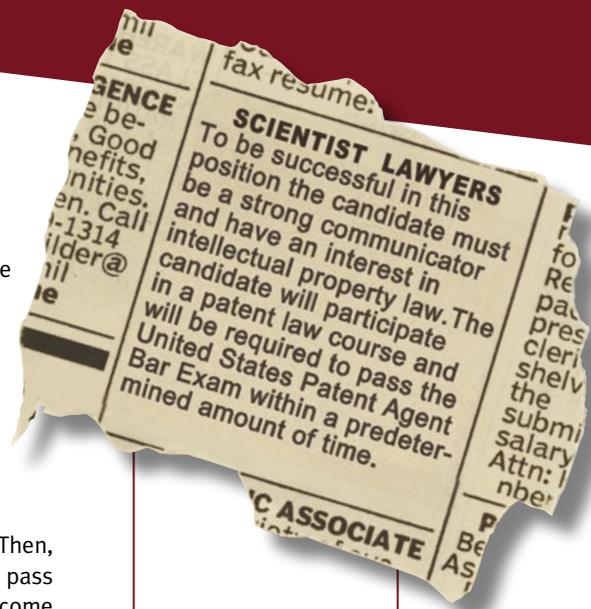


# SCIENTIST LAWYERS TEST TUBES TO BRIEFS

Increasingly job ads like the one to the right are targeting scientists in a broad range of fields, especially engineering, chemistry, and biotechnology. From newly minted Ph.D.s to established faculty, scientists are joining the ranks of patent agents, patent examiners, and technology transfer specialists—all careers that do not require law degrees. Those willing to go back to school to study law will have access to a wider range of opportunities, not to mention higher salaries. What these individuals bring to their jobs are strong analytical skills and an understanding of complex technologies and their applications. **By Laura Bonetta**



In the United States, scientists can join law firms fresh out of graduate school. Then, while helping with patent applications and other tasks, they typically prepare to pass an exam by the US Patent and Trademark Office (USPTO), which allows them to become patent agents.

**James Dilmore** went this route six years ago, when he joined the Pittsburgh-based international law firm Reed Smith. “I had found scientific research exciting but also very frustrating,” says Dilmore, who obtained his Ph.D. in neuroscience. “I also wanted a position with a bit more stability than a series of postdocs.”

By chance, the wife of one of his thesis committee members was getting ready to leave her post at a local law firm. She introduced Dilmore to her boss. “I did not have aspirations to go into law, but the job appealed to me,” says Dilmore. He started as a technical adviser at Reed Smith in February 2001 and passed the patent exam in April 2002.

As a patent agent, Dilmore is responsible for filing patent applications on behalf of several clients. He also spends a good part of his workday advising attorneys at Reed Smith involved in litigation cases. “One of the roles I see myself filling is to ensure that lawyers do not press scientific arguments so far that the science is no longer accurate,” says Dilmore. “I can recognize scientific weaknesses on either side of the argument.”

And as litigations often require the testimony of renowned scientists as expert witnesses Dilmore is often asked to act as “translator.” “It is part of my job to explain to scientists what is important legally,” he explains. “On the other side, I help the attorneys understand what is going on with the science.”

## Second Degree

While it is possible to remain a patent agent, or even a technology specialist, within a law firm, a law degree is needed for career advancement. In the United States doing things like filing appeals from the USPTO to courts, negotiating licenses to use patented technology, or suing those who breach contracts requires a law degree.

**Patricia Granahan** started working toward a Juris Doctor (J.D.) degree right after completing her Sc.D. at the Harvard School of Public Health. “From the time I was in high school, I knew I wanted to combine an advanced degree in science with a law or business degree,” she recalls. “I didn’t necessarily know what I’d do with the combination.”

The timing turned out to be perfect. In 1980, while Granahan was in law school, Ananda Chakrabarty was awarded a US patent for genetically engineered *Pseudomonas* he created while working for General Electric Company. The landmark case, which allowed for the first time the patenting of a living organism, paved the way for a flurry of biotechnology patents.

Granahan, who was initially hired as a part-time scientific consultant by a firm in the Boston area, soon had “more work in biotechnology patents than I could do,” she recalls. Indeed the field of biotechnology patent law quickly grew, along with the demand for lawyers with advanced degrees in biology and medicine. **continued »**

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Philip Webber

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Focus on Asia—March 21

Vaccine Research—March 28

## Postdoctoral Opportunities

“This is a career that gives you a chance to really thrive. It’s not a practice where you’ll ever be able to say, ‘Now I know everything.’”  
—Patricia Granahan



Granahan stayed with the same firm for 16 years, moving up the ranks while raising her two children. After working as an in-house lawyer at the newly established Whitehead Institute for Biomedical Research and as a partner in a Boston firm, in 2006 Granahan joined Wolf, Greenfield & Sacks, PC, where she is currently a shareholder.

Twenty-five years after starting her career in patent law, she still really enjoys what she does. “The biotech aspect of patent law has changed tremendously since I started in practice and the rules of practice have changed just as significantly. We have to keep up with changes in both the science and the law,” she says. “This is a career that gives you a chance to really thrive. It’s not a practice where you’ll ever be able to say, ‘Now I know everything.’”

### Balancing School and Work

Unlike Granahan, **Karen Brown** obtained her law degree on the job. After completing a postdoc at the National Institutes of Health in the field of cell biology, Brown decided to test the waters as a patent examiner with the USPTO in Alexandria, Virginia. “I thought that if I liked it at the USPTO, it would give me an entry into patent law. If I hated it, I could go back to the bench,” she recalls.

But she liked it, and three years later she started applying to law firms. One of the things she was looking for was a firm with a patent agent program in place, where the firm would pay for employees to attend law school.

In April 1998, she moved to Fish & Neave in New York City and started law school the same year, graduating four years later. “I worked all day and went to school at night,” she explains. “It was brutal. I was feeling that I was behind in every aspect of my life.”

After working as an associate at Fish & Neave and then in-house at a large pharmaceutical company, three years ago Brown got a position as an in-house attorney with the biotech company Vertex Pharmaceuticals in Cambridge, Massachusetts. “At the firm I was dealing with a wide variety of technologies. Now my focus is narrower but I am involved more deeply,” she explains. “With every patent application, I have to consider how it fits into the intellectual property strategy of the company.”

Another difference is that she does not have to worry about billing a certain number of hours each week, the typical way law firms keep track of their lawyers’ accomplishments. “With two young children I did not want to be billing 60 hours a week,” says Brown. “There are times when I take work home or work on weekends, but I try hard not to do that.”

### Wide Range of Opportunities

**Erich Veitenheimer** also used the USPTO as a stepping-stone to a career in patent law. A senior corn breeder with DeKalb Genetics

International, he was alerted by a colleague to an ad for a job with the USPTO for a patent examiner with knowledge of plant biotechnology. “It sounded fascinating,” says Veitenheimer, who was offered the job during his initial phone call inquiring about the post.

After being at the USPTO for two years Veitenheimer started attending Georgetown University Law Center in the evenings, with the USPTO helping to pay the tuition fees. “It was a tremendously long day but the stimulation was worth it,” he says. “Walking into my classes I felt my brain cells tingling.”

When two years later the USPTO changed its policy and reduced the amount it would pay for its examiners to attend law school, Veitenheimer became a patent agent with a mid-size patent firm in Virginia willing to support his studies. He subsequently moved to a smaller firm and then a large international firm, where he progressed all the way to partner. In 2005, he became a partner in the Washington, D.C., office of Cooley Godward Kronish, LLP, a national technology firm that serves primarily small to mid-size biotech companies.

Veitenheimer says patent law allows scientists to stay close to the science on topics ranging from stem cells, to cancer and HIV drugs, to RNA interference. “The range of topics is tremendous,” says Veitenheimer. “You get to know the work intimately.”

And the opportunities go beyond patent law. “About half of our lawyers do pro bono work, but not in intellectual property law,” says Veitenheimer. “They come back to the firm after being in front of a judge in, for example, an immigration case and they are very excited and energized.”

**Boston University**  
[www.bu.edu](http://www.bu.edu)

**Cooley Godward Kronish, LLP**  
[www.cooley.com](http://www.cooley.com)

**DeKalb Genetics International**  
[www.asgrowanddekalb.com](http://www.asgrowanddekalb.com)

**Fish & Neave  
(now Ropes & Gray LLP)**  
[www.ropesgray.com](http://www.ropesgray.com)

**Frank B. Dehn & Co.**  
[www.frankbdehn.com](http://www.frankbdehn.com)

**General Electric Company**  
[www.ge.com](http://www.ge.com)

**Georgetown University  
Law Center**  
[www.law.georgetown.edu](http://www.law.georgetown.edu)

**Harvard School of Public Health**  
[www.hsph.harvard.edu](http://www.hsph.harvard.edu)

**National Cancer Institute/NIH**  
[www.nci.nih.gov](http://www.nci.nih.gov)

**Reed Smith, LLP**  
[www.reedsmith.com](http://www.reedsmith.com)

**USPTO**  
[www.uspto.gov](http://www.uspto.gov)

**Vertex Pharmaceuticals**  
[www.vpharm.com](http://www.vpharm.com)

**Warwick University, UK**  
[www.warwick.ac.uk](http://www.warwick.ac.uk)

**Whitehead Institute for  
Biomedical Research**  
[www.wi.mit.edu](http://www.wi.mit.edu)

**Wolf, Greenfield & Sacks**  
[www.wgslaw.com](http://www.wgslaw.com)

#### Additional online resources

**American Intellectual Property  
Law Association**  
[www.aipla.org](http://www.aipla.org)

**European Patent Office**  
[www.epo.org/about-us.html](http://www.epo.org/about-us.html)

**UK Intellectual Property Office**  
[www.ipo.gov.uk/patent](http://www.ipo.gov.uk/patent)

**US Patent and Trademark Office**  
[www.uspto.gov](http://www.uspto.gov)

#### Law-specific job sites

[www.insidecareers.co.uk](http://www.insidecareers.co.uk)

[www.ipjobs.co.uk](http://www.ipjobs.co.uk)

[www.intelproplaw.com/  
Jobs.shtml](http://www.intelproplaw.com/ Jobs.shtml)

## Patent Law in Europe

Scientists are also in high demand in law firms outside the United States. While working toward a Ph.D. at Warwick University in the UK, **Philip Webber** attended a course meant to teach chemical patent attorneys about biotechnology. “I did not know anything about patent law at that time. It was purely fortuitous that my university was running these kinds of courses and that I attended one of them,” he recalls.

The course sparked an interest in the subject. Webber, who had already decided he did not want to continue with bench research, started sending out applications to several law firms. He was hired by the London-based Frank B. Dehn & Co. in the spring of 1992.

A year after joining his firm, Webber passed a set of exams, called “foundation papers,” which test understanding of basic concepts such as patents, trademarks, and copyright. He then passed two additional sets of longer and more challenging exams that qualified him to practice patent law within the British and European patent offices.

However, because UK patent attorneys, unlike their American counterparts, do not have law degrees, they have limited rights to go in front of a judge to handle, for example, patent litigation. Such cases are generally handled by solicitors and barristers, who are less likely to have formal scientific training. British intellectual property solicitors typically practice in all areas of technology with biotech being only a small portion of it.

Regardless of the country of practice, a career in patent law requires good analytical and communication skills. “The ability to write clearly and concisely is paramount,” says Webber. “Often we give job applicants a test where they are given something simple like a desk staple remover and told to describe it in everyday language.”

Another important skill is to keep all the balls in the air at the same time. “At any one time I have 50 or so patent applications going through the exam process. A lot of the deadlines are set in stone. And I am bombarded with e-mails from clients all the time,” says Webber. “You have to be a very organized person and to be able to constantly reprioritize.”

Good people skills are also helpful as patent agents and attorneys deal with a variety of people on a daily basis, from scientists to business executives, and patent examiners to other lawyers.

## Related Careers

Patent law is not the only career available to scientists interested in intellectual property issues. Some scientists land jobs at the patent office and review patent applications for a living. Others find satisfying careers as technology transfer officers at universities or research institutes. **Sean Lee** joined the tech transfer office at Boston University after having worked at two startup companies. “There is so much going on in technology transfer,” says Lee. “For me it was like a kid walking into a candy store.”

Lee is the first point of contact for physical scientists who have made a discovery that may have commercial value. “In technology transfer you need to look at the world a bit differently than when you are doing research,” says Lee. “You don’t want to ask what is most interesting, but rather who really cares about this and is going to pay for it.”

Lee’s experience is not unlike that of **Lisa Finkelstein**, who joined the technology transfer office at the National Cancer Institute (NCI)



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— Sean Lee

## Finding a Job in Patent Law

Although scientists are in high demand in law firms, the competition for a job is stiff. An ad typically gets 100 to 200 applications. For applicants to stand out, it is important that they have not only good scientific credentials, but also a demonstrated interest in intellectual property.

Scientists who have become patent agents and lawyers advise postdocs and students interested in a career in patent law to take a look at some patent applications; these are freely downloadable from patent office websites. In addition, they should take advantage of courses in intellectual property law being offered at many universities. Some technology transfer offices at universities also offer internships or volunteer work. Finally, many major cities have an intellectual property association that provides opportunities for networking.

of the US National Institutes of Health (NIH) in September 2005. She acts as a conduit for scientists at several NCI labs to assist with submitting internal paperwork on inventions. “Anyone at NCI can contact our office for guidance and advice on potentially patentable new discoveries,” she says. She also drafts material transfer and collaboration agreements for the labs on her docket.

Some of her colleagues moved on to technology transfer offices in universities or were hired by pharmaceutical companies or law firms. “Once you get the training here, you are pretty much set for wherever you want to go,” she says. “There are a lot of options.”

Regardless of the path they take, scientists who have pursued intellectual property law as a career say it nourishes their love for science. “It is a great fit for people who enjoy science and want to have the ability to read about it, talk about it, and be involved in it, but without actually doing it,” says Finkelstein.

*Laura Bonetta is a freelance writer based in the Washington, D.C., area.*

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