

Business

Spider-Man, faith inspire Liquidia exec

Biotech pins hopes on chemist Henn

BY SABINE VOLLMER
STAFF WRITER

DURHAM - Robert Henn began making changes as soon as he walked through the door at Liquidia Technologies.

Three months after he signed on as chief technology officer, the Durham company is holding fewer meetings and brainstorming more. In the time it used to take to perfect one experiment, the scientists now perform several.

"No experiment is a failure," said Luke Roush, Liquidia's director of business development. As a result of that attitude, prototypes are now made in three to four days, rather than a month.

And Henn, a chemist, is often in the laboratory, working alongside the nine scientists he oversees. The 49-year old is a man of action. For inspiration, he keeps Spider-Man, the superhero of his youth, as the screensaver on his laptop. For serenity, he carves out 10 hours a week for Bible studies. It's a combination that has helped Henn build a reputation as a man who can make inventors' dreams come true.

He earned that reputation through his work with Gore-tex. The material, used in anything from dental floss to artificial arteries, is best known for making outdoor clothing waterproof and breathable.

Gore-tex is based on an invention by Wilbert Gore and his son, Robert, founders of Wilmington, Del.-based W. L. Gore Associates. By expanding on the Gores' invention, Henn played a crucial role in raising annual sales more than tenfold over

LIQUIDIA TECHNOLOGIES

FOUNDED: 2004

BUSINESS: Manufacturing microscopically small particles for several uses, including delivering drugs and generating power.

HEADQUARTERS: Durham

EMPLOYEES: 15

FUNDING: \$8.5 million in venture capital and private investments

26 years. When Henn left in 2004, Gore was generating \$1.5 billion in sales.

Now Ed Samulski and Joe DeSimone hope that Henn can have similar success at Liquidia. The two University of North Carolina at Chapel Hill chemistry professors are two of the company's five founders.

"I'm great with ideas, but how you realize them in an efficient and cost effective way is not what I think about a lot," Samulski said. "In conversation, Bob lets you see, 'Gee, this can be done without much difficulty.'"

Liquidia is trying to turn a clear, non-stick material, Fluorocur, into a marketable product that can be used to help deliver drugs and generate power.

Fluorocur, developed by DeSimone, Samulski and three of their students, is liquid at room temperature and hardens when exposed to ultraviolet light. The company licensed the rights to use Fluorocur from UNC-CH; it is thought to have several billion-dollar markets.

Turning scientific promise into marketable products is the economic lifeblood of the Triangle. But many companies fizzle for lack of money or leadership.

Liquidia, for instance, still needs a chief executive. But if Henn proves he has the magic touch, he could join the exclusive club of multimillionaire entrepreneurs in the Triangle. In addition, the Triangle, already a biotechnology hot spot, could become a hub for nanotechnology manufacturing as well.

Nanotechnology is a relatively new field of science and engineering that uses a scale only visible through a microscope.

The scale is what's attractive about Liquidia's technology.

Fluorocur creeps into crevices so small they can only be seen with the most powerful microscopes. That makes Fluorocur perfect for molds to manufacture multiple, accurate copies of particles that are so tiny, a string of 80,000 of them is only as long as a hair is thick. The molds, which resemble muffin pans, work in a laboratory setting. They could be used to manufacture particles that make construction material lighter and stronger, cylindrical vessels that sneak chemotherapy drugs into tumor cells, or cones that stud solar cells and increase the production of electricity.

The question is whether Liquidia can scale up production quickly, supply customers in different industries and make a profit.

That's where Henn and his experience at Gore comes in. "This is my ego speaking, but I believe it would be difficult to find another chief technology officer who would be a better fit," Henn said. "I'm in my sweet spot at Liquidia."

Henn grew up wanting to be a chemist. His hero was Spider-Man, a comic book character whose alter ego is a nerdy chemist.

At 21, about to graduate from the University of Michigan with a chemistry degree, Henn was hired at Gore to work in its lab

in Delaware. His fiancée Julie, now his wife and the mother of their four children, was a student at the University of Delaware. He took the job.

Gore was making Gore-tex in 1978, the year Henn joined the company, but the material would not remain waterproof for very long. Within 30 days in the lab, Henn had figured out how to make Gore-tex that didn't leak. "That was a big kick-start," he said.

It also helped to put Henn's other passion into perspective.

He had taken the job at Gore with the intention to stay for a year. If he didn't have fun, he promised himself, he would leave, go to seminary and become a pastor.

But year after year, it was fun. Henn started a new business division at Gore. He designed and built a \$20 million manufacturing plant. He helped develop technologies that led to 73 patents. As Gore's chief technology officer, he was responsible for more than 1,200 employees and an annual research and development budget of about \$150 million.

The first year that it wasn't fun was 2004. "I felt I was just going to work," he said. "I don't understand people who spend many hours of their working life not having fun."

He quit and started looking for another job. This time, seminary wasn't an option. Henn had figured out a long time ago that "he doesn't have to become a pastor to glorify God," said Alex Crain, associate pastor at Bethel Baptist Church in Wilmington, Del., where Henn has volunteered many hours as a Bible teacher.

The Bible study keeps his ego in check. He listens to employees and tries to support them.

Henn puts it this way: "A scientist understands the rules God laid down and uses them." That's what he plans to do at Liquidia.

News researcher Paulette Stiles contributed to this report.

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"I'm in my sweet spot at Liquidia," said Robert Henn, the chief technology officer at the Durham company.

STAFF PHOTO BY ETHAN HYMAN

ROBERT LYON HENN

Henn received his bachelor's degree in chemistry from the University of Michigan and completed executive studies at Wharton Business School.

In his studies of corporate culture, he has learned that ...

- employees need responsibilities, not titles.
- results depend on a combination of defined markets, employees who will follow through on plans and having the resources to complete tasks. If any one of those is missing, the project will not succeed.
- the most restricted resource is time, not money.
- creativity leads to ideas. Innovation leads to products that people will buy.
- not every idea is a great idea. Take the excellent ideas and draw a line under them to separate them from the good ones. Then, do the best you can with ideas that are above the line. Revisit the ideas below the line later.
- the best way to come up with a product is to quickly make prototypes and learn from your mistakes, not just talk about the idea in meetings.
- work is a social activity. Every time you hire somebody, you change the corporate culture. To ensure that he hires effective people, Henn asks job applicants to name an accomplishment they are proud of and explain why.