

FC708 Professional Development Skills

Panel discussion: Careers in industry

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Scientists gain indispensable problem-solving skills throughout their PhD training, which enables them to craft targeted research questions and implement cutting-edge approaches to confront those challenges. This certainly holds true for biomedical PhD students as they learn how to experimentally understand the mechanisms that cause disease and design interventions to prevent or cure them. After committing the better part of a decade to this training, students are often unaware of how they can apply their learned skills in a variety of professional environments. It is important for trainees to recognize that their training imbues them with a host of transferable skills that can be applied to different career paths where they can have a great impact.

Organized by Boston University's Broadening Experiences in Scientific Training (BU's BEST), the panel discussion held on March 2nd, 2022 featured BU Graduate Medical Science (GMS) alumni pursuing various careers in the pharmaceutical/biopharma industry sectors. Two panelists were recent BU Ph.D. graduates: **Dr. Kimberly Barker** (GMS'21), Scientist of Immunology and Oncology at Bristol Myers Squibb and **Dr. Xavier De Luna** (GMS'21), Postdoctoral Virology Researcher at a rapidly growing startup company called Pine Tree Therapeutics. The other two panelists were further along in their careers: **Dr. Dorothy Pazin** (GMS'10), Project Alliance Manager at the Broad Institute of MIT and Harvard, and **Dr. Thomas Richardson** (GMS'00), President at the Institute for Life Science Entrepreneurship and Founder and CEO of Plumeria Therapeutics Incorporated. **Dr. Barbara Schreiber** (GRS'81), Associate Professor of Biochemistry, hosted the discussion.

The discussion provided advice for students to consider as they navigate their Ph.D. training should they decide to pursue an industry career. Developing effective oral communication skills was emphasized as critical to industry employment. The ability to distill the main concepts of complex problems into concise statements sprinkled with facts directly demonstrates how well a scientist can communicate, which is invaluable in building a successful career. The importance of writing skills was also a common topic throughout the discussion. All panelists confirmed that writing is a core competency in some aspect of their job. As a co-founder and CEO, Dr. Richardson is constantly involved in writing grants to external firms to invest in his work. Dr. Pazin often records and summarizes the project deliverables, expectations, and statuses that she manages and coordinates both internally and externally. Dr. De Luna and Dr. Barker both use writing to organize and translate data into key outcomes and future directions for their managers. Dr. De Luna added that carefully articulating data through writing is just as important for negative data as it is for positive data, especially within a startup company where every decision profoundly impacts company growth.

Dr. Richardson described the importance of using emotional intelligence in paying thoughtful attention to how others prefer to communicate to convey information

effectively. He continued to advise that effective communication involves active self-reflection with the goal of “owning the information”. Dr. Pazin also stressed the importance of timing and content in communication. She maintains that staying targeted and adjusting to others’ needs will maintain alliances and streamline progress across a wide range of projects and collaborators, which can be applied to nearly any role in industry.

Two of the panelists chose to stay closer to science and are actively working at the bench, highlighting the importance of mastering technically difficult experimental skills and analytical techniques while still in graduate school. Dr. Barker’s scientific role at Bristol Myers Squibb involves mainly benchwork as she leads pioneering cell therapy discovery projects. Dr. De Luna’s daily roles also require a lot of benchwork while also advising former oncologists about his expertise in the infectious disease space, an opportunity that he says is unique to a startup company environment. Even though technical skills are important to build during graduate school, the panelists encouraged training scientists to look past any technical shortcomings when applying for jobs, instead emphasizing their ability to quickly learn new skills. Dr. Pazin and Dr. Richardson stressed that when hiring, they look for a good personality fit, for those who can think critically, are enthusiastic and collaborative.

The panelists also stressed that trainees should stay open-minded and constantly, fearlessly reflect on how a particular role satisfies any career goals. They also advised students to consider their preferred work-life balance and how this may differ over time. Ultimately, each scientist should stay curious and keep exploring their career interests even after exiting graduate school.

The industry career panel offered by BU’s BEST provided insight into the industry-oriented side of science. The panelists generously gave their time and effort in explaining the broad opportunities provided by an industry career path. Students left the discussion with a detailed perspective on industry career options and how best to explore them.

All of the panelists have graciously agreed to distribution of their emails so trainees can follow up with them; Dr. Barker (kbfh2882@gmail.com), Dr. De Luna (xdeluna@bu.edu), Dr. Pazin (dorothy.pazin@gmail.com) and Dr. Richardson (trichardson@ilsebio.com).

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