

# Eli Nichols' Experience as Director of Design for EG-GILERO



MEMP Alumnus

2007

By Kyle Hamilton



**E**li Nichols graduated from the MEM Program in 2007, and is currently working as the Director of Design at EG-GILERO, a biotech consulting company that is a single-source for design, development and manufacturing. Eli received his Bachelor of Science in Mechanical Engineering from Duke University and was in the 4+1 program, entering the MEM Program immediately following his bachelor's degree. During his time at Duke, he was also a member of the football team. His past experiences include pursuing entrepreneurship and design engineer roles within EG-GILERO.

**“Can you tell me a little about EG-GILERO and what the company does?” asked Kyle.**

“With our roots stemming from GILERO Biomedical, founded here in RTP in 2002, we are a full-service company in the medical device industry that works with anyone looking to take a product beyond napkin sketch. Essentially, we are a consulting firm specifically geared towards supporting medical device design, development and manufacturing efforts of companies of any size, doctors, and inventors. Our Research Triangle Park location is relatively small, with around 20 full time employees. Since the merger with EGI, Inc. and Medacys in early part of 2015, we now have a large manufacturing footprint, with five plants along the East coast and one in Shenzhen, China. We’ve also expanded our medical device design to Columbus, OH. This merger has allowed us to transition into including Manufacturing and Tooling services to our clients. In the past, we worked with external contract manufacturers to provide this service if our clients were seeking it, whereas now we can do manufacturing in house. This “one stop shop” model allows for a more efficient transfer from Design & Development into Manufacturing. Our primary business model is contracting with OEMs to design and manufacture finished goods, the OEMs then distribute product to end users. Working for EG-GILERO provides the unique opportunity to see a vast array of medical device products in a relatively short period of time because of the services we provide.”

**“Could you tell me about the culture of EG-GILERO and how it might differ from one of the "big name" medical device companies?”**

“I think the biggest differentiators, and what provides the most value to our customers, are that we work for our clients on a time and materials basis and our stable but responsive size. Because of this, it forces us to be hyper-efficient with our time and resources in order to provide deliverables based on the customer’s outlined budget and goals. Another benefit to our customers is our agility. Our ability to iterate quickly allows us to execute on timelines that might not be possible at large company. On the other hand, this culture can create unique challenges, as every minute working on a project counts. We spend a lot of time working on proposals and making sure our budgets and timelines are competitive, but achievable prior to presenting.”

**“What were some courses you took while in the MEM program that you think were most beneficial to your career path?”**

“I think the core business courses that are part of the curriculum were a wonderful exposure to the different aspects of what it takes to make a company function. The law course, and especially section on IP law, was very helpful. There is a lot of IP generation in the med device field, and that course provided a great introduction to patent law. The operations management course was beneficial as well, because a large portion of the products EG-GILERO designs is high-value injection molded components with massive volumes, so that ends up playing a large role on design decisions. The core management course was very important in its application to my current role, and prepared me well. Some of the courses I would have liked to take while I was at Duke, but didn’t have a chance to, were Project Management and Commercializing Technology Innovations.”

**“As the Director of Design, what characteristics and experiences are you looking for in new talent to join your team?”**

“For the RTP team specifically, we look for the design minded people and project manager types that have great attention to detail. Attention to detail is important in our business given the pace at which we work. Relevant work experience becomes a large factor for hiring decisions, and this will typically weigh heavier than coursework alone. To add to this, research work with a university can show initiative and interest, but it is still no substitute for practical knowledge and application of material covered in the classroom. Internships are a great way to gain this experience, especially those in line with EG-GILERO’s day to day activities, such as CAD work, mechanical design, and working with injection molded medical device components. Technical writing, including proposals, test protocols, test methods, and test reports, are also a core activity in our company. Within EG-GILERO, we essentially have 2 main job categories: design engineers and product development engineers; however we are beginning to look for more dedicated project managers.”

**“What are the day-to-day activities like as the Director of Design in a biotech company?”**

“My primary role at EG-GILERO is making sure that designs that go out our door solve the right problem, the right way. This involves a lot of one-on-one collaboration to solve problems. A lot of my work revolves around participating in brainstorming sessions. A crucial aspect of this is making sure you are asking the right questions of your design team to better help them solve the problem at hand. Some of these questions revolve around product cost, manufacturability, regulatory concerns, and material properties. I like to see myself as an “engineer coach.” I am very knowledgeable of all team members’ strengths and weaknesses, and I regularly work closely with our Director of Quality & Operations to make sure everyone is staying busy with tasks properly matched to their skillset on a daily basis. Some of my daily tasks pertaining to our ongoing projects include project management, creating and maintaining project timelines with Gantt charts, and coordination of outside resources.”

**“What are the biggest challenges you encounter with this role in the biotech industry?”**

“Seeing that we support a fairly specific niche of the market, most of the challenges I face are driven by customers and internally. One of the biggest challenge I face as the director of design is recognizing employee strengths and weaknesses. For example, a very detail-oriented person might not be best suited for a task that involves early concept development. A project budget can really be negatively impacted if I improperly allocate resources or combine the wrong personality types and skills on a single team. Solving challenging design problems is in our DNA, so we do a pretty good job with that. The merger has increased the number of manufacturing transfer projects we see, and those have proven to be more of a challenge. Setting up a robust, efficient manufacturing process to meet the product requirements for new, innovative design is definitely a tough challenge.”

**“Where do you see yourself going from here?”**

“For the foreseeable future, I see myself taking on more responsibilities here at EG-GILERO help continue to grow and develop my skills along with our company. EG-GILERO provides a great environment to learn all aspects of the product development life cycle. Near term, we have multiple large full development projects, which should each provide their own unique challenges. Long term, I think I’d like launch my own medical device and build a business around it. I dabbled with this unsuccessfully prior to coming to EG-GILERO, but it is something I would like try again at the right point in my career.”