



SATYAPRAKASH PANDEY

The myriad options for advancement in industry can be perplexing, but Satyaprakash Pandey is following his interests to find the best role.

TAKING THE NEXT INDUSTRY STEP UPWARDS (OR SIDEWAYS)

Confused about promotion opportunities after moving to industry? Here are some pointers. **By Sandeep Ravindran**

Ana María Cárdenas's first promotion at the medical-technology firm Becton, Dickinson and Company in Sparks, Maryland, came in September 2021, two years after joining as a research and development (R&D) senior manager.

Last March, she moved from her associate director role to a position as a senior director in global medical affairs.

She had previously overseen teams that focused on product development, but now, among other things, she helps to communicate scientific and clinical information to the health-care community. "I've seen two different functions within industry in my four years" at the firm, says Cárdenas.

That's not unusual. There are many roles for PhD holders rising through the ranks of the pharmaceutical and biotechnology industries.

In a survey last year that tracked European Molecular Biology Laboratory (EMBL) PhD and postdoctoral alumni working in industry, 72% held a position in R&D in which they did or oversaw research, but 16% moved into science-related, non-research positions, says Rachel Coulthard-Graf, a career-development adviser at the EMBL International Centre for Advanced Training in Heidelberg, Germany.

These include positions in quality assurance to test product reliability, roles to help obtain and maintain regulatory approval for products, and jobs in clinical, scientific or medical affairs, which involve outreach and communication with medical professionals, clinicians, scientists, health-care providers and patients.

There are also more specialized or strategic roles, including business development to advance and execute a plan to sell a product;

researching, writing and filing patent applications; guiding technology transfer between teams or organizations; and sales, marketing and communications.

It benefits early-career scientists to be proactive when identifying their ideal path in industry, and there are many steps they can take to help plan it. These include networking, interviewing people working in different areas to find out more about their roles, and acquiring the skills and experience needed to make the most of whichever direction they take.

"To have people who have PhD training – the ability to think, troubleshoot, dive deep, pivot and learn new things – is valuable in all aspects of our organization in our industry," says Elenoe Crew Smith, director of molecular and cell biology at Vertex Pharmaceuticals in Cambridge, Massachusetts.

Work/Careers

Maurizio Scaltriti, vice-president of translational medicine in early oncology R&D for pharma company AstraZeneca, says one of his misconceptions about industry when he was in academia was that “once you are in [a particular role in] pharma, you sort of stick to that role”, he says. “There is nothing more wrong than that,” says Scaltriti, who is based in Gaithersburg, Maryland.

And Prabuddha Kundu, who co-founded Premas Biotech in Gurugram, India, in 2006, values PhDs throughout his company – including in sales. “They are folks who are not trained formally in sales, but who understand the commercial need and the commercial intent and have a very in-depth understanding of the science, and the translation” of the science into a product, he says.

Kundu speaks from experience. After completing his PhD in biomedical engineering at the Indian Institute of Technology Bombay in 1999, he tried out different aspects of industry to learn what it would take to start his own company. He worked as an application scientist at Bio-Rad Laboratories in Gurugram, where he also helped with sales and marketing of their confocal imaging and chromatography devices, before getting R&D experience at Ranbaxy Laboratories pharmaceutical firm, also in Gurugram. After co-founding Premas Biotech, he started as vice-president of manufacturing before becoming executive director in 2011 and managing director in 2018.

Stride through open doors

“Getting the first job in industry is so hard, but it really opens the doors to many different things, and it’s going to be a lot less challenging to get your next position,” says Kerry Boehner, an executive recruiter in the biotech and pharma industries at KOB Solutions in Pittsburgh, Pennsylvania.

In general, PhDs and less experienced post-docs entering industry often start out on a team focused on a particular research area. They can go on to become senior scientists, and, typically after 3–5 years, principal scientists. “This is roughly equivalent to a group-leader role in academia, so you’re really the direct line manager of a team [of people] working on different projects,” says Coulthard-Graf. Those with more postdoctoral and work experience before joining industry, such as Cárdenas, can sometimes start at the principal level or with managerial responsibilities (see ‘Are you management material?’). Cárdenas had completed a postdoctoral fellowship and worked as a lab director at the Children’s Hospital of Philadelphia in Pennsylvania, where she oversaw infectious-disease diagnostics and lab testing for patients.

Assessing the direction you want your career to go in is less about titles and more about what you want to do day-to-day, says Cárdenas. This means deciding whether to continue at the

bench or move into a leadership role, such as an associate-director or a director position, in your own or another department.

Scientists can follow the same path as Cárdenas by moving from R&D to downstream roles, helping to get a product such as a drug or diagnostic test closer to the clinic or consumers.

With all these options, how do you chart out a career trajectory? “I think one of the biggest challenges is knowing what you need to do,” or what drives you, says Kathleen Engelbrecht, research manager at the multinational personal-care company Kimberly-Clark, who is based in Neenah, Wisconsin.

This involves identifying what brings you the most satisfaction, whether that’s having scientific expertise and accomplishments, the satisfaction of translating a discovery to the clinic or market, or helping a team to achieve its full potential. Engelbrecht says she wasn’t

“What I got the most personal satisfaction from was when I helped the team break down barriers.”

considering a management role initially, but her experiences in industry helped her to make up her mind. “What I got the most personal satisfaction from was when I helped the team break down barriers [that were] making their work hard,” she says.

Satyaprakash Pandey, a junior scientist at Tata Medical & Diagnostics in Bengaluru, India, had the opposite realization after a few years in industry. He became less interested in simply continuing to lead bigger and bigger teams, and was more keen on parlaying his training in molecular biology and interest in identifying new technologies into a role in licensing and partnership, which involves identifying prototypes from academia that could be developed into commercial products.

These career decisions don’t have to be just about the work; they can be about your values, work–life balance, family life and location. “Especially with the [COVID-19] pandemic, people really opened their eyes to non-lab-based positions because it gave them the flexibility to work anywhere,” says Boehner.

You also have to advocate for yourself by being upfront with your superiors about your career goals, says William O’Gorman, director of clinical cytometry at biotech firm Genentech in San Francisco, California. This is especially important in a big organization, he adds.

Next-level networking

Managers have a crucial role in career advancement, so it’s important to keep them informed of your aspirations and interest in taking on a new role. “Your manager should really be your biggest advocate,” says Crew Smith.

Employees should discuss promotions and long-term goals in annual reviews, to help their manager identify experiences and opportunities to prepare them for that role, says Daniele Crisi-Couchenour, director of human resources and operations at Novasenta, a biotech start-up company in Pittsburgh.

Within-company networking is also key. Cárdenas used this approach – and, by the time she had applied for her promotion, “I had a network of people that understood what my value was and what I brought to the table,” she says. Informational interviews are a good way to find out about different roles and build networks outside your immediate team. Many companies facilitate in-house networking. For example, Vertex Pharmaceuticals offers a mentorship programme that spans departments, and Roche, a health-care company based in Basel, Switzerland, encourages employees to organize lunch with anyone they’d like to in the organization. Joining employee-led interest groups or committees involved in company oversight and culture can serve as informal networking opportunities.



Elenore Crew Smith (centre) calls drug discovery the ultimate team sport.

VERTEX PHARMACEUTICALS

Many larger companies offer structured opportunities to join short-term projects in another department to get experience in a different area. “Maybe you’re interested in learning about regulatory affairs, so let’s get you a short-term assignment to get a little bit of your feet wet in that environment and see if that’s something that you may like,” says Cárdenas.

Having several roles is often the norm at a smaller company. “I talk to lots of people with smaller companies who start as a pharmacologist, and then they start helping the business-development people and next thing you know, they’re doing business development,” says Boehner. Being in a small company can also speed up career advancement. “At a smaller company, you’re going to have more opportunity to take on more responsibility and then you’re going to be sought after for the next company, so starting with a smaller company just opens up a lot more doors,” she says.

Getting promoted generally depends on your contributions to your project and to the company’s goals, and the requirements vary by field. In R&D, a person’s performance could be based on how many drug targets they discover, or how many investigational new drug applications they file. For someone in regulatory affairs, promotion could depend on having successful interactions with regulatory agencies, such as the US Food and Drug Administration. For someone in sales, it might depend on the revenue they brought in. Unlike in academia, publications don’t usually play a big part in advancement, although some firms, such as Genentech, do factor publications into promotion decisions.

Communication skills

Maintaining good communication with co-workers across levels, from lab technicians to upper management, and across disciplines and departments also helps. “Your ability to communicate at all levels also plays a major part in how you’re going to advance your career,” says Crew Smith. She points out that, in science, there’s a tendency to think the data will speak for themselves. “But if people don’t understand the data, it’s not valuable any more,” she says.

Although workers typically receive promotions every few years, other forms of recognition could include annual performance-based pay raises and bonuses. These tend to increase with seniority, but the specifics vary. “Some companies have just a base salary and a bonus, and some companies have like seven different things that go into their compensation package,” says Boehner. Start-ups and some smaller companies might give employees lower salaries but more stock than bigger companies.

Stock options or increasing bonus schedules can serve as an incentive for employees to stay with a company. “These are long-term incentives, so if you stay with the company

Are you management material?

Supervisory roles come in different shapes and sizes, ranging from team leaders to project managers.

All science in industry is done by teams, and managers act as their all-important coaches. “Drug discovery, we say it’s the ultimate team sport,” says Elenoe Crew Smith, director of molecular and cell biology at Vertex Pharmaceuticals in Cambridge, Massachusetts.

Crew Smith emphasizes that a move into management should be about more than just the title and higher pay. “There are people who are depending on you for their own careers and for their own success, and ultimately for the success of the project and the company, so it’s really important that you care as a manager,” she says.

Many large companies use what’s known as a matrix structure with multifunctional teams, in which a project lead or manager shepherds a particular project as it flows through various functional areas, or departments, such as structural biology, high-throughput screening for potential drug candidates and preclinical testing.

That means the project manager has a very important role — one that’s in high demand, says Kerry Boehner, an executive recruiter at KOB Solutions in Pittsburgh, Pennsylvania. “It’s a hard job, you have to be really detail-oriented, and you have to get people who don’t report [directly] to you to do things, so you have to be very influential without being annoying,” she says.

Switching to management allows scientists to broaden their focus. “You start seeing a holistic picture rather than [solely] your expertise that you bring to the project,” says Heena Khatter, a project leader at Roche in Basel, Switzerland. She started as a researcher in structural biology, but decided

longer, you’re going to be vesting more of these,” says Cárdenas. A few companies offer sabbaticals as a long-term incentive. For example, Genentech offers employees a six-week sabbatical, which can be spent gaining expertise or relaxing and spending time with family, once every six years.

But there can also be incentives to switch companies every few years. “You’re [likely] going to get a higher jump in salary from moving than you are if you stay at the same company,” because you have better negotiating power, says Boehner.

Ultimately, scientists have options for

she wanted to progress beyond that. “It’s challenging because you’re going away from your comfort zone,” she says.

Another reason people choose the management track is to focus more on the big picture. As director of clinical cytometry at Genentech in San Francisco, California, William O’Gorman says he deals less with the day-to-day laboratory work and almost exclusively with broader company and project strategy and personnel management. The more people you manage, he says, the less you’re involved in generating or analysing primary data.

Switching to management can involve a learning curve for scientists who are used to working independently in the lab. O’Gorman now has ten direct reports, and he has had to learn how to manage them on the job. “The art of it is, you have to tailor your management style to each person,” in a nuanced and diplomatic way, he says.

Many companies, including Kimberly-Clark, Becton, Dickinson and Company and Roche, offer leadership and management training and courses on developing effective communication skills. Maurizio Scaltriti, vice-president of translational medicine at AstraZeneca in Gaithersburg, Maryland, also recommends reaching out to other managers or to human resources for advice. He considers it important to regularly keep his reports apprised of their project’s big-picture goals, not just their day-to-day tasks.

PhD students and postdocs can gain management skills by mentoring more junior students, says Crew Smith. “Having experience dealing with people from different backgrounds, who have different perspectives, who have gone through different challenges and lived experiences is essential to being an effective manager,” she says.

advancing their careers in industry, and the onus is on them to make the most of that flexibility. To do so, they should identify a trajectory that suits them, network, let colleagues and managers know of their ambitions and seek out professional-development opportunities to advance their careers. Cárdenas encourages people to keep an open mind and try to find — or even create — a role that’s the best fit for them. “I’m a firm believer of, the grass is greenest where you water it.”

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