

Career in focus

Biotechnology Patent Law

In this issue, CNSPY executive board member Paul Cao presents answers to frequently asked questions about careers in Biotechnology Patent Law. Paul is a postdoctoral associate in the Department of Pathology and is currently studying the biological mechanisms of lung cancer metastasis. He is currently an intern at the Yale Office of Cooperative Research and is interested in a career path where science, business, and law intersect. Paul interviewed Dr. Naira Rezende, a PhD graduate from Weill Cornell who has successfully transitioned into a career where she is applying her science expertise in biotechnology patent law. She kindly shared her first-hand experience and prospects in this arena.

FAQs

What is Biotechnology Patent Law?

“A patent is a property right granted by the Government of the United States of America to an inventor “to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States” for a limited time in exchange for public disclosure of the invention when the patent is granted.” (United States Patent and Trademark Office, www.uspto.gov)

Biotechnology patent law focuses on obtaining and defending the property rights granted by patents on technologies developed by scientists working in the biosciences. There are opportunities in biotechnology patent law for both patent lawyers (who combine a law degree and a background in science or technology) and others that do not require a law degree, including becoming a patent examiner, serving as a scientific advisor for a law firm or legal department of a company, and working in technology transfer at a university.

Why switch?

Patent-related careers are a viable option for those looking to intersect both science and law, and in particular those who enjoy evaluating science innovation.

What positions can one hold in patent law?

Many PhD scientists in this field are employed as *technology specialists* or *scientific advisors*. Responsibilities include working with inventors, researchers and attorneys to evaluate invention disclosures, assess patentability, and draft patent applications. As one progresses in this career, most law firms will encourage you to take the Patent Bar Exam to qualify as Patent Agents. In addition, for some PhD scientist career paths in IP/patent law, in particular working as a patent attorney, it is required or highly beneficial to attend law school and obtain a JD (juris doctorate). Some of the key duties of patent attorneys include advising clients about contracts, prosecuting patent applications, and participating in courtroom trials.

Where will you work?

Besides law firms, jobs in biotechnology patent law include working for companies, state and federal governments (e.g. USPTO), private institutes, non-government organizations and technology transfer offices at universities.

How to make the transition?

Those interested in biotechnology patent law should seek internship opportunities that will expose them to the field. These might include internships in science & technology policy or technology transfer.

While you are at Yale

Apply to the Yale [Technology Ventures Program](#). Additionally, the [Science & Technology Policy Fellowships](#) of the American Academy of Arts and Sciences (AAAS) are likely to provide valuable credentials.

Interview with Dr. Naira Rezende

Scientific Advisor at the Wilson Sonsini Goodrich and Rosati law firm in New York, NY.

Please describe your career path to date.

I received my PhD in Molecular Biology and Biochemistry from the Weill Cornell Graduate School of Medical Sciences in 2012. As a graduate student, I was also a Howard Hughes Medical Institute Gilliam Fellow (2005-2010). Currently, I am a scientific advisor for a law firm in New York City that works with life science companies.

How did you become interested in patent law?

In 2011, I applied for a science policy internship opportunity at the National Academy of Sciences (NAS). I was selected to be a Technology Policy Fellow and took the following fall semester off from the lab to go to Washington D.C., where I had the opportunity to work with the Committee on Science Technology and Law (CSTL). At my time there, I interacted with staff members of the NAS, and with different people and organizations who influence or make science and technology policy. It was a valuable learning experience. One day, I received a circulating email to the PhD graduate student body for an open position as a scientific advisor for the law firm I am currently at. I think that patent law can influence and drive the direction of the medical landscape (i.e. drug discovery, business development, research, and education), and I pursued the opportunity to do so.

What is a typical day like? What are your responsibilities and how do you see yourself progressing in this career path?

I am pretty much busy as soon as I step in the front door. I usually work an average of 10 hours a day and I also work most weekends. My responsibilities include assisting in evaluating invention disclosures, drafting patent specifications and claims, preparing and prosecuting applications, performing freedom to operate analysis, and working on proceedings in the United States Patent and Trademark Office (USPTO). Most law firms highly encourage you to take the Patent Bar Exam. The USPTO requires that all those applying for registration (agents or attorneys) meet three requirements: (1) good moral character, (2) legal, scientific and technical qualifications necessary to render valuable service, and (3) competence to advise and assist patent applicants in

the presentation and prosecution of patent applications. A college graduate with a bachelor's degree in a recognized technical subject, for example, biology, chemistry, physics, computer science, and most engineering degrees can typically satisfy the requirement for technical qualifications. Approval in the Patent Bar allows a PhD scientist to practice patent-related careers as a Patent Agent or a Technology Specialist. Many people entering this field with PhDs might choose to become a patent attorney. In some instances, law firms will help you obtain your law degree part-time and classes are taken during the evenings. Getting a JD can open a number of additional career opportunities. Some people stay at the law firm as patent attorneys, participating in prosecution and litigation, and try to become partner. Some people might decide to leave and open their own patent law private practice. Some become counsel members of pharmaceutical, biotechnology, technology companies, and academic institutions. Others might decide to pursue something outside of law, such as pursuing positions in the private sector, biotech companies, or becoming chief scientific officers (CSO) that head scientific research operations at organizations and biotech companies. I find my work enjoyable, rewarding, and stimulating with plenty of opportunities available for career growth in the future. The most exciting part of my job is that I am in touch with cutting edge science projects.

What advice would you give to graduate students & postdocs in science, who wish to make the transition into patent law?

For those interested in making this transition, I would encourage them to seek opportunities such as doing an internship with the Technology Transfer Office at their institution, or an internship with biotech and/or technology companies. These types of internships will give you a glimpse of what patent law might entail. It wasn't until I immersed myself in the field that I began to think of intellectual property as a career path. More important is to seek, reach out, and network with other science PhDs already in patent law. These connections will help you get a better understanding of what it's like to work in patent law from a science PhD perspective.

Thank you for reading!

CNSPY Core Leadership Team

Co-founders - Thihan Paddukavidana (President), Rebecca Brown*

*Executive Board - Michael Bradley**, Shalini Nag#, Jacqueline Heiss, Paul Cao*, Kerry Hollands#, Meghan Kerrisk, Yixiao Zou, Yan Gao*, Joydeep Banerjee.*

Career Liaison - Thomas Magaldi, Irene Reynolds Tebbs

*Contributors; #Editors - The Career Network Spyglass