



Whether she is cycling with a group of colleagues along the Schuylkill River in the suburbs of Philadelphia before heading to the office or undertaking a memorial ride with former team members starting at Ground Zero in New York and culminating at the Pentagon in Washington, D.C., Jane Hollingsworth is up to the challenge.

The 300-mile ride was organized by a former colleague and Ms. Hollingsworth's future business partner at NuPathe, Terri Sebree, a year after 9/11. To prepare for the challenge, every day for two months they got up at 5 a.m. to train before work.

"None of us had ever done anything like this before; some people didn't even have bikes so we had to find bikes for everyone," she says. "It was particularly special since it was a memorial ride that involved people who had lost friends or relatives in the attack. Even though it was very difficult, the adventure was special for all of us. We really felt as though we'd accomplished something. We had fun, we camped out together, and we got to know each other in ways we would never have been able to otherwise."

Ms. Hollingsworth also knows and appreciates that one of the benefits of being part of a small company is that these types of events and experiences are possible.

Staying TRUE

Cycling plays into Ms. Hollingsworth's competitive nature, an attitude that is well-suited to tackling the risks involved in starting and running, not one, but two businesses.

As the cofounder of two specialty pharmaceutical companies, Ms. Hollingsworth defines what it is to be an entrepreneur. She appreciates that problems can arise and things may not go according to plan; and what matters most is focusing on what has been learned from the experience for the future.

It's this spirit for adventure that led Ms. Hollingsworth to cofound Auxilium in 1999 and then NuPathe in 2005.

"Staying true to the goals, to myself, and to the people I work with means it's difficult to fail; I need to just go out there and make it happen," she says.

NuPathe is a specialty pharmaceutical

company with a focus on therapeutic products for neurological and psychiatric diseases.

"There is an enormous amount of energy surrounding a start-up company," Ms. Hollingsworth says. "It's really exciting to give birth to something. There is passion about the people we bring in, all of whom influence the success or failure of what we do. I love that every decision we make has an impact."

Young, fresh companies with small, dedicated staff are also in a position to make decisions quickly, the CEO maintains.

"Many talented people in many big companies talk about the frustration of having access to great experience and brainpower but the inability to reach a decision around a wonderful idea," she says. "These types of structures make it easy for companies like ours to attract really good people."

// Smaller start-up companies are an important cog in the wheel of our evolving industry, and WE NEED TO DO EVERYTHING WE CAN TO ENCOURAGE SMALL COMPANIES AND ALL THE BRIGHT PEOPLE WITH GREAT IDEAS TO TAKE ADVANTAGE OF OPPORTUNITIES. //

On the flip side, one of the most difficult aspects of starting out is establishing the credibility needed to attract investment.

"Starting something new is fabulous," she says. "But translating the business model, technology, or product into a believable and real concept while trying to raise money is the tricky part."

Today, with the success of Auxilium as evidence of her skill as a leader and NuPathe gaining ground and offering some promising opportunities in its pipeline, the early difficulties are easing and the exciting phase is under way.

Courting EXPERIENCE

A great teacher can have a huge influence on an individual's life, and in Ms.

JANE HOLLINGSWORTH

Hollingsworth's case it was her Spanish teacher, whose passion and dedication to the topic was infectious.

By the time Ms. Hollingsworth got to college she was very proficient in Spanish and decided to major in the subject with a minor in business. To cement the experience, she spent a year while at college in Madrid learning the language in a native setting.

"Not only did I learn a lot about the language and life and European culture, but it was also a time to grow up," she says.

After finishing college, Ms. Hollingsworth returned to Spain for a year, taking a job as an English teacher. Though she considered staying

in the country, she realized after a year that she needed to find a job with longer-term prospects and since that wasn't an option at the time in Spain, she returned to the United States.

Initially the plan was to pursue an international business degree and she worked for a while in a publishing company to make some money. Ultimately, with the encouragement of her father, a lawyer, she attended Villanova University School of Law.

That training has proved invaluable. In this industry, where politics and the changing environment are top of the agenda for most companies, knowing more about the issues and how to handle them is an asset, she says.

Above all, though, Ms. Hollingsworth says a law degree teaches people how to learn and ask questions, how to analyze situations, and how to be an advocate.

"Law school taught me how to evaluate a situation, how to understand a situation, and how to learn what I needed to take advantage of a situation, and I use these skills every day," she says.

Immediately after graduating from law school, Ms. Hollingsworth spent a year in the district court.

"This was a plumb position and the experience provided me with an insider's view of how the system works, how juries work, what makes for a great litigator, and so on," she says.

The thrill of waiting for a jury to come back and make a decision was tantalizing, and today as CEO of a pharmaceutical company she says it's a feeling not unlike waiting for data to come back.

She decided to become a commercial litigator so she could combine her interest in business with the excitement of the court room.

Ms. Hollingsworth worked for Philadelphia-based law firm Montgomery, McCracken, Walker & Rhoads, dealing with contractual, business, and product and liability cases on behalf of pharmaceutical clients as well as the accounting and legal professions.

After seven years, Ms. Hollingsworth decided to make the leap into the business world, something she had in mind while pursuing



Ms. Hollingsworth says to differentiate itself, NuPathe maintains a focus on finding products that fill a need for patients rather than on selecting targets that fit with a particular technology.

"For many companies, when they have a technology they seek to maximize the use of that technology, which guides all of their thinking," she says. "Our approach is to look at the marketplace and find what we need to address any gaps."

To best achieve its goals, NuPathe seeks

USING THE HEAD FOR OPPORTUNITY

WITH A VISION FOR BUILDING A COMPANY SERVING PATIENTS IN THE NEUROSCIENCE SPACE, JANE HOLLINGSWORTH AND TERRI SEBREE ESTABLISHED NUPATHE IN 2005. THE COMPANY SPECIALIZES IN THE DEVELOPMENT OF THERAPEUTIC PRODUCTS FOR NEUROLOGICAL AND PSYCHIATRIC DISEASES AND SEEKS TO MEET ITS GOALS BY LICENSING OR ACQUIRING PRODUCT OPPORTUNITIES THAT CAN HAVE AN IMMEDIATE AND SIGNIFICANT IMPACT ON DISEASE TREATMENT AND MANAGEMENT.

to marry a reasonable risk approach with advances in technology to improve its treatments.

Its lead product, NP101, uses a transdermal patch technology, SmartRelief, to deliver sumatriptan to treat migraines.

"There is no migraine therapy right now delivered by patch, and if we can receive approval for the product, we would solve a big need in the market," Ms. Hollingsworth says. "Oral treatments for migraine sufferers are less than optimal because of the nausea and vomiting associated with the condition."

The company expects to start Phase III trials on NP101 soon. The company predicts a large market potential for the product, with 25 million adults in the United States suffering from migraines, and annual worldwide sales of migraine treatments exceeding \$2 billion.

Other products in the pipeline are NP201 for the treatment of Parkinson's disease and NP202 for the treatment of schizophrenia. Both products are based on LAD — a long-acting drug delivery technology developed at the University of Pennsylvania. LAD enables NuPathe to design novel products that address critical treatment needs by consistently delivering a drug over a sustained period of time with a single application. This delivery process also improves patient compliance, a significant obstacle in the treatment of neuropsychiatric conditions.

When it comes to the pharmaceutical infrastructure required to market and sell a product, Ms. Hollingsworth says the company will assess the situation based on what makes most sense.

her undergraduate degree. She took a job as general counsel for the contract research organization IBAH/BioPharm, which later became Omnicare Clinical Research Inc.

Healthy ALTERNATIVE

The move into the pharmaceutical world was prompted in part by Ms. Hollingsworth's father, who had spent his career at SmithKline Beecham, now GlaxoSmithKline.

"I grew up hearing stories about the early days of the pharma industry, the 1960s and 1970s where things happened fast," she says. "SmithKline was a very small company when my father was there; it probably had about \$300 million in revenue, which is significantly different from today. We got to know the people who worked there and the company became part of my life."

She heard the ups and downs of the business, everything from the first billion-dollar drug, Tagmet, to the withdrawal of a drug from the market.

"The stories became part of who I am; I understood the industry because I had seen it evolve," she says. "I had a number of friends and family who were in the industry and I was attracted to a business that helps people."

Working for a young, growing company, as IBAH was, provided much in the way of excitement and opportunities.

"The company was growing like crazy; we were opening offices in different parts of the world, and managing all of that activity was an exciting challenge," she says.

With the opportunity to be involved in more than just the legal side, Ms. Hollingsworth also helped to run the business, which provided valuable insights into the way a growing life-sciences company operates.

"There were no walls when I was there," she recalls. "The company needed people who could to jump in and solve challenges and make decisions. This experience provided a huge springboard for what I'm doing now."

The decision to start Auxilium arose while Ms. Hollingsworth was at IBAH at a time when there were discussions around selling the company. With an inspirational and driven boss, IBAH's Founder Gerri Henwood, to encourage her and join her as a business partner, the concept of Auxilium was born.

Ms. Hollingsworth and Ms. Henwood set about founding a specialty pharmaceutical company, focusing first on urology.

"This just seemed like a natural transition;



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Rather my career has evolved over time in ways I could never have predicted.”

as long as we could raise the money, we thought let's go out and do it," Ms. Hollingsworth says. "We had complete confidence we could do it, we never doubted that, and it worked."

Choosing the MODEL

Once the decision to start a company had been made, the task was to find a niche. The two women investigated opportunities for creating a specialty pharma company in an area not dominated by the big pharma companies, while focusing on a medical need in the marketplace.

The plan was to develop a product that was lower risk, and possibly lower return, as the basis for building the commercial part of the business. From that foundation, they would follow with other products that might be higher risk, and capitalize on the existing infrastructure.

"Getting started took a lot of hard work and money, but we achieved what we set out to do," Ms. Hollingsworth says. "Auxilium is doing well now. The first product has good sales, and there are high hopes for the pipeline products, which are biologics for the most part. We don't know what will happen, but the infrastructure is there, the commercial machine is there, and everything should work the way we modeled."

For Ms. Hollingsworth, one of the proudest moments was the day Auxilium filed the NDA for its first compound, Testim, a hormone replacement product for men suffering from hypogonadism, which is a low level of the male hormone testosterone.

Getting the approval letter from the FDA was then the icing on the cake.

With those milestones achieved, it wasn't long before Ms. Hollingsworth was mulling the next prospect.

Ms. Sebree, who was Auxilium's senior VP of development and is cofounder and president of NuPathe, was the instigator for the next idea, which ultimately became NuPathe.

"Terri's background was in neuroscience and psychiatry and she was anxious to get back into these areas since this is where her scientific passion lies," Ms. Hollingsworth says. "She was eager to develop products that would serve patients in the neuroscience therapeutic area. Her passion inspired me and together we decided the next company would focus on the unmet needs in neuroscience."

In some ways, this was a leap of faith for the entrepreneurs since for years venture capitalists had balked at getting into the field, deeming it too high risk.

Nevertheless, Ms. Hollingsworth maintained this was a business proposition whose time had come.

"There's a lot that's not known about the brain, so there is some fear of backing high-risk programs and companies in this space," she says. "But we believed there was a way to overcome the obstacles by taking a reasonable, creative, lower-risk approach by using technology and focusing on what we do best. We believed neuroscience was a perfect match for the skills we had and the needs in the marketplace."

After Auxilium went public and its path was secured, Ms. Hollingsworth and Ms. Sebree began their next challenge and NuPathe was born. This time the NuPathe founders have taken a slightly different business model approach than the one used at Auxilium.

"We're not trying to build a commercial infrastructure around the first product," Ms. Hollingsworth comments. "Our focus is to find the best product to work on and do it." (For more on NuPathe's focus and products, see breakout on page 50.)

Nature or NURTURE

Entrepreneurship, Ms. Hollingsworth believes, is an evolutionary process.



“I didn’t wake up one day and say, ‘well, I think I’m an entrepreneur,’” she says. “Rather my career has evolved over time in ways I could never have predicted.”

She believes it is important to have the determination to seize opportunities and to be fearless in the face of the unknown.

“To me, it’s all about following your heart,” she says. “People who enjoy what they do are much better at their jobs and will be more successful.”

Success also comes from thoughtful management, building an entrepreneurial and trusting culture with talented and high-quality managers and ensuring the company maintains a strong network within the region and industry.

“We spend a lot of time when we bring new people in to evaluate what their approach is, how they fit with the culture we are trying to establish here, and ensuring they understand what the expectations are in terms of continuing to build on the culture as we go along,” Ms. Hollingsworth says.

She encourages the teams to have fun, do bonding activities, and to get to know one another better on a personal level.

“I think the job of a CEO, more than anything else, at an early-stage company is about hiring the right people,” she says. “And it’s about holding them to the standards set but also letting them do their jobs.”

When it comes to involvement at an industry and regional level, Ms. Hollingsworth believes it’s important to offer constructive ideas on how to guide the industry through the myriad issues it faces — from the political environment, the payer environment, and even the development of drugs.

“Staying true to the goals, to myself, and to the people I work with means it’s difficult to fail — I JUST GO OUT THERE AND MAKE IT HAPPEN.”

“I think we all have a responsibility to be thoughtful, to be involved, and to try to help grow the industry,” she says.

Being inventive and having a good plan in place is not only important for the individual company’s success, Ms. Hollingsworth believes, but also for the future of the industry.

The agility small companies offer with regard to creativity, decision making, and less costly drug development are key, she says.

“Smaller start-up companies are an important cog in the wheel of an evolving industry, and we need to do everything we can to encourage all the bright people with great ideas to take advantage of opportunities and go out and develop their products,” she says.

Industry minded, Ms. Hollingsworth is actively involved in the organization Women Inventing Next (WIN), and in October 2007 was selected to receive the organization’s Iris Newman Award.

“Women need role models, and that’s one of the goals of WIN,” she says. “And by reaching out to half of the population in the greater Philadelphia region it also helps to build the biotech industry in our region by encouraging and helping talented women in the field to start their own businesses.”

Ms. Hollingsworth also seeks to pass on insights to other women in business through her connections at WIN, within the workplace, and through the Fox School of Business of the Temple MBA program, where she is an advisor.

“I try to be supportive of women who may not have the confidence to take the next big step,” she says. “I love to think through business ideas with them.” ♦

PharmaVOICE welcomes comments about this article. E-mail us at feedback@pharmavoiced.com.

A Career Cycle

JANE HOLLINGSWORTH — RESUME

2005 — PRESENT. CEO and Cofounder NuPathe Inc., Conshohocken, Pa.

1999 — 2004. Cofounder and Director, Executive VP, Secretary, General Counsel and Chief Compliance Officer, Auxilium Pharmaceuticals, Inc., Norristown, Pa.

1994 — 1998. VP, Secretary, and General Counsel, Omnicare Clinical Research Inc. (formerly IBAH/Biopharm), King of Prussia, Pa.

1987 — 1994. Commercial Litigator, Montgomery, McCracken, Walker & Rhoads, Philadelphia

1986 — 1987. Law Clerk to Federal Judge Jane R. Roth, U.S. District Court for the District of Delaware, Wilmington, Del.

1982 – 1983. Assistant, Cooke Publishing Company, Devon, Pa.

1980 – 1981. Teacher of English as a Second Language, Institutos Mangold, Madrid

EDUCATION:

1986. Juris Doctor, Villanova University School of Law, Villanova, Pa.

1980. B.A., Gettysburg College, Gettysburg, Pa.

PROFESSIONAL MEMBERSHIPS:

Biotechnology Industry Organization (BIO)

Pennsylvania Bio

Food and Drug Law Institute

WIN (Women Inventing Next)



95% reach. 0% waste.

One out of every two US adults get their health information from WebMD.

Three out of every four women.

95% of all adults seeking health information online.

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If you'd like to reach them,

e-mail us: BetterMarketing@WebMD.net

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