ArentFox Schiff LLP
Attorneys

Julia Fountain, Ph.D.

PATENT AGENT

Julia works in IP at the forefront of chemistry, biology, and life sciences.



Practices

Patent
— Chemical & Life Sciences

Education

Tufts University, PhD, 2023
University of South Carolina, BS, cum laude, 2017

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Julia is a Patent Agent in the firm's Boston office, where she supports clients across the pharmaceutical, biotechnology, and chemical industries with sophisticated patent preparation, prosecution, and portfolio development strategy. She leverages a strong interdisciplinary background spanning organic chemistry, bioorganic chemistry, bioconjugation, biomaterial engineering, and cellular systems to help innovators secure and strengthen intellectual property protection for complex technologies. Julia's practice focuses on small molecules, biologics, advanced materials, and chemical processes.

Previous Work

Prior to joining ArentFox Schiff, Julia was a patent agent at an IP boutique firm in Boston, where she focused on patent preparation and prosecution in the life sciences sector.

Her academic background spans organic and bioorganic chemistry, with particular experience in small molecule design and synthesis, protein modification, and biomaterials development. Julia earned her Ph.D. in Chemistry from Tufts University, where her research included the synthesis of novel trivalent iodonium reagents for fluorination of carbohydrates, amino acids, peptides, and proteins. She also has extensive experience in carbohydrate chemistry and mammalian cell culture.

Julia is an inventor, holding a U.S. Patent related to the construction of hydrophobic silk fibroin, and is an active member of the American Chemical Society.

Publications, Presentations & Recognitions

Publications

- U.S. Patent No. 12,403,176, Inventor, "Hydrophobic Silk Fibroin Compositions and Methods of Making the Same"
- "Fluorinated Hydrophobic Silk as Platelet Compatible Coatings for Platelet Conservation and

Storage Applications," *Advanced Functional Materials* (July 2025)

- "Towards Non-Stick Silk: Tuning the Hydrophobicity of Silk Fibroin Protein," *Chembiochem*, Vol. 23 (Sept. 2022)

Presentations

- J. Fountain, "Towards non-stick silk: controlling the hydrophobicity of silk fibroin protein," ACS National Meeting and Expo, Sand Diego, CA (March 2022)
- J. Fountain, "Controlling the Hydrophobicity of Silk Fibroin Protein," Pfizer Chemistry Connect, Boston, MA (Nov. 2022)
- J. Fountain, "Fabrication of silk fibroin with tunable hydrophobicity," Boston Symposium on Organic & Bioorganic Chemistry, Boston, MA (Nov. 2021)
- M. Hawker, J. Fountain, "Fabrication of Silk Fibroin with Tunable Hydrophobicity," American Chemical Society National Meeting and Exposition, September 2020

Boards, Memberships & Certifications

Certifications

- USPTO Patent Agent – Registration No. 83,756

Life Beyond the Law

Outside of work, Julia enjoys visiting National Parks, reading, skiing and running half-marathons.

Court Admissions

US Patent and Trademark Office