The career development seminar this month focused on careers in project and product development. The panel included specialists from both industrial and academic backgrounds who progressed to positions at both small and large biotech companies. Those who presented had careers including marketing (promoting current products to consumers), new product development (creation of new products to streamline a current process), establishing biological banks (creation of new antibody lines), and working as a team lead at small startup companies. They also went into how this differs from work in academia or at large corporations.

The panel started off with its first speaker, Dr. Matthew Rittler. He started as a graduate student at Virginia Tech and continued his education as a postdoc at the National Cancer Institute in the lab of Dr. William Stetler-Stevenson with a focus on anti-angiogenic therapeutics. After his postdoc, he joined a small biotech company, Amplimmune, as a protein purification scientist. He was later appointed as the downstream technical lead of new product development. He specializes in protein purification, downstream protein production, and protocol management, though this is not what he originally specialized in during his postdoc. He stressed the importance of being willing to expand into new areas rather than focusing only on a niche, which is what he attributes to acquiring his position at Amplimmune. In order to succeed in industry, the ideal applicant is open to new experiences and is not afraid to try new things. Those who choose biotech, especially small biotech companies, should start early by investigating the skill sets needed by their company of choice and begin expanding their expertise into new areas. Dr. Rittler also made it clear that networking is an essential part of obtaining and maintaining a career in product development. In 2014, Dr. Rittler joined Mount St. Mary’s as the director of the Biotechnology and Management program, which specializes in helping students transition from an academic to industry career.

Our next panelist was Dr. Jonathan Shaffer, a Senior Scientist and Product Developer at Qiagen. He attended the University of Pittsburgh School of Medicine where he received his PhD in biochemistry and molecular genetics. He completed a postdoc at a small biotech company, SABiosciences, where he developed products that assess protein expression and epigenetic modifications. When SABiosciences was purchased by Qiagen, he became a senior scientist and product developer at Qiagen’s research and development division with a focus on products that assess miRNA expression and function, very different from how he started at SABiosciences. He had several key pieces of advice to offer to those interested in a career in industry and product development. First, be sure to develop a broad technical skill set. Knowledge of several techniques will ensure that no matter what project you are put on, you will be prepared for it. Secondly, you have to pay attention to (and be intrigued by) detail and be creative! You will be working on new products, which takes some imagination and detailed expertise. Thirdly, be engaged and persistent, stay current on research and maintain contacts. Since the majority of work in product development involves teams, maintaining a positive attitude and showing interest in
the project is encouraged. Finally, the ideal candidate should develop “focused flexibility”, or the ability to be focused, but flexible enough to transition to other projects if needed.

Our third speaker was Dr. Vinodh Kurella, Senior Scientist at Intrexon Corporation. He was a graduate student at Louisiana State University Health Sciences Center and completed his postdoc at the Dana Farber Cancer Institute at Harvard Medical School. During his time there, he specialized in antibody engineering and design using computational modeling followed by experimental validation. While completing his postdoctoral studies, he was involved in teaching a self-developed bioinformatics course, which later, when presented at a national conference, secured him the contact at Intrexon he needed to become one of their senior scientists. His suggestion for succeeding at obtaining a biotech career is to get involved in things outside the lab. Involvement with groups unrelated to your current research broadens your background and increases your exposure to new people.

Our final speaker of the seminar, Dr. Raed Samara, obtained his PhD at Georgetown University in tumor biology and completed his postdoc at the National Cancer Institute (NCI). During his time at NCI, Dr. Samara was very involved in many activities outside the lab such as career development committees and networking. Near the end of his postdoc, he was contacted by a Qiagen scientist who had previously been asked to NCI by Dr. Samara to give a talk. Through his networking efforts, Dr. Samara is now a global product manager at Qiagen. He began at Qiagen as a project manager, in which he was responsible for getting products from the bench to the customer. This involved pushing projects forward, keeping track of timelines, and keeping teams moving towards completion. After a few years as project manager, he had the opportunity to shadow and learn from a product manager, which later helped him to transition into that position. As a product manager, his focus is on marketing activities, including conceptualization of products, determining customer requirements through contact with the current market, defining customer needs and implementation of new products to enable sales. He is also responsible for launch of new products and day to day support of current products.

Take-home messages:

1. All speakers agreed that flexibility and being comfortable with change is essential to increasing an applicant’s desirability to biotech companies big and small. In industry settings, projects are often started/cancelled in a matter of months, and those scientists who have the ability to adapt and pick up new techniques quickly will have the most success. When starting a postdoc, acquire a position with a good mentor who will encourage you to learn multiple lab techniques during your time with them. When applying, it is important to convey this ability in your C.V. by including experiences and papers that show technical flexibility.

2. Start early. Browse company websites to determine what positions you are interested in. Then begin working on techniques that will help you fit the role they are searching to fill. Read the descriptions carefully to ensure that you are meeting all the criteria for your dream job. It is never too early to start building your C.V.

3. Get involved in activities outside the lab. There are many committees and groups at NIH and in the community that will help to increase social skills and expose scientists to other areas.
speakers agreed that it is harder than ever these days to get jobs in companies due to larger numbers of postdocs applying to these positions. Showing them that you can interact with others from different backgrounds is key to standing out from the crowd and being able to function in a team setting in product development.

4. Network, network, network! Attend seminars and connect with the speakers. Ask for their cards in order to keep in contact. Every few months contact your speakers to touch base or to invite them for more talks. Build relationships with people inside the career track you wish to pursue so that when you are ready, you will already have people to contact within your preferred company.

5. Be friendly! In product development, the majority of work is done in teams. Companies need people who can work well with others and who are pleasant to be around. Ultimately this will be conveyed during the interview, so be happy, shake hands, and smile!

6. Choose a career in biotech/product development for the right reason. Many companies have employees who may work up to 70-80 hours a week, about half of which is taken up by teleconferences, meetings and other non-bench work. There is also significant time applied to laying out research plans and to accounting for time worked. If you are more of a bench scientist, you may not be happy in a non-bench environment. Take all of this into consideration before making a choice to transition into industry and project or product development.