coordinator for Biomedical Nonprofits' Professional Meeting (1)
Health Research Alliance and Council on Government Relations	2 NFRI Partnership Coordinator
Life Science Tennessee	1 Project Management Intern, Fall 2018
Nashville Biosciences	4 Business Development Interns
Sarnoff Cardiovascular Research Foundation	1 Meeting Program Coordinator
Utilize Health	4 interns, Clinical Data Science (1), Marketing and Sales Operations (2), Clinical Registry and Data Science (1)

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Externships

Externships give trainees short-term, on-site job shadowing opportunities.

Externship Opportunity	Recipients
Amgen Postdoc Day (Boston, MA)	2 Graduate Students
STEM Policy Trip (Washington, DC)	5 Graduate Students, 3 Postdoctoral Fellows
AAAS CASE Workshop (Washington, DC)	2 Graduate Students
Johns Hopkins Regulatory Affairs Workshop	2 Postdoctoral Fellows

07
2018

July 6, 2018
"BRET Career Development Services"
 New Faculty Orientation
 Kim Petrie

July 9, 2018
"Introduction to NRSAs"
 Cell and Developmental Biology Department
 Kim Petrie

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2018

September 12, 2018
"Introduction to NRSAs"
 Chemical & Physical Biology Program
 Kim Petrie

September 18, 2018
"Career Development Resources"
 Clinical Pharmacology Fellows
 Ashley Brady

10
2018

October 9, 2018
"Non-Tenure Academic Careers"
 Vanderbilt Postdoc Association Panel
 Ashley Brady

October 9, 2018
"Preparing for a Faculty Career"
 Microenvironment Influences in Cancer Training
 Program (MICTP)
 Kathy Gould

October 12, 2018
"Maximizing Your Research Efforts"
 Cell and Developmental Biology
 Kathy Gould

11
2018

November 6, 2018
*"Learning How to Mentor: Strategies for Mentoring
 Graduate Students, Postdocs, and Trainees"*
 Early Career Faculty Development Seminar
 Kathy Gould

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2018

December 4, 2018
"Crafting a Compelling Elevator Pitch"
 Microenvironment Influences in Cancer Training
 Program (MICTP)
 Ashley Brady

December 6, 2018; January 10, 17, and 31, 2019
"LinkedIn: Power Boost"
 IMPACT (4 sessions)
 Ashley Brady

01
2019

January 8, 2019
"Informational Interviews"
 Cellular, Biochemical, and Molecular Sciences
 (CBMS) Training Grant
 Kate Stuart

02
2019

January 10, 17, 31, 2019
 "CVs"
 IMPACT (4 sessions)
 Kim Petrie

January 15, 2019
"Applying for your Next Position"
 Chemical & Physical Biology Program
 Kathy Gould

January 29, 2019
*"The Next Step: Applying for Your Postdoc or Other
 Post-Grad Job"*
 Microenvironment Influences in Cancer Training
 Program (MICTP)
 Kathy Gould

February 7, 14, 28, 2019
"Biosketches"
 IMPACT (4 sessions)
 Ashley Brady

February 19, 2019
"Fair Review"
 Molecular Endocrinology Training Program
 Kathy Gould

February 27, 2019
"Making the IDP Work for You"
 Academic Pathways Symposium
 Roger Chalkley

February 28, March 7, 14, April 4
 "Career Planning"
 IMPACT (6 sessions)
 Kim Petrie

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2019

April 5, 2019
"Your CV, Your Resume, Your Pitch"
 Clinical Pharmacology Fellows
 Kim Petrie

April 9, 2019
"Saavy Science"
 Cellular, Biochemical, and Molecular Sciences
 (CBMS) Training Grant
 Kate Stuart

April 15, 2019
"How to Review a Paper"
 RCR Session for Chemical and Physical Biology
 Program
 Kathy Gould

April 23, 2019
"Saavy Science"
 Microenvironment Influences in Cancer Training
 Program (MICTP)
 Kate Stuart

