<table>
<thead>
<tr>
<th>Table of Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Exploration and Decision-Making</td>
<td>8</td>
</tr>
<tr>
<td>Annual Career Symposium</td>
<td></td>
</tr>
<tr>
<td>PhD Career Stories</td>
<td></td>
</tr>
<tr>
<td>ASPIRE Internships</td>
<td></td>
</tr>
<tr>
<td>Beyond the Lab Videos and Podcasts</td>
<td></td>
</tr>
<tr>
<td>Individual Advising</td>
<td></td>
</tr>
<tr>
<td>Online Resources and E-Newsletter</td>
<td></td>
</tr>
<tr>
<td>Career Development Lending Library</td>
<td></td>
</tr>
<tr>
<td>Trainee Professional Development</td>
<td></td>
</tr>
<tr>
<td>ASPIRE Modules</td>
<td>15</td>
</tr>
<tr>
<td>ASPIRE Cafe for Postdoctoral Fellows</td>
<td></td>
</tr>
<tr>
<td>Professional Headshot Days</td>
<td></td>
</tr>
<tr>
<td>CV/Resume Drop-in Clinic</td>
<td></td>
</tr>
<tr>
<td>Lab to Lunch</td>
<td></td>
</tr>
<tr>
<td>National Career Development Research and Best Practices</td>
<td>21-22</td>
</tr>
<tr>
<td>National Leadership</td>
<td></td>
</tr>
<tr>
<td>Invited Talks &amp; Presentations</td>
<td></td>
</tr>
<tr>
<td>Publications</td>
<td></td>
</tr>
<tr>
<td>Awards</td>
<td></td>
</tr>
<tr>
<td>Alumni Programmatic Participation Results &amp; Discussion Newsletter</td>
<td>22</td>
</tr>
<tr>
<td>Alumni Outcome Database</td>
<td></td>
</tr>
<tr>
<td>Alumni Relations, Outcomes, and Development</td>
<td></td>
</tr>
<tr>
<td>Employer Relations and Workforce Development</td>
<td>26</td>
</tr>
<tr>
<td>Employer Information Sessions</td>
<td></td>
</tr>
<tr>
<td>Internship &amp; Externship Partnerships</td>
<td></td>
</tr>
<tr>
<td>Mock Interview Day</td>
<td></td>
</tr>
<tr>
<td>Invited Campus Talks</td>
<td>30</td>
</tr>
<tr>
<td>New Faculty Orientations</td>
<td></td>
</tr>
<tr>
<td>Lunches with Postdoc Faculty Mentors</td>
<td></td>
</tr>
<tr>
<td>IMPACT Presentations</td>
<td></td>
</tr>
<tr>
<td>National Career Development Research and Best Practices</td>
<td></td>
</tr>
<tr>
<td>Employer Information Sessions</td>
<td></td>
</tr>
<tr>
<td>Internship &amp; Externship Partnerships</td>
<td></td>
</tr>
<tr>
<td>Mock Interview Day</td>
<td></td>
</tr>
<tr>
<td>Alumni Programmatic Participation Results &amp; Discussion Newsletter</td>
<td></td>
</tr>
<tr>
<td>Alumni Outcome Database</td>
<td></td>
</tr>
<tr>
<td>Alumni Relations, Outcomes, and Development</td>
<td></td>
</tr>
<tr>
<td>Employer Relations and Workforce Development</td>
<td></td>
</tr>
<tr>
<td>Employer Information Sessions</td>
<td></td>
</tr>
<tr>
<td>Internship &amp; Externship Partnerships</td>
<td></td>
</tr>
<tr>
<td>Mock Interview Day</td>
<td></td>
</tr>
<tr>
<td>Invited Campus Talks</td>
<td></td>
</tr>
<tr>
<td>New Faculty Orientations</td>
<td></td>
</tr>
<tr>
<td>Lunches with Postdoc Faculty Mentors</td>
<td></td>
</tr>
<tr>
<td>IMPACT Presentations</td>
<td></td>
</tr>
<tr>
<td>National Career Development Research and Best Practices</td>
<td></td>
</tr>
<tr>
<td>Employer Information Sessions</td>
<td></td>
</tr>
<tr>
<td>Internship &amp; Externship Partnerships</td>
<td></td>
</tr>
<tr>
<td>Mock Interview Day</td>
<td></td>
</tr>
<tr>
<td>Alumni Programmatic Participation Results &amp; Discussion Newsletter</td>
<td></td>
</tr>
<tr>
<td>Alumni Outcome Database</td>
<td></td>
</tr>
<tr>
<td>Alumni Relations, Outcomes, and Development</td>
<td></td>
</tr>
<tr>
<td>Employer Relations and Workforce Development</td>
<td></td>
</tr>
<tr>
<td>Employer Information Sessions</td>
<td></td>
</tr>
<tr>
<td>Internship &amp; Externship Partnerships</td>
<td></td>
</tr>
<tr>
<td>Mock Interview Day</td>
<td></td>
</tr>
<tr>
<td>Invited Campus Talks</td>
<td></td>
</tr>
<tr>
<td>New Faculty Orientations</td>
<td></td>
</tr>
<tr>
<td>Lunches with Postdoc Faculty Mentors</td>
<td></td>
</tr>
<tr>
<td>IMPACT Presentations</td>
<td></td>
</tr>
<tr>
<td>National Career Development Research and Best Practices</td>
<td></td>
</tr>
<tr>
<td>Employer Information Sessions</td>
<td></td>
</tr>
<tr>
<td>Internship &amp; Externship Partnerships</td>
<td></td>
</tr>
<tr>
<td>Mock Interview Day</td>
<td></td>
</tr>
<tr>
<td>Alumni Programmatic Participation Results &amp; Discussion Newsletter</td>
<td></td>
</tr>
<tr>
<td>Alumni Outcome Database</td>
<td></td>
</tr>
<tr>
<td>Alumni Relations, Outcomes, and Development</td>
<td></td>
</tr>
<tr>
<td>Employer Relations and Workforce Development</td>
<td></td>
</tr>
<tr>
<td>Employer Information Sessions</td>
<td></td>
</tr>
<tr>
<td>Internship &amp; Externship Partnerships</td>
<td></td>
</tr>
</tbody>
</table>
Established in 2005, the Biomedical Research Education and Training (BRET) Office of Career Development provides career and professional development enrichment activities for Vanderbilt University School of Medicine 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 evaluation efforts and research training, including diversity initiatives, and spearheaded the BEST Consortium. Dr. Abigail Brown conducts outcomes evaluation and research with the project efforts of Dr. Janani Varadarajan and Lindsay Meyers.

The ASPIRE Program serves PhD students and postdoctoral fellows in the biomedical sciences. Although our events are open to the Vanderbilt community, ASPIRE activities and individual advising are tailored for BRET PhD graduate students and postdocs.

**Trainees We Serve**

The ASPIRE Program serves PhD students and postdoctoral fellows in the biomedical sciences. Although our events are open to the Vanderbilt community, ASPIRE activities and individual advising are tailored for BRET PhD graduate students and postdocs.

**POSTDOCTORAL DEPARTMENTS SERVED**

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

**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 & Chemical Biology Program (QCB)

**Our Scope**

- Trainee Professional Development
- Employer Relations and Workforce Development
- Alumni Relations, Outcomes, and Development
- National Career Development Research and Best Practices
- Campus Partnerships and Faculty Outreach

**Our Summary**

Our Scope

Trainee Professional Development

Graduate Students

86% US Citizens/Permanent Residents

Postdoctoral Fellows

51% US Citizens/Permanent Residents

Total

1,078

Trainees We Serve

The ASPIRE Program serves PhD students and postdoctoral fellows in the biomedical sciences. Although our events are open to the Vanderbilt community, ASPIRE activities and individual advising are tailored for BRET PhD graduate students and postdocs.

Postdoctoral Departments served

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

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 & Chemical Biology Program (QCB)
Zooming through the End of the Year

By Ashley Brady, PhD, Assistant Dean of Biomedical Career Engagement and Strategic Partnerships

Like many organizations across the country, Vanderbilt University and the campus our Nashville community. Starting on March 16, our team began working from home and trying to find a new normal in a decidedly not-normal world. The week leading up to the work-from-home order was a frantic series of cancellations, postponements, and moving meetings to phone calls. We had to modify or cancel a number of activities that we had been planning for months, or even a year out, since so much of our ASPIRE programming revolves around in-person meetings, seminars, workshops, and face-to-face networking.

Pivoting to a new mode of service delivery

We slipped in our last in-person event on Monday, March 9 - our first ever Mock Interview Day, which involved hosting 20 alumni and 9 Vanderbilt faculty on campus to interview 24 graduate student and postdoctoral fellows. While this event felt nearly normal, elbow bumps were substituted for traditional handshakes in an effort to observe safety precautions. Little did we realize just how much more our world was about to change by the end of that week.

As a bold statement of our resilience, we and our trainees quickly acclimated ourselves to a virtual existence and embraced Zoom. We built a new webpage devoted to highlighting what was happening with all of our current and ongoing programming so that trainees could easily determine what was canceled, postponed, or continuing on in a virtual format. We developed an online request form for trainees to sign up if they wanted to use this time to focus on their professional development goals through individual one-on-one advising and review of their professional documents. As a team, we fielded 45 individual advising appointments via Zoom or email between March 16 and the end of June.

We helped trainees who were in the midst of their job search navigate the new challenges of doing this virtually during a time when many companies were focusing on things other than hiring. We were seeing a slowing economy and a lot of uncertainty in the job market, including hiring freezes in some sectors, especially in academia. Trainees who were invited to interview had to quickly shift to a virtual format which requires different preparation and we adapted to support them.

In the midst of the unprecedented events, we wanted to make sure that the students and postdocs knew we were here to support them while they were adjusting to the significant changes in their lives.

Programming changes

We were in the midst of wrapping up our second iteration of the ASPIRE Module, Data Science Essentials, which culminates in a series of site visits with local data science companies. Our plan for the coming month had been to meet with data scientists at DeCode Health, XSOLIS, and Nashville General Hospital, and to welcome alumna, Tim Shaver, PhD, back to campus to hear about his work at Inscripta, Inc. in Boulder, Colorado. We quickly canceled these events, not envisioning how we might replicate a site visit virtually on such short notice. The ASPIRE Module, Business and Management Principles for Scientists, led by Joe Rando, MBA, continued seamlessly through the spring, converting to a remote format nearly overnight for both didactic lectures and then small group project work. The module wrapped up on time and culminated in outstanding virtual group presentations complete with a judge’s panel.

Sadly, we had to cancel our ASPIRE on the Road trip and alumni happy hour in Boston which was scheduled for the last week of April. We had 12 graduate students and postdocs all set to visit 5 biopharma companies in Cambridge. The plans had been in the works for over 6 months.

We also quickly adapted our regularly scheduled career development series sessions from the ASPIRE Bistro, ASPIRE Café for Postdoctoral Fellows and the ASPIRE Job Search Series to a virtual format and found attendance on par with what we have seen for in-person sessions in the past.

The Annual Career Symposium, scheduled for May 29th, was efficiently converted to a remote format and was a huge success with over 250 attendees tuning in to the Zoom webinar to hear from 9 different invited speakers. This year’s event focused on Effective Job Searching from our keynote speaker, Lauren Celano, MBA, from Propel Careers and then from two separate afternoon panels of four speakers representing various roles in the biotech and pharmaceutical industry from research & development to clinical research management, intellectual property and regulatory affairs.

All of these changes gave us an exciting opportunity to reinvent the way we deliver support to our trainees, to learn new technologies, to create new content to address current concerns, and to reimagine the ways in which we do our work.

Zooming ahead

The ASPIRE team will continue to work remotely from home for the foreseeable future and is committed to continuing to serve all of our PhD graduate student and postdoctoral fellows with the same level of quality and attention as we always have. As we plan for the next year, we intend to offer all of our programming virtually. With broad support from all of our campus and community partners and alumni, we are adjusting our ASPIRE Module syllabi and the delivery of our seminars and workshops, planning a full calendar of PhD Career Stories seminars from guest speakers visiting us virtually, and exploring all the new ways we can meet the needs of our trainees.

The ASPIRE Team Annual Summer Retreat held via Zoom, June 2020.
Career Exploration and Decision-Making

Practice Areas

- Prosecution—getting a patent from the USPTO
- Client Counseling
- Opinion work (e.g., Freedom to Operate, Patentability, Infringement)
- Licensing
- Whatever the client needs
- Litigation
  - PTAB—post-grant proceedings at the USPTO
  - District Court—trial
  - Federal Circuit—appeal

Drs. Seth Ogden and Mark Kilgore speak at the PhD Career Stories seminar about careers in patent law.
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.

**Beyond the Lab Videos**

Followers of @VUBRETPhDJobs

Beyond the Lab Video Views

Beyond the Lab Podcast Episodes

Individual Advising Appointments

165 PhD Students • 83 Postdocs • 19 Alumni

267

Attendees at Career Exploration Programs

359 Blog Posts

1,900 E-Newsletter Subscribers

87 Beyond the Lab Videos

48,708 Beyond the Lab Video Views

67 Beyond the Lab Podcast Episodes

18,030 Beyond the Lab Podcast Downloads

Followers of @VUBretASPIRE

479

Followers of @VUBRETPhDJobs

586

**Predoc Exit Survey Feedback**

“The ASPIRE Program is fantastic. It provides a more in-depth view of possible careers in biomedical science, especially outside of academia. I figured out what I wanted to do next by going to the PhD Career Stories seminars.”

“The ASPIRE Program was very useful in guiding me toward my current career goal. I took advantage of both the ASPIRE on the Road program and the Biomedical Research and the Media communication module, and these experiences helped me to see that I really enjoyed writing/communication/project management.”

“ASPIRE provided a great framework for me to explore my career interests early in graduate school. I did not have a clear career goal when I began graduate school but hearing the first-hand experiences of people in diverse careers helped clarify my interests.”

“The ASPIRE Program has been highly valuable in my career exploration. The workshops and symposia have allowed me to meet and talk to people in various career paths and has exposed me to career options that I never would have known about without this program.”

“Leaders of the ASPIRE program provided a number of opportunities, which I attended, that were very helpful for me figuring out and navigating what career choices I plan on pursuing following graduate school.”

**Annual Career Symposium Goes Virtual**

Choose Your Own Adventure: Exploring Careers in Industry

The Annual Career Symposium is our flagship event that was first held in 1998. With the help of the graduate student and postdoctoral fellow-led organizing committee, the ASPIRE team quickly pivoted during the coronavirus stay-at-home order to make the Annual Career Symposium a successful virtual experience. This year’s event, themed “Choose Your Own Adventure: Exploring Careers in Industry,” continued as planned on May 29th with a few changes from the original schedule, and showcased nine speakers excited to tell their stories and share their advice about careers in the biotech and pharmaceutical industry. The virtual event was well-attended and received strong, positive feedback despite the format change.

Above, Panel 1 discussed their roles at the bench in various pharmaceutical and biotech companies with graduate student Kelsey Pilewski moderating. Top, Panel 2 focused on industry careers in regulatory, intellectual property, clinical development, medical affairs, and more, moderated by graduate students Laura Geben and Sam Dooyema. Right, Dr. Ben Doranz spends time discussing his daily activities in his role.

Annual Career Symposium

• 253 Zoom Webinar Attendees
• 9 Speakers
• 72 Average active online minutes for each 90 minute session
Kim Petrie, PhD, Kate Stuart, Ashley Brady, PhD, and Angela Zito present the new branding for four of the regularly scheduled seminars of 2019-2020.
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 cafes help equip trainees for the next step in their career path.

Attendees at ASPIRE Bistro for Graduate Students

Attendees at ASPIRE Cafe for Postdoctoral Fellows

Attendees at ASPIRE Job Search Series

Participants in 9 Different Modules

Professional Photos Captured at 4 Headshot Days

CV/Resume Drop-in Clinic In-Person Visits

Predoc Exit Survey Feedback

"ASPIRE has been instrumental in improving my soft skills, such as resume/CV writing, interviewing, LinkedIn use, etc. They have also really helped me to explore many different types of careers that I never would have known about. Furthermore they gave me confidence and techniques for building a network. I cannot recommend the ASPIRE Program enough."

“I have continuously used this program. They have provided amazing resources! It has prepared me for how and where to network, what job types exist, CV and resume building, connections to others outside of academia to start my career search. So grateful for what they do!”

“The ASPIRE Program helped me narrow my career path by providing opportunities to explore many different types of careers. The ASPIRE program was also crucial in helping me expand my professional network. I also benefited from the ASPIRE workshops and modules which helped me acquire many valuable professional skills.”

“[The ASPIRE Program] helped me develop professional skills and got me thinking about career development early, which means that I now have a well-rounded skill set.”

“I always knew I wanted to do a postdoctoral fellowship after graduate school. The ASPIRE Program helped me stay on track in terms of when I should start applying for postdoc opportunities and what I needed to do prior to that.”
By Ashley Brady, PhD, Assistant Dean of Biomedical Career Engagement and Strategic Partnerships

ASPIRE Introduces Two New Professional Development Series

When the ASPIRE Program was rolled out in the fall of 2014, one of the first programs we developed was the ASPIRE Café for Postdoctoral Fellows, a twice-monthly seminar series exploring topics in career development and professionalism, exclusively targeted to postdoctoral fellows. In this series, we featured topics such as Converting your CV Into a Powerful Résumé, Writing a Winning Cover Letter, Informational Interviewing, Grant Resources at Vanderbilt, Preparing for a Teaching Demo, and What to Expect in a Faculty Interview or Chalk Talk.

Since its inception, we have seen great success with this series, welcoming between 300-400 postdoctoral fellows to about 20 sessions each year and engaging faculty and campus partners to deliver sessions on topics in which their expertise and experience is invaluable. Postdoctoral fellows weren’t the only ones who saw the value in this series, and we often received requests from student organizations and graduate programs to deliver similar content to graduate student groups.

As a result of this interest and our commitment to providing valuable and timely information to trainees, the ASPIRE team decided to reimagine the way we organize programs to deliver similar content to graduate student groups.

In the fall of 2019, we launched two new series that complement the ASPIRE Café for Postdoctoral Fellows: the ASPIRE Bistro for PhD Students and the ASPIRE Job Search Series.

The ASPIRE Bistro for PhD Students was developed as a sister program to the ASPIRE Café for Postdoctoral Fellows, but with topics tailored specifically to our graduate student trainees’ needs. These sessions are delivered primarily by members of the ASPIRE team and include such topics as The Next Step: Applying for Your Postdoc or Your Post-Grad Job, Maximizing Your Research Efforts, How to Review A Paper, and What to Expect in a Faculty Interview or Chalk Talk.

The ASPIRE Job Search Series was born out of the recognition that a number of professionalism topics and skills transcend training stage. In fact, any trainee who is planning to go on the job market in any career sector would benefit from mastering the skills covered in these sessions. Like the ASPIRE Bistro series, the ASPIRE Job Search Series proved to be very successful over the course of its first year. We hosted nearly 400 graduate student and postdoctoral fellow trainees at eleven sessions that covered topics such as Resumes and Industry CVs, Leveraging LinkedIn, Informational Interviewing, Interviewing 101 and Behavioral Interviewing.

The ASPIRE Café for Postdoctoral Fellows continued for its sixth year and hosted nearly 300 attendees at twelve sessions. Some topics that we had covered in the past were redirected to the ASPIRE Job Search Series so that they would be accessible to graduate student trainees as well. This reorganization left space in the schedule to add additional topics of interest to postdoctoral fellows such as Exploring the Non-Tenure Faculty Track and Developing Your Mentoring Style.

Following on the successes of last year, we plan to continue to offer these three seminar series again for the 2020-2021 academic year in much the same form, but with an emphasis in many sessions on skills needed for success in a virtual world, including tips for networking virtually, preparing for virtual interviews, and starting a new job in a remote setting.

Launching in 2018, the module includes a didactic eight-week introduction to data science in partnership with the Nashville Software School, a nine-week section to build communication and networking skills, and a series of career case sessions led by professional data scientists and hosted on site at their organization. A second round of the module began last week.

“The demand for well-trained data scientists continues to expand as companies increasingly rely on the mining and interpretation of vast amounts of data to drive discovery and innovation,” Brady, Petrie and Gould wrote in their award abstract.

Brady is assistant dean of Biomedical Career Engagement and Strategic Partnerships in the BRET Office of Career Development. Petrie is assistant dean for Biomedical Career Development, and Gould is associate dean for Biomedical Sciences, director of Graduate Student Support and the Louise B. McCawrock Professor of Cell and Developmental Biology.

Graduate students Mabel Seto (Pharmacology) and Iliza Butera (Neuroscience) participated in the first module with 18 other PhD students and postdoctoral fellows.

“The module was extremely helpful in giving me insight into what data science is like as a career,” said Seto. “I'm definitely interested in pursuing it, and I don't think I would have known that without taking the module.”

“This program really helped to reinforce my interest in data visualizations,” Butera added. “This will be particularly helpful as I transition from neuroscience to join a music tech company called Artiphon.”

“My next goal is to find new ways to analyze and visualize music data so that players can see trends in their own playing style and skill development,” she said.

This is the second time in three years that a course developed through the BRET Office of Career Development has won an AAMC Innovations in Research Education Award. A previous module, “Management and Business Principles for Scientists,” won second place in 2016.

Developing innovative approaches to broaden graduate and postdoctoral training is a major focus of the BRET Office of Career Development. The ASPIRE program was launched in 2013 with a National Institutes of Health BEST Award.

Kim Petrie, PhD, and Abby Brown, PhD, present their poster together on the Outcomes Database during the AAMC-GREAT Group meeting in September.
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 remain at the forefront of graduate and postdoctoral career development, we cultivate partnerships and engage in professional organizations to share our work.

External Partners
The ASPIRE Program maintains many relationships with external partners at the local and national level:
The Graduate Career Consortium
Burroughs Wellcome Fund Life Science Tennessee

Awards
2019 AAMC Innovations in Research Education Award
Data Science Essentials
Ashley Brady, Kathy Gould, Kim Petrie

External Learning to Career Development Training for Biomedical Graduate Students and Postdocs: Perspectives on Program Development and Design.

Institutional Training Opportunities for PhD Students in Laboratory Medicine: An Unmet Career Development Need?

Outcomes and Mentoring
AAMC-GREAT Group
Annual Meeting
Seattle, WA
September, 2019
Roger Chalkley and Abby Brown

Data Science Essentials: A Career Exploration Program for Biomedical PhDs
AAMC-GREAT Group
Annual Meeting
Seattle, WA
September, 2019
Kim Petrie

Building the Technology Infrastructure to Store and Visualize our Doctoral Alumni Outcomes
AAMC-GREAT Group
Annual Meeting
Seattle, WA
September, 2019
Abby Brown

Papers

The Final Chapter: BEST Book Published

This fall, the story of the NIH BEST Consortium was finally complete. All 17 institutions gathered tales of their success, and Vanderbilt served as the main facilitator and author of this compendium.

BEST: Implementing Career Development Activities for Biomedical Research Trainees provides an instructional guide for institutions wanting to create, supplement, or improve their career and professional development offerings. Each chapter provides an exclusive perspective from an administrator from the 17 Broadening Experiences in Scientific Training (BEST) institutions. The book can aid institutions who train graduate students in a variety of careers by teaching faculty and staff how to create and implement career development programming, how to highlight the effectiveness of offerings, how to demonstrate that creating a program from scratch is doable, and how to inform faculty and staff on getting institutional buy-in.

Roger Chalkley, Laura Daniel, and Lorena Infante Lara served as editors of the collaboration. Roger Chalkley also wrote the introduction. Kathy Gould, Kim Petrie, Ashley Brady, and Kate Stuart co-wrote the ASPIRE chapter, “Vanderbilt’s ASPIRE Program: Building on a Strong Career Development Foundation to Change the PhD-training culture.”

BEST Collaborations Continue: A Multi-institutional Perspective on Experiential Learning in Career Development

By Ashley Brady, PhD, Assistant Dean of Biomedical Career Engagement and Strategic Partnerships

NIH BEST funding ended at Vanderbilt University in September 2018 and for those BEST institutions who were part of the second cohort, funding ended the following fall. Nevertheless, collaborations and the sharing of lessons learned from the programming developed during the BEST years continue to be fruitful.

This spring, nine different institutions, including Vanderbilt University, had a collaborative manuscript accepted for publication in CBE-Life Sciences Education titled Applying Experiential Learning to Career Development Training for Biomedical Graduate Students and Postdocs: Perspectives on Program Development and Design.

In this manuscript, the authors provided a cross-consortium comparison of the implementation and effectiveness of expanding experiential learning tools into a career development setting. They provided an overview of the four types of experiential learning approaches that their nine institutions have incorporated into programming for both PhD graduate students and postdoctoral fellows: 1) Job Simulations 2) Employer Site Visits 3) Job Shadowing and 4) Internships. They compared learning objectives and evaluation strategies employed for executing each type of experiential learning. The authors also highlighted key factors for other institutions to consider if seeking to implement experiential learning activities into their trainees’ career development initiatives, including tapping into local expertise, geographic location, available staff time, alumni participation, faculty advocacy, and ineligible populations. The participating institutions concluded that experiential learning can vary greatly in size and scope of format as well as trainee time commitment and still remain effective. Yet, it is key to provide components of practical engagement and reflection to each activity, and to carefully evaluate their effectiveness. The overall goal of the publication is that by describing their experiences, these BEST institutions will have provided a framework to support others in the successful design and implementation of experiential learning programs for biomedical graduate students and postdoctoral fellows at institutions with a variety of needs and constraints.


This spring, nine different institutions, including Vanderbilt University, had a collaborative manuscript accepted for publication in CBE-Life Sciences Education titled Applying Experiential Learning to Career Development Training for Biomedical Graduate Students and Postdocs: Perspectives on Program Development and Design.

In this manuscript, the authors provided a cross-consortium comparison of the implementation and effectiveness of expanding experiential learning tools into a career development setting. They provided an overview of the four types of experiential learning approaches that their nine institutions have incorporated into programming for both PhD graduate students and postdoctoral fellows: 1) Job Simulations 2) Employer Site Visits 3) Job Shadowing and 4) Internships. They compared learning objectives and evaluation strategies employed for executing each type of experiential learning. The authors also highlighted key factors for other institutions to consider if seeking to implement experiential learning activities into their trainees’ career development initiatives, including tapping into local expertise, geographic location, available staff time, alumni participation, faculty advocacy, and ineligible populations. The participating institutions concluded that experiential learning can vary greatly in size and scope of format as well as trainee time commitment and still remain effective. Yet, it is key to provide components of practical engagement and reflection to each activity, and to carefully evaluate their effectiveness. The overall goal of the publication is that by describing their experiences, these BEST institutions will have provided a framework to support others in the successful design and implementation of experiential learning programs for biomedical graduate students and postdoctoral fellows at institutions with a variety of needs and constraints.


This spring, nine different institutions, including Vanderbilt University, had a collaborative manuscript accepted for publication in CBE-Life Sciences Education titled Applying Experiential Learning to Career Development Training for Biomedical Graduate Students and Postdocs: Perspectives on Program Development and Design.

In this manuscript, the authors provided a cross-consortium comparison of the implementation and effectiveness of expanding experiential learning tools into a career development setting. They provided an overview of the four types of experiential learning approaches that their nine institutions have incorporated into programming for both PhD graduate students and postdoctoral fellows: 1) Job Simulations 2) Employer Site Visits 3) Job Shadowing and 4) Internships. They compared learning objectives and evaluation strategies employed for executing each type of experiential learning. The authors also highlighted key factors for other institutions to consider if seeking to implement experiential learning activities into their trainees’ career development initiatives, including tapping into local expertise, geographic location, available staff time, alumni participation, faculty advocacy, and ineligible populations. The participating institutions concluded that experiential learning can vary greatly in size and scope of format as well as trainee time commitment and still remain effective. Yet, it is key to provide components of practical engagement and reflection to each activity, and to carefully evaluate their effectiveness. The overall goal of the publication is that by describing their experiences, these BEST institutions will have provided a framework to support others in the successful design and implementation of experiential learning programs for biomedical graduate students and postdoctoral fellows at institutions with a variety of needs and constraints.
Alumni Relations, Outcomes, and Development

Alumni serve on the PhD Career Stories Medical Science Liaison panel in September.
The Office of Career Development engages biomedical PhD and postdoctoral alumni once they complete their training. 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.

### Alumni Relations, Outcomes, and Development

- **1,582** Number of Alumni Tracked in Outcomes Database
- **1,108** LinkedIn Group Members
  - Vanderbilt University Biomedical Research
  - Graduate and Postdoctoral Trainees & Alumni
- **1,031** PhD Student Exit Surveys
  - Administered to Date (2007 start)
- **54** Number of Alumni Participating in Programming

### Employment Location and Sectors of Biomedical PhD Graduates

July 2019-June 2020 Defense Dates

- **65% Acадemia**
- **26% For Profit**
- **11% Negotiating Position**
- **5% Government**
- **3% Nonprofit**

Data about first position after graduation is collected from our predoctoral exit survey. This year, 15 students were still negotiating their first position at the time they took the exit survey.

### Employment Role

- **58%** Postdoctoral Fellow
- **6%** Research Staff or Technical Director
- **5%** Data Science, Analytics, and Software Engineering
- **2%** Technical Support and Product Development
- **3%** Other
- **26%** Negotiating Position

### ASPIRE Endowed Fund

The ASPIRE Scholar Fund provides support for exceptional PhD graduate students and postdoctoral fellows to pursue experiential learning opportunities that further their career and professional development. This fund has recently been endowed, and the ASPIRE Team can now continue to provide further travel opportunities for ASPIRE Scholars.
Employer Relations and Workforce Development

Mock Interview Day, March 2020
This March, on the cusp of university shutdowns surrounding the Coronavirus pandemic, the BRET Office of Career Development ASPIRE Program executed the first ever Mock Interview Day. Registered graduate students and postdoctoral fellows were matched based on career interests for four rotations with alumni and Vanderbilt faculty volunteers. For 25 minutes, the interviewer asked questions and recorded their evaluations in a rubric, measuring their first impressions, the trainees’ oral responses to CV/resume-based questions, and how they described their research experience, communication skills, and readiness. There was a brief time of feedback before the interviewees rotated to a different interviewer.

Overall, the event was a huge success and one that the ASPIRE Program hopes to repeat in the future.

Look & Act the Part: Inaugural Mock Interview Day a Big Success

28 interviewers
19 alumni interviewers
9 VU faculty interviewers
8 postdoc interviewees
16 grad student interviewees
4 rotations
25 minutes of practice
5 minutes of feedback

“I thought this event was absolutely fantastic! I received helpful and constructive feedback that helped me improve my interview skills. This exercise also provided me a confidence boost that was very helpful in the real interviews I had later.”

“A few of my interviews turned into more of a networking opportunity. They suggested other people I should reach out to!”

“Getting feedback from interviewers for the particular position was invaluable. This never happens in a real interview, and they were particularly keen to do this since it was arranged that way. This was much better than a mock interview with a friend or colleague who may be an expert in something but not necessarily for the type of job you are applying for.”

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 biomedical trainees

Internship Hosts at a Glance

- Adventure Science Center
- Alzheimer’s Association
- American Heart Association of Middle Tennessee
- Belmont University
- Benioff
- Doris Duke Charitable Foundation
- Fisk University
- Harrow Health
- Health Research Alliance
- iQuity
- Life Science Tennessee
- Nashville Biosciences
- National Cardiovascular Research Foundation
- National Tuberous Sclerosis Alliance

Since the Internship Program inception in Fall 2015, the ASPIRE Program has had a total of 244 applicants (159 Graduate Students and 85 Postdocs) and had 125 trainees participate as interns (83 graduate students, 42 postdocs). Over this time, we have worked in partnership with a total of 33 different companies and non-profits who have hosted our trainees as interns.
Associate Dean Kathy Gould, PhD, presents at the ASPIRE Cafe for Postdoctoral Fellows on preparing for faculty careers.
**Campus Partnerships**

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.

- **28 Invited Campus Talks and Presentations**
- **26 Training Grant Sponsors for the 2020 Annual Career Symposium**
- **17 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 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
- Dean's Advisory Council for Mental Health and Wellness
- Cancer Education Advisory Committee, Vanderbilt Ingram Cancer Center
- Provost’s Women’s Initiative Subcommittee on Family Friendly Policies, Parental Leave, and Childcare at Vanderbilt

---

**Additional Campus Roles**

The ASPIRE Team served as Faculty or Staff Advisors to a number of campus organizations and initiatives:

- Vanderbilt University Advanced Degree Consulting Club
- Life Science Tennessee Academic Alliance
- Vanderbilt Science Policy Group
- Dean’s Advisory Council for Mental Health and Wellness
- Cancer Education Advisory Committee, Vanderbilt Ingram Cancer Center
- Provost’s Women’s Initiative Subcommittee on Family Friendly Policies, Parental Leave, and Childcare at Vanderbilt

---

**IGP and QCB recruitment**

IGP and QCB recruitment is a time for the Vanderbilt biomedical community to come together to showcase our strengths in graduate training. This extends beyond the strength of our research and curriculum to also include our nationally-leading ASPIRE program and team. Savvy prospective students understand that graduate school is just one step in their training and now look for support in planning, preparing, and gaining experience for their next step. We have one of the best career development programs in the country and are excited to show these mature candidates that we, too, are invested in their future.

In previous recruiting seasons, we have briefly described our ASPIRE program. However, this year, we were thrilled to host a leader from the ASPIRE team to present the program explicitly. It has become increasingly clear that providing the specifics of the opportunities would complement the remainder of our recruiting emphasis on dual strengths of research and personal development at Vanderbilt.

The feedback we received confirmed the impact of including the ASPIRE team on recruitment:

- “From the very first interaction with Vanderbilt, I felt like the experience was personal and it spurred a connection right away. I was blown away with the amount of resources for career opportunities … I felt like they had a genuine interest in me!”
- “Vanderbilt and the IGP stood out to me due to the abundant career development opportunities, kind and accommodating faculty … and helpful graduate students.”
- “The career development opportunities tipped the balance for me selecting Vanderbilt.”

IGP and QCB students benefit from ASPIRE, and emphasizing this program clearly enhances our recruiting efforts! We are excited to continue partnering together to strengthen the Vanderbilt community.
Collaborative Effort Between Drs. Schmitz, Gould, Petrie, and Wheeler Results in Module, Paper, Fellowships, and Funding

By Kate Stuart, Assistant Director, ASPIRE

The credentialing of PhD-scientists as medical directors of clinical laboratories is driven by formal postdoctoral training programs. Prior to acceptance in one of these accredited fellowships, however, a trainee’s exposure to the field can be far less standardized, with significant ramifications for their awareness of this career field and their competitiveness for it. The ASPIRE Program partnered with Drs. Jonathan Schmitz and Ferrin Wheeler to create the Clinical Laboratory Medicine module which combines both didactic and shadowing experiences for 6 trainees annually. For two hours a week for five weeks, trainees’ participation involves shadowing the diagnostic management teams who consult with physicians.

Launched initially in 2015, the module has been wildly successful, with many module alumni now employed in clinical lab medicine sectors including Sarah Cannon Research Institute, Kalsec, and Vertex. Six out of the 24 who have participated in the module have been accepted into the small number of available clinical laboratory fellowships across the nation.

Based on the ASPIRE module, the collaborators published an article in The Journal of Applied Laboratory Medicine describing the “experiences in developing local, institution-based immersion opportunities for PhD experiences in the subdisciplines of laboratory medicine (clinical microbiology, clinical chemistry, and molecular genetics/genomics).” Both the exposure to this career field as well as the shadowing experience of the module creates an opportunity that is both in-depth and mentor-facilitated. Alumna Allison Eberly, PhD, who participated in the Clinical Laboratory Medicine module, was accepted into the Clinical Microbiology Fellowship at the Mayo Clinic and was highlighted in the most recent issue of Results & Discussion. These collaborative efforts will soon provide an internship with Vanderbilt’s Clinical Laboratory Medicine team as part of Trans-Institutional Programs (TIPS) through the Vanderbilt University Office of the Provost.

Outcomes Team
The ASPIRE Team works closely with the BRET Office of Outcomes Research to understand our alumni outcomes and disseminate our research.
**Appendix**

### A1 Annual Career Symposium

**Choose Your Own Adventure: Exploring Careers in Industry**

**Keynote**

Lauren Celano, Co-founder and CEO of Propel Careers

"Navigating Career Opportunities and Optimizing Your Career Search"

**Panel 1**

Ben Doranz, PhD  
Managing Partner, Versant Learning Solutions

Becca Senter, PhD  
Senior Scientist, Pharmacyclics (an AbbVie company)

Brian Yaspan, PhD  
Senior Scientist and Innovation Advisor, Biological Technologies, Defense Advanced Research Projects Agency (DARPA)

Larry Zeitlin, PhD  
Director of Technology Development, Affinergy

**Panel 2**

Uade da Silva, MBA, PhD  
Associate Director, Global Regulatory Affairs, Merck

Kim Riley, PhD  
Senior Clinical Research Associate, PPD

Todd Townsend, PhD  
Regional Medical Scientific Director, Merck

Rebecca Dise, PhD  
Head of IP Operations Strategy and Manager Docketing, AstraZeneca

**Virtual**

---

### A2 Other Career Exploration Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Attendance</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 13, 2019</td>
<td>Coffee Chat with Alumna</td>
<td>19</td>
<td>Abby Olena, PhD, freelance science writer</td>
</tr>
<tr>
<td>November 2019,</td>
<td>c12 Lunches</td>
<td>4/each</td>
<td>Gary Nabel, PhD; Kayla Graff, PhD</td>
</tr>
<tr>
<td>February 2020</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>October 14, 2019</td>
<td>Role of an Editor: A Career Path Talk</td>
<td>42</td>
<td>Manuel Breuer, PhD, Journal of Cell Science</td>
</tr>
<tr>
<td>February 26, 2020</td>
<td>PhD &amp; Masters Virtual Career Fair</td>
<td>N/A</td>
<td>In partnership with the Graduate Career Consortium</td>
</tr>
<tr>
<td>May 15, 2020</td>
<td>Applying to the AAAS Science &amp; Technology Fellowship**</td>
<td>33</td>
<td>Amrita Banerjee, PhD, and Meagan Postema, PhD, recent VU PhD graduates</td>
</tr>
</tbody>
</table>

**Virtual**

---

### A3 PhD Career Stories

<table>
<thead>
<tr>
<th>Month</th>
<th>Topic</th>
<th>Attendance</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 23, 2019</td>
<td>Grant and Research Management</td>
<td>39</td>
<td>Jami Scheib, PhD, Science Officer, Ripple Effect, supporting the Congressionally Directed Medical Research Programs (CDMRP), USAMRMC</td>
</tr>
<tr>
<td></td>
<td>Networking Lunch with Dr. Scheib</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>September 6, 2019</td>
<td>Medical Science Liaison</td>
<td>65</td>
<td>Joseph Conrad, PhD, Regional Medical Scientific Director, Merck</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dawn Stults, PhD, Medical Science Liaison, Genentech</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oliver Vranjkovic, PhD, Medical Science Liaison, Myriad</td>
</tr>
<tr>
<td>October 18, 2019</td>
<td>Industry Research</td>
<td>72</td>
<td>Larry Thompson, PhD, Senior Principal Scientist, Pfizer</td>
</tr>
<tr>
<td></td>
<td>Lunch with Dr. Thompson</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>November 8, 2019</td>
<td>Patent Law</td>
<td>34</td>
<td>Seth Ogden, PhD, Shareholder, and Mark Kilgore, PhD, Associate, Patterson Intellectual Property Law</td>
</tr>
<tr>
<td>December 13, 2019</td>
<td>Academic Research</td>
<td>30</td>
<td>Anthony J. (A.J.) Baucum II, PhD, Assistant Professor, Department of Biology, Indiana University-Purdue University Indianapolis</td>
</tr>
<tr>
<td></td>
<td>Lunch with Initiatives for Maximizing Student Diversity Training Grant</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>January 24, 2020</td>
<td>Nonprofit/Fundraising</td>
<td>19</td>
<td>Janice Ascano, PhD, Director of Corporate and Foundation Relations for Scientific Research, Vanderbilt University</td>
</tr>
<tr>
<td>February 7, 2020</td>
<td>Defense and Intelligence</td>
<td>38</td>
<td>Jennifer Sparks, PhD, Deputy, Advanced and Emerging Threats Division, Chemical and Biological Technologies Department, Defense Threat Reduction Agency</td>
</tr>
<tr>
<td></td>
<td>Networking Lunch with Dr. Sparks</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Virtual**

---

### A4 Lab to Lunch

December 3, 2019  
Lab to Lunch: Business Savvy for Scientists  
Malika Williams, Founder of Excuse Me, Please Etiquette  
60 (capped)

---

### A5 Headshot Day

Headshot Day for:  
Participants | Date
---|---
Graduate Students | 32 | August 1, 2019
Postdoctoral Fellows | 28 | October 4, 2019
Graduate Students | 34 | December 4, 2019
Postdoctoral Fellows | 32 | March 5, 2020
### Enhanced Career Exploration

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Director</th>
<th>Participants</th>
<th>Frequency and Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Science Essentials</td>
<td>Mary van Valkenburg, Analytics and Data Science Program Manager, Instructor, Nashville Software School</td>
<td>15</td>
<td>August 2019-March 2020</td>
</tr>
<tr>
<td>Ashely Brady, PhD, Assistant Dean for Biomedical Career Engagement and Strategic Partnerships (Kate Stuart also assisted with sessions)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction to the Principles and Practice of Clinical Research (IPPCR)</td>
<td>NIH Clinical Center (VU BRET Office served as a registered remote site)</td>
<td>35</td>
<td>October, 2019-August 2020</td>
</tr>
<tr>
<td>Biomedical Research and the Media</td>
<td>Wayne Wood, MLAS, Executive Director of New Media Productions, VUMC News and Public Affairs</td>
<td>6 (capped)</td>
<td>8 sessions Sept 19-Nov 13, 2019</td>
</tr>
<tr>
<td>Clinical Microbiology: Applying Your PhD to Patient Care</td>
<td>Jonathan Schmitt, MD, PhD, Assistant Professor, Pathology, Microbiology, and Immunology, VUMC</td>
<td>6 (capped)</td>
<td>Individual Rotations Winter 2019</td>
</tr>
<tr>
<td>Management and Business Principles for Scientists</td>
<td>Joe Rando, MBA, Associate Professor of the Practice, Managerial Studies, Vanderbilt University</td>
<td>24</td>
<td>2 hours/week, 10 weeks Jan 15-Apr 15, 2020</td>
</tr>
</tbody>
</table>

### Essential Skill Building

<table>
<thead>
<tr>
<th>Title</th>
<th>Director</th>
<th>Participants</th>
<th>Frequency and Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating Effective Scientific Talks and Delivering Them with Confidence</td>
<td>Kathy Gould, PhD, Associate Dean, Biomedical Sciences</td>
<td>20 (full session)</td>
<td>3 sessions Sept 16-30, 2019</td>
</tr>
<tr>
<td>EQ + IQ = Career Success</td>
<td>Kate Stuart, Assistant Director, BRET Office of Career Development</td>
<td>13</td>
<td>6 sessions November 7-Dec 12, 2019</td>
</tr>
<tr>
<td>Networking Pacing</td>
<td>Ashley Brady, PhD, Assistant Dean for Biomedical Career Engagement and Strategic Partnerships</td>
<td>13</td>
<td>6 sessions September 24-November 19, 2019</td>
</tr>
<tr>
<td>Practical Strategies for Strong Writing</td>
<td>Beth Estes, PhD, Academic Support Coordinator, The Writing Studio, Vanderbilt University</td>
<td>14</td>
<td>3 sessions January 21, 28, and February 4, 2020</td>
</tr>
</tbody>
</table>

### Trainee Professional Development Additional Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Attendance</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 27, 2020</td>
<td>Making the Most of Your Presentation</td>
<td>25</td>
<td>Jean-luc Doumont, PhD, founding partner, Principae</td>
</tr>
<tr>
<td>March 9, 2020</td>
<td>Mock Interview Day</td>
<td>24</td>
<td>Various alumni, employers, and faculty</td>
</tr>
</tbody>
</table>

**Virtual**
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 20, 2019.

**ASPIRE Advisory Committee**

ROB CARNAHAN, PHD (Vanderbilt University)
MANNY ASCANO, PHD (Vanderbilt University)
SAM DOOVEMYA (Vanderbilt University)
DALE EDGAR, PHD (El Lilly, retired)
EFRAIN GARCIA, PHD (Health & Human Services)
BRIAN LADEN, PHD (Tristar Technology Ventures)
LORENA INFANTE LARA, PHD (Vanderbilt University)
INES MACIAS-PEREZ, PHD (Cumberland Pharmaceuticals)
ALAN MARNETT, PHD (Benchfly)

**Notes**

- **Virtual**
- **5/27/20**
- **12/4/19**
- **02/10/2020**
- **March 7, 2020**

**In the Press**

"Finding example F30, F31, and F32 NIH NRSA applications" Kim Petrie

**ASPIRE Blog (2020)**

"Tips for international postdocs on finding funding for your research." Kim Petrie

**ASPIRE Blog (2020)**

**Annual Report Contributors**

*Authors: Beth Bowman, Ashley Brady, Bill Snyder, Kate Stuart*

*Data contributions: Abby Brown and Janani Varadarajan*

*Designer: Kate Stuart*

*Photos contributed by: Ashley Brady, Kim Petrie, Kate Stuart, Marcie Kindred, Vanderbilt University*

**Conference Poster Presentations**


**Data Science Essentials Employer Case Sessions**

<table>
<thead>
<tr>
<th>Date</th>
<th>Company</th>
<th>Attendance</th>
<th>Speaker/Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 22, 2020</td>
<td>Data Science Nashville Meetup</td>
<td>11</td>
<td>Data Science Nashville</td>
</tr>
</tbody>
</table>

**Invited National and Regional Talks and Participation**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Presenter</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/2020</td>
<td>February 4, 2020 &quot;Career Resources at Vanderbilt University&quot; Fink to Vanderbilt Master's to PhD Bridge Professional Skills Forum Ashley Brady and Ruth Schemmer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09/2019</td>
<td>September, 2019 &quot;The Relationship between Mentoring and Graduate Student Outcomes&quot; AAMC-GREAT group Annual Meeting Seattle, WA</td>
<td>Abby Brown and Roger Chalkley</td>
<td>30</td>
</tr>
<tr>
<td>03/2020</td>
<td>February 12, 2020 &quot;Resumes and CVs for Industry, Academia, and Every Job in Between&quot; American Heart Association Annual Conference, Strategically Focused Research Network Nashville, TN</td>
<td>Ashley Brady</td>
<td></td>
</tr>
<tr>
<td>10/2019</td>
<td>October 21, 2019 Panelist &quot;2019 Research and Research Training Innovation Award Exhibit, featuring Data Science Essentials&quot; Association of American Medical Colleges Webinar</td>
<td>Ashley Brady</td>
<td></td>
</tr>
<tr>
<td>03/2020</td>
<td>March 7, 2020 &quot;Career Options for Scientists: Navigating Your Own Path&quot; Biomedical Sciences Graduate Student Association Career Symposium 2020 Orlando, FL</td>
<td>Ashley Brady</td>
<td></td>
</tr>
</tbody>
</table>

**Peer-Reviewed Publications and Books**


**Annual Report Contributors**

*Authors: Beth Bowman, Ashley Brady, Bill Snyder, Kate Stuart*

*Data contributions: Abby Brown and Janani Varadarajan*

*Designer: Kate Stuart*

*Photos contributed by: Ashley Brady, Kim Petrie, Kate Stuart, Marcie Kindred, Vanderbilt University*

**Conference Poster Presentations**


**Data Science Essentials Employer Case Sessions**

<table>
<thead>
<tr>
<th>Date</th>
<th>Company</th>
<th>Attendance</th>
<th>Speaker/Host</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 22, 2020</td>
<td>Data Science Nashville Meetup</td>
<td>11</td>
<td>Data Science Nashville</td>
</tr>
</tbody>
</table>

**Invited National and Regional Talks and Participation**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Presenter</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/2020</td>
<td>February 4, 2020 &quot;Career Resources at Vanderbilt University&quot; Fink to Vanderbilt Master's to PhD Bridge Professional Skills Forum Ashley Brady and Ruth Schemmer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09/2019</td>
<td>September, 2019 &quot;The Relationship between Mentoring and Graduate Student Outcomes&quot; AAMC-GREAT group Annual Meeting Seattle, WA</td>
<td>Abby Brown and Roger Chalkley</td>
<td>30</td>
</tr>
<tr>
<td>03/2020</td>
<td>February 12, 2020 &quot;Resumes and CVs for Industry, Academia, and Every Job in Between&quot; American Heart Association Annual Conference, Strategically Focused Research Network Nashville, TN</td>
<td>Ashley Brady</td>
<td></td>
</tr>
<tr>
<td>10/2019</td>
<td>October 21, 2019 Panelist &quot;2019 Research and Research Training Innovation Award Exhibit, featuring Data Science Essentials&quot; Association of American Medical Colleges Webinar</td>
<td>Ashley Brady</td>
<td></td>
</tr>
<tr>
<td>03/2020</td>
<td>March 7, 2020 &quot;Career Options for Scientists: Navigating Your Own Path&quot; Biomedical Sciences Graduate Student Association Career Symposium 2020 Orlando, FL</td>
<td>Ashley Brady</td>
<td></td>
</tr>
</tbody>
</table>

**Peer-Reviewed Publications and Books**


**Annual Report Contributors**

*Authors: Beth Bowman, Ashley Brady, Bill Snyder, Kate Stuart*

*Data contributions: Abby Brown and Janani Varadarajan*

*Designer: Kate Stuart*

*Photos contributed by: Ashley Brady, Kim Petrie, Kate Stuart, Marcie Kindred, Vanderbilt University*
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

<table>
<thead>
<tr>
<th>Role/Title</th>
<th>Company/Event</th>
<th>Attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adventure Science Center</td>
<td>2 TWISTER Interns</td>
<td>53</td>
</tr>
<tr>
<td>Alzheimer's Association</td>
<td>2 Advocacy Ambassador Interns</td>
<td>N/A</td>
</tr>
<tr>
<td>American Heart Association of Middle Tennessee</td>
<td>2 Health Strategies Interns</td>
<td>95</td>
</tr>
<tr>
<td>Belmont University</td>
<td>2 Teaching Interns, Anatomy and General Biology</td>
<td></td>
</tr>
<tr>
<td>Benchfly</td>
<td>1 Research Management Intern</td>
<td></td>
</tr>
<tr>
<td>BioCentury, Inc.</td>
<td>3 Data Analyst Interns</td>
<td></td>
</tr>
<tr>
<td>Doris Duke Charitable Foundation</td>
<td>1 Scientific Peer Review Management Intern</td>
<td></td>
</tr>
<tr>
<td>Fisk University</td>
<td>2 Teaching Intern, Biochemistry I and General Biology Lab</td>
<td></td>
</tr>
<tr>
<td>Harrow Health</td>
<td>4 Pharmaceutical Sciences Interns</td>
<td></td>
</tr>
<tr>
<td>Health Research Alliance</td>
<td>3 Program Coordinator Interns, HRA Members’ Meeting (1), Biomedical Nonprofits’ Professional Meeting (1), NFRI Partnership (1)</td>
<td></td>
</tr>
<tr>
<td>iQuity</td>
<td>4 Research Interns, Bioinformatics and Data Science</td>
<td></td>
</tr>
<tr>
<td>Life Science Tennessee</td>
<td>1 Programming and Policy Intern</td>
<td></td>
</tr>
<tr>
<td>Nashville Biosciences</td>
<td>5 Interns, Business Development (1), Bioinformatics (1), Scientific (1)</td>
<td></td>
</tr>
<tr>
<td>Objective GI</td>
<td>2 Clinical Registry and Data Science Interns</td>
<td></td>
</tr>
<tr>
<td>Sarnoff Cardiovascular Research Foundation</td>
<td>1 Meeting Program Coordinator</td>
<td></td>
</tr>
<tr>
<td>Tuberous Sclerosis Alliance</td>
<td>1 Academy Project Intern</td>
<td></td>
</tr>
</tbody>
</table>

### Externship Opportunity

<table>
<thead>
<tr>
<th>Externship Opportunity</th>
<th>Recipients</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAAS Annual Meeting (Washington, DC)</td>
<td>1 Graduate Student</td>
</tr>
<tr>
<td>Amgen Postdoc Day (Boston, MA)</td>
<td>1 Graduate Student</td>
</tr>
<tr>
<td>From Academia to Industry: An Amgen Perspective (Cambridge, MA)</td>
<td>2 Graduate Students</td>
</tr>
<tr>
<td>Health Research Alliance Members Meeting</td>
<td>1 Graduate Student</td>
</tr>
</tbody>
</table>

**Three additional externships were scheduled but cancelled due to Coronavirus.

### New Postdoctoral Mentor Lunches

<table>
<thead>
<tr>
<th>Lunches with Kathy Gould and Roger Chalkley</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 26, 2019</td>
<td>November 8, 2019</td>
</tr>
<tr>
<td>September 6, 2019</td>
<td>December 13, 2019</td>
</tr>
</tbody>
</table>

**Virtual