

Case Study:

SwitchBack Systems



Mary Noe, PhD
SwitchBack Systems



Paul Conley, PhD
General Inception

Mary Noe was obsessed with DNA synthesis for over 25 years, as an undergrad, graduate student, and during her work in the biotech industry. Her goal became how to design and build a tool to make the best DNA synthesis in the world. Mary saw the biology revolution coming and what was needed to achieve its promise. “Every platform I was working on was not scalable to meet the future market need,” she said. Mary knew what approaches to DNA synthesis worked and didn’t. She leveraged her understanding to create a scalable, cost efficient, new DNA synthesis platform.

MARY NOE, PHD

How did you connect with GI?

I met General Inception through Tim Richardson. Our mutual friends were trying to recruit us to start a company with them.

I wanted to do my own thing. I have been working in DNA synthesis for 25 years and knew that a scalable modality was essential to meet market needs. But I didn’t know how to start a company.

Tim suggested I meet Paul Conley.

PAUL CONLEY, PHD

How did GI identify the opportunity?

I had been talking to Tim Richardson for a while about starting General Inception and what we were trying to create - a new company to help build new companies. Tim had been hanging out with Mary and other folks from Twist. I had worked with Tim and trusted his instincts.

He told me Mary had promising technology and was the type of entrepreneur I had described as perfect for the GI model.

MARY NOE, PHD

What were the compelling reasons to partner with GI?

Through the grapevine I heard about Paul. Everyone raved about his knowledge of the biotech industry and his personality as a collaborative, great guy.

I finally met him in person at SynBioBeta 2019, right before COVID. He was laser focused on starting GI and his idea around a new way to start companies.

I had tinkered around with the idea of starting a company before. There are certain phenotypes of investors - angels have cash but no experience, Tech VCs might understand company building but not the specific challenges of biotech. I needed help with the industry aspects as well as the business building aspects of starting a company.

Paul has built companies before, he has a track record in the industry and a network in the community. He knows how tough it is and has the network of people to build things right. Being able to tap into Paul’s experience and network was essential. He brings it all to the table.

PAUL CONLEY, PHD

What were the compelling reasons GI wanted to partner with Mary?

I had been working on formulating the General Inception model. When I met Mary, she and her innovation were a bullseye for our first company.

It was obvious that Mary knows her craft. But she was alone. She expressed frustration working in other people’s startups but she was staring into the abyss regarding how to launch her own venture.

I wanted companies at GI to be founded with extraordinary scientists. She fit the bill perfectly. Mary has spent most of her career working in the same industry - molecular chemistry, electrochemistry, chemical synthesis and DNA synthesis. She also was trained by Marvin Caruthers, a leader in the space.

Mary also could really benefit from our approach and offerings at GI. She didn't have business experience, but she knows how to take in new ideas and explain her science to business people. We knew she could benefit from our infrastructure and leverage it. She was way too early for traditional VC, so lined up perfectly with our rubric.

Most importantly, Mary is a great person and eager learner. She wanted to create something new and was ready to work to create it correctly from the start with a collaborative culture.

MARY NOE, PHD

At what point in the SwitchBack journey did GI join?

Before SwitchBack was a company, before I knew what a pitch deck was, Paul and GI jumped in. All I had was an idea on a single slide.

Paul mentored me from the start. It was the early days of GI so we were both figuring out how to do what we were doing together. I met with Paul weekly doing pseudo pitches. He taught me a ton, sharing his knowledge of the industry. He helped me write the investment memorandum and the team performed IP searches before my company was even a company.

I saw the biotech revolution was coming and knew DNA synthesis was a key component in future discovery and development. I wanted to develop the world's best scalable and cost efficient DNA synthesis platform to meet the market need. Paul understood and supported this vision.

PAUL CONLEY, PHD

At what point did GI join SwitchBack?

I met Mary when she had a great idea backed by exceptional experience. I felt GI had the skills and know-how to match her experience. We had deep experience in the technology and the market opportunity she wanted to tackle. We could understand her idea and we knew people to bring on and immediately validate her approach.

We were able to dig into our toolbox to put people and equipment in early to retire risk.

MARY NOE, PHD

How has the partnership experience been for you?

From the beginning, Paul and the GI team have been mentors, guides, and sounding boards. I wouldn't have done this without their support. I was excited to work on my technology. Working with Paul I learned how companies are built and got excited to build my own.

Specifically, GI took care of everything from incorporating the company, providing a mini financing, to bringing on an engineering firm for prototype development and proof of concept work. All of this happened within six weeks.

As the company grew, we received support services and hired a fractional CFO from GI. GI transformed the company with HR hiring, marketing, everything was an incredible help. And through it all Paul continued to serve as my mentor.

When the time came to raise our institutional Seed financing, again, GI helped me understand what each document meant and gain perspective on term sheets and cap tables for the first time. Not only did GI introduce me to all the Seed investors, they helped me negotiate the deal and choose the final syndicate.

PAUL CONLEY, PHD

How has the partnership experience been for GI?

Mary had the idea and technical experience, GI had the flexible human capital, infrastructure and a little bit of cash to start proving her idea.

With our engineering relationships, lab tech support, and bench space, we were able to create hardware to test her ideas. This meant that we moved quickly and efficiently from data to patent application without leases, hiring or equipment purchases.

We also took care of the essential back office services like payroll, HR, accounting, and brought on a fractional CFO to help Mary and the company understand business models and budget building compatible to how future venture investors would want to understand the company in the future.

Importantly, Mary brought us a team member as well. She knew someone looking for a new endeavor. That person was able to join GI as a fractional product manager who subsequently

worked with Mary on how to build her R&D team and what is necessary for product management. It demonstrates the trade value GI and our companies have for one another. Our co-founders get help with the blueprint of company building and we help them turn their ideas into a reality and they contribute to our knowledge base and talent network.

Finally, when it came time for SwitchBack to raise Seed financing, we were able to help them develop a pitch deck and introduce the company to a quality syndicate of VCs with appropriate technical backgrounds. Also, we helped Mary negotiate fair terms for the financing and closed the deal within four months.

MARY NOE, PHD

Final Thoughts

For folks like me who are technology-oriented, making a pitch deck is daunting. Friends of mine who have gone through accelerators have eight weeks for a program with peers and then are spit out. That's it.

Paul and the GI team have been with me providing support the whole time, not just a few months of intensive work. They continue to participate in the SwitchBack journey. GI has been on the whole ride with me.

PAUL CONLEY, PHD

Final Thoughts

I'm still on the Board of Directors and Mary and I have frequent conversations. The scaffold has been built and the company is growing more independently now, but the SwitchBack team knows we are always here as a resource for advice, fractional executives as needed, and continued support.