The 7th Biennial Symposium of the Biotechnology Training Program (BTP) will be held on Thursday, November 10th, 2016 in UVa’s Newcomb Hall. The theme of “Tomorrow’s Medicine Today: Biotechnology's Next Frontier,” will offer a diverse and multifaceted view of some of the challenges and benefits of translating academic research into real world medical devices and therapeutics. Subthemes span cellular, tissue and whole organism scales (see illustration). The Symposium comprises a full day of talks, panel discussion, and a student poster competition. Breakfast and lunch will be provided. BTPer Kellen Chen and BTP faculty Kyle Lampe co-chair the BTP Symposium Committee. Also serving on the committee are BTPer’s (*some now graduated) Arch Creasy, Dan Nelson*, Phil Yen, Jaymes Beech*, Anna Blazier, Joanna Adadevoh, Kelly Drews, Ali Harris, Alex Keller and Maria Ali. Other BTP faculty on the Committee are: Mazhan Adli, Hui Zong, Jill Venton, Mark Kester and Chris Deppmann.
Editor’s Spotlight

Diversity is the sum of our individual differences. By bringing together people of different backgrounds, the scope of what is possible in Science and Engineering is significantly broadened and enhanced. Ground breaking discoveries are seeded and collaboration and innovation nurtured. Major funding sources now encourage and even require applicants to include a statement on diversity, and the broader impacts of their research. Expanding diversity is a very high priority of the BTP. With the enthusiastic help of UVa’s Director of Diversity Programs, Keisha John, the BTP organized the 2015 annual Biomedical Sciences (BIMS) Diversity Day, attracting underrepresented minority undergraduate students from the University of Maryland, Baltimore County and from North Carolina A&T University.

Inclement weather interfered with travel of students from Hampton and Norfolk State Universities. Students learned about day-to-day life in a research intensive university from a variety of UVa students and faculty.

One month before, the BTP visited Gallaudet University to expand outreach to the hearing disabled. Via a translator, BTP Director Gordon Laurie and Program Administrator Mary Hall provided background on the BTP and BTPers Kelly Drews, Matt Biggs and BTP alum Dan Nelson (’15) presented their research.

The BTP offers a science outreach program to in state and out of state MARC programs that features a lecture pool of senior BTP mentors. Several gave talks over the past year.

BTP mentors Andreas Gahlmann and Gordon Laurie are members of Keisha John’s Mentoring Institute in which an entering student of diversity is matched with a supportive faculty mentor. This arrangement seeks to ease the transition into graduate school, and offer a source of guidance and advocacy through graduate training and potentially beyond.

In summary, our program values diversity and does a great job fostering a collaborative and inclusive environment for all. We celebrate our 67% diverse 2016 entering class, and are committed to further enhance diversity in the graduate biomedical and engineering sciences.
BTP Industry Panel
Laryssa Manigat, 3rd year graduate student in BIMS
The 2015 Biotechnology Career Panel was a Q&A session in which professionals from various sectors of industry with differing backgrounds shed light on their career success, and what paths led them there. Panelists included David Edge, PhD (Merck), BTP alum Caren Petrie Aronin, PhD (Wilson Sonsini Goodrich & Rosati), Anna Pomes, PhD (INDOOR Biotechnologies), Ed Ramos, PhD (NIBIB), Thomas Thorpe, MBA (Afton Scientific) and Sue Yi, PhD (Syngenta). All UVa science students and postdocs were invited. The event was particularly helpful to BTP students such as myself, who are unsure where our interest in biotechnology will take us, and what career paths are available.

The panel explored a range of options. Panelists were mostly from the Mid-Atlantic region and represented Big Pharma, the NIH, agribusiness, a patent law firm, as well as two smaller biotech companies. The dynamic of the panelists made the event highly engaging and interactive.

Following the event, BTP students met privately with panelists over lunch. Students left the event with a broader appreciation of the utility of Ph.D. training, perhaps following the career footsteps of our panelists.

BTP Student Seminar
Each year student members of the BTP Seminar committee invite outside speakers to visit and discuss their research or contribution to the field of biotechnology, or both. Serving on the committee in 2015 were Mahmoud Saleh (3rd year, Microbiology, Immunology, and Cancer Biology) and Bryan Chun (2nd year, Biomedical Engineering). Mahmoud and Bryan invited Dr. Charles Gersbach, Rooney Family Associate Professor of Biomedical Engineering from Duke University, who spoke on his p and lunched with BTP students. The seminar was a shared event with Biomedical Engineering. Dr. Gersbach also talked about the Southeast Biotechnology T32 Career Workshop (see next page).
Southeast Biotechnology T32 Career Workshop
Matthew Biggs, 5th year graduate student in Biomedical Engineering

Charles Gersbach, Associate Professor of Biomedical Engineering at Duke University, hosted the first annual ‘Southeast Biotechnology T32 Career Workshop’ June 16 – 17, 2015. BTP students from Duke, NC State, UVa, and Georgia Tech participated. I attended not really knowing what to expect, but hoping I could get some good tips and make new connections. The event ended up being really fantastic and valuable. At its core, the Workshop consisted of a slate of speakers from the biotech industry who shared their career paths, highlighting the reasons they made certain decisions and summarizing their experiences into a few pieces of advice. The advice they gave was helpful both from “what’s it like to do your job?” and “how do I figure out what I want to do?” standpoints. Barbara Gerratana, NIH Program Director of all BTP’s nationwide (former tenured professor at the U. of Maryland) spoke, as well as Laura Hagerty, Program Officer at the Muscular Dystrophy Association. Laura has worked at both tiny and enormous biotech companies. We also heard from Barry Myers, who is the only PhD, MD, MBA I’ve ever met. He had great advice about career transitions and networking. Other speakers included Lucinda Camras and Derek Jantz, both of whom founded and continue to operate successful biotech companies. We heard from Ali Behbahani, a venture capitalist, and Charles Anamelechi, who works as a consultant with Deloitte.

There are too many bits of advice to share here, but there were some broad themes that came out of the many stories people told. The most prominent is to build and leverage your network. That means cultivating real relationships. Regularly take the time to get to know people. Be interested in them and be helpful to them. Keep in touch with them in natural ways. Another theme was to be flexible and be willing to seize unexpected opportunities. Most of the speakers built their careers on unforeseen opportunities and are in positions now that, as students, they didn’t even know existed. Finally, you are a free agent, so don’t think of yourself as under the care of an organization. You take initiative to follow your interests, to make connections, and to seize opportunities.

We practiced elevator pitches, toured a local biotech company (Precision Biosciences, which had a really beautiful space in a converted tobacco warehouse), and networked with the speakers and other students. Overall, I would strongly encourage all to attend this event in the future, regardless of your specific career goals.
BTP Day of Caring

2015 BTP Students after Day of Caring Volunteering.

BTP Trip to Gallaudet University

Matthew Biggs, Kelly Drews, 3rd year graduate student

A small group of graduate students went on a recruiting trip to Gallaudet University at the end of September, 2015, accompanied by the BTP Director and Program Administrator. Gallaudet is a school for the hearing disabled located in Washington D.C. We met with a group of undergraduate students in different science programs and presented slides about our backgrounds and current research at UVA. Two American Sign Language translators helped us to convey our messages (not surprisingly, the science jargon was a little bit difficult to translate), and we received good questions from students in attendance. For me, the most interesting part was the tour of their facilities. All of their laboratories were designed using DeafSpace principles. That means better lines of sight between desks and lecturers, and between lab benches. The colors are all muted to be easier on the eyes, and alerts are made more visual (flashing lights rather than beeps). They have several recently renovated lab spaces which are used for both teaching and research. I was impressed with the students we met and the university as a whole. Visiting Gallaudet was a wonderful experience that enabled us to share our research at UVA with an eager crowd of university students. Each of us provided a short Powerpoint presentation on our work and answered questions. Students asked about our research, our field, life as graduate students, and UVa in general. When we arrived we were a bit unsure as to how interested the students would be or if any of them had considered graduate school. I remember in particular one or two of the students had very insightful and persistent questions about our research, and stayed afterwards to discuss possibilities for deaf students to earn their graduate degrees at UVa. Looking back I feel lucky to have had a chance to participate in such a unique and effective outreach program through the BTP. I’m hoping to go back to Gallaudet in the coming years and continuing to share my experiences at UVa with their students.

The annual BTP Day of Caring is a community service project organized with the United Way in which old and new BTP’ers work together towards a common community improvement goal. Past activities include trail building, mulching and improvement of a day care. In September 2015, BTP’ers assisted residents of the Cedar’s retirement home in several hours of bingo. The residents and staff had taken bingo to a new competitive level and enjoyed the visit. We had fun playing, and were very appreciative of the time spent there. This event was organized by BTP student Anna Blazier (4th year, Biomedical Engineering).
2016 UVA BIOTECHNOLOGY TRAINING PROGRAM NEWSLETTER

2015 BTP Appointees

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Princeton University, Molecular Biology
PhD Department: Biomedical Engineering, Saucerman Lab

Kelly Drews
Virginia Polytechnic Institute and State University, Biology, Biochemistry, History
PhD Department: Pathology, Kester Lab

Alexandra Harris
University of California, San Diego, Biochemistry, Cell Biology
PhD Department: Pathology, Munson Lab

Alexander Keller
Duke University, Environmental Science
PhD Department: Physiology, Isaakson Lab

Laryssa Manigat
Northeastern University, Behavioral Neuroscience
PhD Department: Pathology, Purow Lab

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PhD Department: Biomedical Engineering, Papin Lab

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PhD Department: Microbiology, Immunology, Petri Lab

2016 BTP Appointees

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PhD Department: Biology, Kucenas Lab

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