






# Bill Spencer, Ph.D.

## Technology Specialist, Patent Agent

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## Overview

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### About Bill

William Spencer, Ph.D., is a technology specialist and patent agent in the New York office of Fish & Richardson P.C. Prior to joining the firm, Dr. Spencer amassed 13 years of research experience in target- and methods-oriented synthetic organic chemistry across 12 diverse projects in both industrial and academic settings, including five years of research experience in the pharmaceutical industry.

Dr. Spencer prepares and prosecutes patent applications, conducts freedom-to-operate studies, conducts patentability searches and analyses, and performs additional functions to support the patent portfolios of a range of clients. Dr. Spencer's practice emphasizes small-molecule drugs, formulations, medicinal chemistry, and inorganic chemistry.

### Focus Areas

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### Services

- Patent
- Patent Prosecution

### Industries

- Chemicals
- Life Sciences

## Education

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Ph.D., Organic Chemistry, University of Rochester (2012)

M.S., Organic Chemistry, University of Rochester (2010)

M.S., Chemistry, Rochester Institute of Technology (2008)

B.S., Chemistry, Rensselaer Polytechnic Institute (2001)

## Insights

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### Publications

Spencer, W. T.; Vaidya, T.; Frontier, A. J. "Beyond the Divinyl Ketone: Innovations in the Generation and Nazarov Cyclization of Pentadienyl Cation Intermediates," *Eur. J. Org. Chem.*, 2013, 3621-3633. (Top ten most accessed article May–June 2013)

Spencer, W. T.; Frontier, A. J. "A Convenient Cycloaromatization Protocol for Synthesis of Polysubstituted Phenol Derivatives: Method Development and Mechanistic Studies," *J. Org. Chem.* 2012, 77, 7730-7736.

Malona, J. A.; Cariou, K. C.; Spencer, W. T.; Frontier, A. J. "Total Synthesis of ( $\pm$ )-Rocaglamide via Oxidation-Initiated Nazarov Cyclization," *J. Org. Chem.* 2012, 77, 1891-1908.

Spencer, W. T.; Levin, M. L.; Frontier, A. J. "Oxidation-Initiated Nazarov Cyclization of Vinyl Alkoxyallenes," *Org. Lett.* 2011, 13, 414-417.

Cioffi, C. L.; Spencer, W. T.; Richards, J. J.; Herr, R. J. "Generation of 3-Pyridyl Biaryl Systems via Palladium-Catalyzed Suzuki Cross-Couplings of Aryl Halides with 3-Pyridylboroxin," *J. Org. Chem.* 2004, 69, 2210-2212.

### Presentations

Spencer, W.T.; Levin, M.L.; Frontier, A.J. "Oxidation-Triggered Nazarov Cyclization of Vinyl Alkoxyallenes." SYCAM Departmental Seminar at the University of Rochester, Rochester, NY, January 11, 2012.

Spencer, W.T.; Levin, M.L.; Frontier, A.J. "Oxidation-Triggered Nazarov Cyclization of Vinyl Alkoxyallenes." Poster presentation at the 42nd National Organic Symposium, Princeton, NJ, June 8, 2011.

Spencer, W.T. "The Development of N-Heterocyclic Carbene-Boranes as Tunable Radical Reducing Agents." Departmental Seminar at the University of Rochester, Rochester, NY, February 11, 2011.

Frontier, A.J.; Spencer, W.T.; Huang, J.; Malona, J.A.; LeBoeuf, D. "New Twists in Nazarov Cyclization Chemistry." Presentation at the 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, June 2-5, 2010. Abstract: NERM-315

Collison, C.G.; Dorn, S.; Swartzenberg, J.L.; Spencer, W.T.; Smith, J.; Agosto, M. "Studies Toward the Total Synthesis of Trocheliophorolide A," Poster presentation at the 238th National Meeting of the American Chemical Society, Washington, DC, August 16-20, 2009.

Spencer, W.T.; Collison, C.G.; Smith, J.N.; Agosto, M.; Cawthray, I. "Studies Toward the Total Synthesis of a Novel Gamma-Lactone," Poster presentation at the 234th National Meeting of the American Chemical Society, Boston, MA, August 21, 2007.

Spencer, W.T.; Agosto, M.; Cawthray, I.; Collison, C.G. "Studies Toward the Total Synthesis of a Novel Gamma-Lactone," Poster presentation at the 34th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, October 6, 2006. Abstract: NRM-449

Cioffi, C.L.; Spencer, W.T.; Richards, J.J.; Herr, R.J. "Generation of 3-pyridyl biaryl systems via palladium-catalyzed Suzuki cross-couplings of aryl halides with 3-pyridylboroxin," Poster presentation at the 31st Northeast Regional Meeting of the American Chemical Society, Saratoga Springs, NY, June 15, 2003.

## Recognition

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Weissberger Fellowship

Sherman-Clarke Fellowship

D. Walters Teaching Award

Robert L. Craven Outstanding Teaching Assistant Scholarship

## Memberships & Affiliations

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National Association of Patent Practitioners

Austin Intellectual Property Law Association

American Chemical Society