



Shabnam Sharifzadeh, Ph.D.

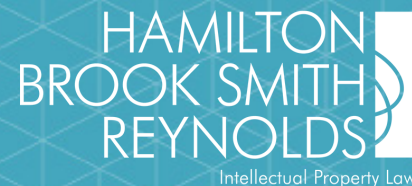
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PRACTICE AREAS

- Patents
- Design Patents
- IP Litigation

TECHNOLOGIES

- Biotechnology & Life Sciences
- Pharmaceuticals
- Chemistry
- Biologics & Immunotherapies
- Medical Devices
- Bioinformatics
- Materials Science
- Medical Imaging

EDUCATION

- Doctor of Pharmacy, Tehran University of Medical Sciences
- Ph.D. in Chemical Biology, University of Minnesota

Shabnam assists clients in preparing and prosecuting patent applications in different areas of life sciences and chemistry. Her scientific experience spans the fields of organic chemistry, biochemistry, chemical biology and microbiology. She has been engaged in multiple interdisciplinary projects and interinstitutional collaborations worldwide.

Before joining the firm, Shabnam worked as a technology specialist at a general practice law firm, where she assisted clients with patent preparation and prosecution as well as IP due diligence in a range of technologies, including small molecules, peptides, oligonucleotides, and antibody therapeutics.

Prior to starting her career in intellectual property, Shabnam conducted postdoctoral research in the Department of Cancer Biology at Dana-Farber Cancer Institute, where she conceptualized and pioneered the development of a novel proteomics-based bioanalytical method to identify chemical protein modifications (drug-target adducts). In addition, Shabnam was a Technology Transfer Intern at the Belfer Office of Dana-Farber Innovations, where she contributed to the design and execution of an institute-wide innovation portfolio project.

Shabnam earned her Ph.D. from the University of Minnesota, where she developed chemical biology tools to study microbial systems. Shabnam's graduate research included the design and synthesis of chemical probes for an essential class of antibacterial targets known as Penicillin-Binding Proteins (PBPs). During her doctoral research at the University of Minnesota, Shabnam earned an Interdisciplinary Doctoral Fellowship, which recognizes graduate students with scholarly achievements in interdisciplinary fields. As a pharmacy student at Tehran University of Medical Sciences, Shabnam performed medicinal chemistry research focused on the design and synthesis of small molecule inhibitors of acetylcholinesterase, as candidates for Alzheimer's disease pharmacotherapy.

Shabnam is the co-inventor of two issued U.S. patents, and has authored a book chapter and several scientific publications that have appeared in peer-reviewed journals, including American Chemical Society Chemical Biology, Nature Chemical Biology, Chemical Society Reviews, and Methods in Enzymology.

PUBLISHED PATENTS

- Carlson, E. E., Sharifzadeh, S. Antibiotic-based conjugates and methods of use thereof. U. S. Patent Number 11,022,602, Issued June 1, 2021.
- Carlson, E. E., Sharifzadeh, S., Shokri, A., Shirley, J. D. Lactone-based probes and methods of use thereof. U.S. Patent Number 10,822,318, Issued October 14, 2020.

PUBLICATIONS

- Chan, W. C., Sharifzadeh, S., Buhrlage, S. J., & Marto, J. A. Chemoproteomic methods for covalent drug discovery. *Chemical Society Reviews*. 2021, 50(15), 8361-8381.
- Sharifzadeh, S., et al. Chemical Tools for Selective Activity Profiling of Bacterial Penicillin-Binding Proteins. *Methods Enzymol.* 2020, 638, 27-55.
- Sharifzadeh, S., Dempwolff, F., Kearns, D. B., & Carlson, E. E. Harnessing β -Lactam Antibiotics for Illumination of the Activity of Penicillin-Binding Proteins in *Bacillus subtilis*. *ACS Chem. Biol.* 2020, 5, 1242-1251.
- Sharifzadeh, S., Shirley, J. D., Carlson, E. E. Activity-Based Protein Profiling Methods to Study Bacteria: The Power of Small Molecule Electrophiles. *Curr. Top. Microbiol. Immunol.* 2018, 420, 23-48. (Book chapter)
- Sharifzadeh, S., et al. Novel Electrophilic Scaffold for Imaging of Essential Penicillin-Binding Proteins in *Streptococcus pneumoniae*. *ACS Chem. Biol.* 2017, 12, 2849-2857.