

CAREERS

TURNING POINT Epidemiologist challenges orthodoxy with interdisciplinarity p.263

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BUSINESS AND SCIENCE

In the market

Researchers with a knack for promotion and a desire to help those in need may find their niche in biomedical marketing.

BY BRYN NELSON

After nearly a decade as a university diagnostic pathologist, Lawson Macartney decided that academia was a difficult place to earn a living. "I gave up a teaching job and a research job and joined the industry in pathology, where I discovered that I was actually very good at leading teams," he says.

Macartney gained a commercial perspective and experience in sales, marketing, drug discovery and development at three companies. Now senior vice-president of the emerging business unit at Shire Pharmaceuticals in Wayne, Pennsylvania, he combines marketing and research to help develop products for conditions such as attention deficit hyperactivity disorder and gastrointestinal diseases.

Biomedical marketing isn't for everyone. But for determined, extroverted researchers who excel in clear communication and are prepared to follow a lengthy career path, it can offer a fulfilling alternative to academia and an opportunity to shape products that could benefit thousands or millions of people.

Marketing positions can cover a range of terrains. Some professionals have direct roles in helping their companies to decide which products to bring to market and how to differentiate them from the competition; others are more like consultants. Market-research firms such as Ipsos Healthcare, which has its North American base in Parsippany, New Jersey, and BioPlan Associates in Rockville, Maryland, for example, provide pharmaceutical clients with information about customer perceptions through surveys, focus groups and data analysis. They use those data to help brand managers to decide how to promote their products.

Companies such as Spectrum, a health and science communications firm based in Washington DC, dig through clients' scientific data and break down the concepts to provide a media kit, social-media campaign or advice on how a company can craft its own messaging and marketing.

Spectrum's clients range from major pharmaceutical companies to academic institutions and advocacy groups. Cynthia Chen, a senior account executive at the company, often works with a client's external-affairs and marketing departments, but also talks directly to scientists and reads their papers to understand their products or research. Her ultimate goal is to distill the science into a media-accessible explanation of the rationale behind a targeted treatment or product, or a description of the significance of results. "I love that I have a science background because here I'm able to use it," says Chen, who has a bachelor's degree in microbiology, immunology and molecular genetics and a master's degree in public administration and health policy.

AN ACTIVE APPROACH

Some researchers find marketing a welcome change from the malaise of lab science. Faye Boeckman, now director of market development at Life Technologies in Frederick, Maryland, had grown increasingly disenchanted with her pharmacology postdoc at the University of Washington in Seattle when she established a rapport with a sales representative from Bio-Rad, a lab-tool manufacturer based in Hercules, California. That led to ▶

► a research-and-development position at Bio-Rad, where her interest was piqued by close collaborations with the marketing department to launch products. "I wanted to be more a part of the decision-making in what comes forward and what doesn't," says Boeckman. She used her experience at Bio-Rad to obtain marketing positions at three further lab-tool companies before arriving at Life Technologies, where she has led efforts to develop and launch cell-culture and proteomics research tools.

Consulting agencies such as Spectrum have been hiring in the past year, but few people in full-time marketing positions are now recruited directly from postdocs. Candidates from academia face stiff competition from job seekers with marketing experience, says Boeckman. "I've had a couple of people reaching out to me for well over a year, trying to get in and not having a lot of luck," she says.

"The most direct way in is almost always through an entry-level sales-representative position," says Jennifer Bennett, director of strategic staffing and diversity at the pharmaceutical firm Novo Nordisk in Princeton, New Jersey. But companies are generally reluctant to hire candidates without sales experience. "The rationale is: how can you contribute to marketing strategy and direct a sales force on campaigns and marketing approaches and branding if you haven't experienced it on the other side yourself?" says Bennett.

A FOOT IN THE DOOR

Experts suggest several alternative entry roles for researchers who lack sales experience. In biopharmaceuticals, for example, medical liaisons often act as bridges between biomedical companies and the external medical community, interacting with the marketing department. Field application specialists provide technical support to sales teams, and in-house medical writers collaborate with marketers to prepare regulatory documents and other materials that require translation of the science into everyday language.

Boeckman advises applicants to aim for entry points that most closely match their existing experience. "What I tell people is, baby steps. Don't try to jump the 12-foot hurdle without trying to jump the 3-foot one," she says. The first step is to choose the sector that offers the best fit, and then proactively learn as much as possible about it. Marketing positions in the highly regulated biopharmaceutical sector, for example, demand an understanding of requirements issued by regulatory bodies around the world. They also value depth of knowledge in specific disciplines, such as cardiology or neurology. In the unregulated research-tools industry, however, says



Eric Langer says that biomedical marketing hopefuls should seek business or other training.

Boeckman, breadth of knowledge about existing tools generally trumps depth.

Applicants should also identify companies that can help them to expand and broaden the skills they need for marketing, by giving them a good understanding of sales dynamics, consumer bases and market strategy. "If your plan as a young person joining the industry is to diversify your experience base, then that conversation has to be right up front," says Macartney. "And if alarm bells sound and you think, 'Oh my gosh, they want me just for my science and I'm just going to be siloed here doing that and that's not what I want,' then don't go to that company."

One way to get onto a firm's radar is to use an internal connection, as Boeckman did. Another is to set up an informational interview: a low-pressure meeting at which job seekers can submit their CVs and talk to marketing representatives to learn more about what they do, with the understanding that no positions are available. "But what happens is, if a job comes up, you're first in mind. And so it's very powerful — people get jobs through informational interviews," says Boeckman. Such sessions can also provide crucial guidance on training decisions, such as taking university courses to learn about marketing basics, analysis and management.

The diverse and continually evolving field of biomedical marketing is far from impenetrable. "There is a little bit of doom and gloom in the mythology that's going around right now, but the reality of it is that patients will always need new medicines that bring value to them," says Macartney. "For talented individuals who manage their career appropriately, actively manage it, I don't think there's a shortage of opportunity, quite frankly. It's all about leveraging strength."

In other words, marketing hopefuls must market themselves. Eric Langer, president and managing partner of BioPlan Associates, says

that the best candidates demonstrate their value through their education and relevant job experience in a carefully targeted area. If "you are able to demonstrate that you've got expertise in a particular product area or a particular type of marketing, you'll be able to sell that, because you're creating unique value for yourself," he says. For example, researchers with a deep understanding of one of the complicated mechanisms of action that underlie many cancers, neurological disorders or infectious diseases can distinguish themselves at small companies that focus on specific patient populations.

Scientists' analytical skills are also highly valued. And they often make good marketers, says Langer, once they've learned the fundamentals. "They understand there's a marketing process," he says. "A measurable, repeatable process." Through monitoring and evaluation, good marketers can modify a hypothesis and tweak a strategy that isn't working.

OFF-THE-JOB TRAINING

Many people working in marketing and commercialization have some sort of science background, from a bachelor's degree to a PhD. But Paul Snyderman, chief research officer of health and pharmaceuticals at Ipsos Health-care's office in Philadelphia, Pennsylvania, says that his decades of experience in biopharmaceuticals have taught him that far fewer marketers have a strong research background. That proportion could drop further given the shaky economy, he says, as risk-averse managers hesitate to take a chance on recruits who haven't got any specific marketing experience.

A bench scientist entering marketing may have to contend with considerable culture shock. Marketing means embracing and promoting a company's products and goals, which academics who are used to independence may find uncomfortable. And, says Langer, scientists can struggle to accept that marketing



Cynthia Chen finds that her scientific background is an asset for her career in marketing.

decisions must often be made using limited and imperfect data.

For a better grounding in marketing and business, some industry observers recommend that researchers take advanced marketing classes. Langer teaches courses such as 'marketing in a regulated environment' for the master of biotechnology and master of regulatory affairs programmes at Johns Hopkins University in Baltimore, Maryland, and notes that his students all have science backgrounds. Many already work at pharmaceutical firms, and want to pick up a master's degree to get a competitive edge.

At Novo Nordisk's headquarters in Bagsværd, Denmark, a training programme called Base Camp specifically recruits people who have recently graduated with a master's, some of whom also have scientific degrees. The two-year programme, designed to fast-track careers at the company, offers ten areas of specialization, including global marketing.

WORKING UP TO IT

Macartney agrees that a master's degree — particularly in business — from a top-tier institution can be a selling point, but he also values candidates who have taken a purposeful, well-planned career path, picking up experience on the job.

Companies may be more inclined to take a chance on inexperienced individuals when seeking marketers for products that are about to lose their patent protection, because the campaigns are considered fairly low-risk and unattractive to seasoned marketers. European companies tend to recruit for potential and may give relatively untested applicants a better shot than their counterparts in the United States.

Internships are another possible entry point, especially for communications agencies such as Spectrum, which accepts about six trainees every summer.

Experience, of course, can't replace natural ability. In essence, marketers say that their job boils down to persuasive storytelling, whether about the development of a drug or about the results of a consumer survey. "It's being able to take that story, support it by evidence, and communicate it effectively enough so that either companies agree and they fund your programme, or investors agree and they want to support that development," says Rob Lasser, former product general manager in the emerging business unit at Shire Pharmaceuticals.

The career path may require persistence, but biomedical marketers say that it is well worth the effort. "Keep trying, don't get dismayed," says Boeckman. "It just takes longer today than it used to." ■

Bryn Nelson is a freelance writer based in Seattle, Washington.

TURNING POINT

Alison Galvani

Alison Galvani, an epidemiologist at the Yale School of Public Health in New Haven, Connecticut, became one of the institution's youngest-ever tenured faculty members two years ago, at the age of 33. This May, Galvani received a Blavatnik Award for Young Scientists, bestowed by the New York Academy of Sciences and the Blavatnik Family Foundation to reward innovative, interdisciplinary work.

What prompted you to pursue a scientific career?

My initial interest in biology was sparked during high school, after I read *The Blind Watchmaker* (Norton, 1986) by Richard Dawkins. I wrote him a letter and he encouraged me to apply to the University of Oxford, UK.

What did you say in the letter?

I don't remember the details, but I questioned his argument that speciation is an entirely gradual process. There is sometimes a jump in the number of chromosome pairs — for example, from 24 in apes to 23 in humans — that would constitute a significant change. He agreed that was an issue. I admired him, but I think he liked that I challenged him a small bit.

How did you end up in epidemiology?

I went to Oxford for my undergraduate degree in biological sciences and stayed to do a PhD in theoretical epidemiology with Robert May, former head of the UK Royal Society. I had always liked mathematics and thought public health was important, so I modelled transmission of evolutionary factors in parasitic-worm infections in developing countries.

What was the best advice you got from May?

He recommended I apply for a Miller Research Fellowship. That fellowship allowed me to explore interdisciplinary areas rather than restricting myself to a single project. For example, I helped to challenge the idea that, through natural selection, the European plague epidemic in 1348–50 caused a genetic shift that increased resistance to HIV in the population. That helped me to become comfortable challenging dogmas. It set the stage for my work in the burgeoning field of behavioural epidemiology.

What impact have you had on that field?

I was part of one of the first modelling teams to challenge the US Centers for Disease Control and Prevention (CDC) in its policy of focusing influenza vaccination on the elderly. That recommendation neglected the importance of transmission dynamics, notably among school



children and parents. We predicted that targeting vaccination to children and parents would avert deaths and reduce hospitalization costs for the whole community, including the elderly. We showed that protection through herd immunity is more effective than direct protection.

Did your career suffer after you called vaccination policies into question?

Not everyone at the CDC was happy about our paper, but policies shifted. Even if people weren't happy, they did notice what we had found. I have good relationships with some people at the CDC, and I don't think there were long-lasting adverse effects on my career.

What is the key to successfully conducting risky research?

Whether research is risky or not, the key is having a collaborative, interdisciplinary team. With a strong team, the research is no longer risky; it is just interesting. Risky research can help to attract top students, many of whom go on to have stellar careers and remain collaborators.

Now that you have tenure, do you feel more confident taking risks?

Yes; I think it is easier to do high-risk work when you have established your reputation. We're beginning to tackle how behaviours, including altruism, habits and cultural beliefs, might call into question assumptions of epidemiological models. These are complicated factors to untangle.

What is the secret to securing tenure so young?

I had an extraordinarily supportive mentor who encouraged the dean to put me up early for tenure. I was fortunate to get a John Simon Guggenheim Memorial Foundation Award, which helped me to justify early promotion. ■

INTERVIEW BY VIRGINIA GEWIN