

Sarah M. Scarry

University of North Carolina at Chapel Hill
UNC Eshelman School of Pharmacy
Division of Chemical Biology and Medicinal Chemistry
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EDUCATION

- | | |
|----------------------|---|
| August 2006-May 2012 | UNIVERSITY OF MISSISSIPPI , University, MS
Department of Medicinal Chemistry
Ph.D. in Pharmaceutical Sciences emphasis in Medicinal Chemistry
Dissertation Title: <i>Synthesis of HIV-1 Integrase Inhibitors</i>
Mentor: Professor John M. Rimoldi |
| August 2002-May 2006 | WAYNESBURG UNIVERSITY , Waynesburg, PA
Chemistry Department
B.S. in Chemistry
Honors: Cum Laude
Mentor: Professor Robert B. LaCount |

RESEARCH EXPERIENCE

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|-------------------------|--|
| March 2016-present | UNIVERSITY OF NORTH CAROLINA , Chapel Hill, NC
Research Assistant Professor , Division of Chemical Biology and Medicinal Chemistry
Mentor: Professor Jeffrey Aubé |
| June 2015-March 2016 | UNIVERSITY OF NORTH CAROLINA , Chapel Hill, NC
Postdoctoral Research Associate , Division of Chemical Biology and Medicinal Chemistry
Mentor: Professor Jeffrey Aubé |
| August 2013-May 2015 | UNIVERSITY OF KANSAS , Lawrence, KS
Postdoctoral Research Fellow , Department of Medicinal Chemistry
Mentor: Professor Jeffrey Aubé |
| July 2012-July 2013 | BOSTON UNIVERSITY , Boston, MA
Postdoctoral Research Fellow , Department of Chemistry
Mentor: Professor Aaron B. Beeler |
| August 2006-May 2012 | UNIVERSITY OF MISSISSIPPI , University, MS
Graduate Research Assistant , Department of Medicinal Chemistry
Mentor: Professor John M. Rimoldi |
| August 2008-August 2009 | UNIVERSITY OF MISSISSIPPI , University, MS |

Natural Products Neuroscience Pre-Doctoral Fellow, The Center of Research Excellence in Natural Products Neuroscience (CORE-NPN)
Mentor: Professor John M. Rimoldi
In Vitro Hepatic Metabolism Studies of the Cytotoxic Sesquiterpene Lactones of *Centaurea Repens*

August 2006-August 2008 **UNIVERSITY OF MISSISSIPPI**, University, MS
UNIVERSITY OF SOUTHERN MISSISSIPPI, Hattiesburg, MS
Associate of the NSF Integrative Graduate Education and Research Traineeship (IGERT)
Mentor: Professor John S. Williamson
The IGERT program supported a new model of graduate education that offered interdisciplinary training through collaborative research (polymer science, medicinal chemistry, and entrepreneurial training).

September 2005-May 2006 **SEPARATION AND DESIGN GROUP**, Waynesburg, PA
Chemistry Research Internship
Mentor: Professor Robert B. LaCount

June 2005-August 2005 **UNITED STATES DEPARTMENT OF ENERGY**, Richland, WA
Chemistry Pre-Service Teaching Program Internship
Mentor: Robert S. Disselkamp, Ph.D

September 2003-May 2006 **WAYNESBURG UNIVERSITY**, Waynesburg, PA
Chemistry Department Laboratory Assistant

PUBLICATIONS

Ballinger, Elaine; Mosier, John; Hartman, Travis; Burns-Huang, Kristin; Gold, Ben; Morris, Roxanne; Goullieux, Laurent; Blanc, Isabelle; Vaubourgeix, Julien; Lagrange, Sophie; Fraisse, Laurent; Sans, Stéphanie; Couturier, Cedric; Bacqué, Eric; Rhee, Kyu; **Scarry, Sarah M.**; Aubé, Jeffrey; Yang, Gaungbin; Ouerfelli, Ouathek; Schnappinger, Dirk; Ioerger, Thomas R.; Engelhart, Curtis A.; McConnell, Jennifer A.; McAulay, Kathrine; Fay, Allison; Roubert, Christine; Sacchettini, James; Nathan, Carl, Opposing reactions in coenzyme A metabolism sensitize *Mycobacterium tuberculosis* to enzyme inhibition, *Science*, *accepted*.

Ho, Jo-Hao; Stahl Edward L.; Schmid, Cullen L.; Scarry, Sarah M.; Aubé, Jeffrey; Bohn, Laura, G protein signaling–biased agonism at the κ -opioid receptor is maintained by striatal neurons, *Sci. Signal.*, **2018**, *11*, eaar4309.

Wang, Mengzhe; McNitt, Christopher D.; Wang, Hui; Ma, Xiaofen; **Scarry, Sarah M.**; Zhanhong, Wu; Popik, Vladimir V.; Li, Zibo, The efficiency of ^{18}F labelling of prostate specific membrane antigen ligand via strain-promoted azide–alkyne reaction: reaction speed versus hydrophilicity, *ChemComm*, **2018**, *54*, 7810.

Brust, Tarsis F.; Morgenweck, Jenny; Kim, Susan A.; Rose, Jamie H.; Locke, Jason L.; Schmid, Cullen L.; Zhou, Lei; Stahl, Edward L.; Cameron, Michael D.; **Scarry, Sarah M.**; Aubé, Jeffrey; Jones, Sara R.; Martin, Thomas J.; Bohn, Laura M., Biased agonists

of the kappa opioid receptor suppress pain and itch without causing sedation or dysphoria, *Sci. Signal.*, **2016**, 9, ra117.

Scarry, Sarah M.; Lovell, Kimberly L.; Frankowski, Kevin, J.; Bohn, Laura M., Aubé, Jeffrey, Synthesis of kappa opioid antagonists based on pyrrolo[1,2- α]quinoxalinones using an *N*-arylation/condensation/oxidation reaction sequence, *J. Org. Chem.*, **2016**, 81, 10538.

Chajkowski, Sarah M.; Mallela, Jaya; Waston, David E.; Wang, Jing Jing.; McCurdy, Christopher R.; Rimoldi, John .M.; Shariat-Madar, Ziaeddin, Highly selective hydrolysis of kinins by recombinant prolylcarboxypeptidase, *Biochem. Biophys. Res. Commun.*, **2011**, 405, 338.

Nillos, Mae Grace; **Chajkowski, Sarah**; Rimoldi, John M.; Gan, Jay; Lavado, Ramon; Schlenk, Daniel., Stereoselective biotransformation of permethrin to estrogenic metabolites in fish, *Chem. Res. Toxicol.*, **2010**, 23, 1568.

Paul, Shiby; Mizuno, Cassia S.; Lee, Hong Jin; Zheng, Xi; **Chajkowski, Sarah**; Rimoldi, John M.; Conney, Allan; Suh, Nanjoo; Rimando, Agnes M., In vitro and in vivo studies on stilbene analogs as potential treatment agents for colon cancer. *Eur. J. Med. Chem.*, **2010**, 45, 3702.

Disselkamp, Robert S.; **Chajkowski, Sarah M.**; Boyles, Kelly R.; Hart, Todd R.; Peden, Charles H. F., Cavitating ultrasound hydrogenation of water-soluble olefins employing inert dopants: studies of activity, selectivity and reaction mechanisms. *Chemical Industries* (Boca Raton, FL, United States), (**2007**), 115 (Catalysis of Organic Reactions), 213.

Boyles, K. R.; **Chajkowski, S. M.**; Disselkamp, R. S.; Peden, C. H. F., An examination of the H/D isotope substitution effect on selectivity and activity in the cavitating ultrasound hydrogenation of aqueous 3-buten-2-ol and 1, 4-pentadien-3-ol on Pd-black. *Ind. Eng. Chem. Res.*, **2006**, 45, 4015.

Invited Reviews:

Scarry, Sarah Chajkowski; Rimoldi, John M., Monoamine oxidase A and B substrates: probing the pathway for drug development. *Future Med. Chem.*, **2014**, 6, 697.

Scarry, Sarah Chajkowski; Rimoldi, John M., Discovery and development of prolylcarboxypeptidase (PRCP) inhibitors for cardiometabolic disorders. *Annu. Rep. Med. Chem.*, **2013**, 48, 91.

POSTERS AND PRESENTATIONS

Poster: **Sarah M. Scarry**, Drew J. Cesta, Tigran Abramyan, Ben S. Gold, Landys Lopez-Quezada, Kohta Saito, Dmitri Kireev, Selin Somersan Karakaya, Carl F. Nathan, Jeffrey Aubé, Strained amine heterocycles as non-hydrolyzable β -lactam surrogates: Mechanistic probes for *Mycobacterium tuberculosis*, 256th ACS National Meeting in Boston, MA, August 19-23, 2018.

Poster: **Sarah M. Scarry**, Drew J. Cesta, Ben S. Gold, Landys Lopez-Quezada, Carl F. Nathan, and Jeffrey Aubé, *Strained amine heterocycles as non-hydrolyzable β -lactam surrogates: mechanistic and structure-activity probes for Mycobacterium tuberculosis*, Tuberculosis Drug Discovery and

Development Gordon Research Conference, Lucca (Barga), IT, June 25-30, 2017.

Podium: **Sarah M. Scarry**, Drew J. Cesta, Ben S. Gold, Landys Lopez-Quezada, Carl F. Nathan, and Jeffrey Aubé, *Strained amine heterocycles as non-hydrolyzable β -lactam surrogates: mechanistic and structure-activity probes for *Mycobacterium tuberculosis**, Tuberculosis Drug Discovery and Development Gordon Research Seminar, Lucca (Barga), IT, June 24-25, 2017.

Poster: **Sarah M. Scarry**, Kimberly Lovell, Kevin J. Frankowski, Huiyong Ma, Stephen R. Slauson, John M. Streicher, Lei Zhou, Angela Phillips, Thomas E. Prisinzano, Laura M. Bohn, and Jeffrey Aubé, *Synthetic efforts toward kappa opioid receptor antagonists*, The Ninth Annual Chapel Hill Pharmaceutical Sciences Conference, Chapel Hill, NC, October 15, 2015.

Podium: **Sarah M. Scarry**, Kimberly Lovell, Kevin J. Frankowski, Stephen R. Slauson, Huiyong Ma, John M. Streicher, Lei Zhou, Angela Phillips, Thomas E. Prisinzano, Laura M. Bohn and Jeffrey Aubé, *Synthetic efforts toward kappa opioid receptor antagonists*, CBMC Summer Retreat and Mini-Symposium, Chapel Hill, NC, August 17, 2015.

Podium: **Sarah M. Scarry**, Kimberly Lovell, Kevin J. Frankowski, Stephen R. Slauson, Huiyong Ma, John M. Streicher, Lei Zhou, Angela Phillips, Thomas E. Prisinzano, Laura M. Bohn and Jeffrey Aubé, *Synthetic efforts toward kappa opioid receptor antagonists*, Kappa Therapeutic Conference 2015, Chapel Hill, NC, April 20-24, 2015.

Poster: **Sarah M. Scarry**, Lei Zhou, Kimberly M. Lovell, Kevin J. Frankowski, Stephen R. Slauson, Angela M. Phillips, John M. Streicher, Edward Stahl, Cullen L. Schmid, Peter Hodder, Franck Madoux, Michael D. Cameron, Thomas E. Prisinzano, Jeffrey Aubé, Laura M. Bohn, *Development of functionally selective agonists at the kappa opioid receptor (KOR)*, University of Kansas Chemical Biology Symposium, Lawrence, KS, October 10, 2014.

Poster: **Sarah M. Scarry** and Aaron B. Beeler, *Synthesis of sinuleptolide-inspired natural product fragments*, Boston University Organic Chemistry Department Graduate Student Recruiting Weekend, Boston, MA, March 1, 2013.

Podium: **Sarah M. Chajkowski**, Robert K. Peel and John M. Rimoldi, *The reaction of the sesquiterpene lactone repin with various amine nucleophiles*, The 37th Annual MALTO Medicinal Chemistry and Pharmacognosy Meeting, University, MS, May 23-25, 2010.

Poster: **Sarah M. Chajkowski**, Zia Shariet-Madar, Jaya Mallela, Jing Jing Wang and John M. Rimoldi, *Prolylcarboxypeptidase catalyzed conversion of bradykinin to BK 1–8 and BK 1–7: LC-MS kinetic profiling and analysis*, The 37th Annual MALTO Medicinal Chemistry and Pharmacognosy Meeting, University, MS, May 23-25, 2010.

Poster: **Sarah Chajkowski** and John M. Rimoldi, *In vitro hepatic metabolism of repin: a cytotoxic sesquiterpene lactone from *C. repens**, NIH-COBRE External Advisory Board Meeting, University, MS, March 23-25, 2009.

Abstract: Mae Grace Nillos, John Rimoldi, **Sarah Chajkowski**, Daniel Schlenk and Jay Gan, *Enantioselective estrogenic effect of pyrethroid insecticides*, Society of Environmental Toxicology and Chemistry: World Congress, Sydney, Australia, August 3-8, 2008.

Poster: **Sarah Chajkowski**, *Bridging the gaps at the interface of medicinal chemistry and polymer science*, NSF IGERT 2007 Annual Project Meeting, Arlington, VA, May 13-15, 2007.

AWARDS AND HONORS

2014	Chemical Biology Symposium Poster Award (University of Kansas)
2012	Dissertation Fellowship (University of Mississippi)
2011	Associated Student Body Funding Award for Journal Club (University of Mississippi)
2011	American Association of Colleges of Pharmacy WalMart Scholar
2011	University of Mississippi School of Pharmacy Teaching Assistant of the Year
2010	Nobles-Sam Award (University of Mississippi)
2010	Robert A. Magarian Outstanding Podium Presentation Award (MALTO Conference)
2006	American Chemical Society Certification (Waynesburg University)
2002-2006	Bonner Foundation Service Scholarship (Waynesburg University)
2002	Chemistry Department Scholarship (Waynesburg University)
2002	Pittsburgh Tribune Review Outstanding Young Citizen Award

PROFESSIONAL AFFILIATIONS

2017-Present	International Society of Heterocyclic Chemistry
2011-Present	Kappa Psi Pharmaceutical Fraternity
2010-Present	American Association of Colleges of Pharmacy
2010-Present	American Association of Pharmaceutical Scientists
2006-Present	American Chemical Society Division member: Chemical Toxicology, Medicinal Chemistry, and Organic Chemistry
2002-2006	American Chemical Society Student Affiliate
2003-2006	Society of Analytical Chemists of Pittsburgh Student Affiliate (Chair 2005-2006)

PROFESSIONAL DEVELOPMENT

August 16, 2018	15th Annual Teaching and Learning Conference <i>Busting the myths of teaching and learning</i> , Elon University, Elon, NC
March 17-19, 2016	Training in Neurotherapeutics Discovery and Development for Academic Scientists course Sponsored by NINDS Grant 1R25NS077582 (awarded to UC Davis), Bethesda, MD Course Directors: Michael A. Rogawski, MD, Ph.D., Barbara Slusher, Ph.D., and Karl Scheidt, Ph.D.

November 13-15, 2012 **Advion Compact Mass Spectrometer Expression Training**
Hosted by Advion, Inc., Ithaca, NY
Course Director: Jack Henion, Ph.D. (Co-founder, CSO and Chairman)

PROFESSIONAL EXPERIENCE

January 2014-May 2015 **UNIVERSITY OF KANSAS**, Lawrence, KS
Aubé Research Group Weekly Problem Set
Organized and maintained weekly problem set meetings for Aubé research group graduate students and postdoctoral fellows.

November 2012-July 2013 **BOSTON UNIVERSITY**, Boston, MA
Organic Chemistry Division Student Colloquium Series
Worked closely with two graduate students to start and maintain a student organized seminar series for the Organic Division of The Department of Chemistry.

January 2013-May 2013 **BOSTON UNIVERSITY**, Boston, MA
Graduate CH644-Medicinal Chemistry
Worked closely with Professor Aaron Beeler as he developed his course curriculum, class lectures, and exams. Independently developed and taught several class lectures.

January 2010-May 2011 **UNIVERSITY OF MISSISSIPPI**, University, MS
Graduate Teaching Assistant
MEDC317: Pharmacogenetics and Pharmacoinmunology

August 2006-May 2012 **UNIVERSITY OF MISSISSIPPI**, University, MS
Medicinal Chemistry Department Journal Club
Started and facilitated the student organized journal club meetings for The Department of Medicinal Chemistry.

August 2006-August 2008 **UNIVERSITY OF MISSISSIPPI**, University, MS
Senator in Graduate Student Council
Represented the graduate students from The Department of Medicinal Chemistry.

UNDERGRADUATE AND GRADUATE STUDENTS MENTORED

I have had the opportunity of training students in the laboratory. These students come from diverse backgrounds, and have spent time in the laboratory working on various research projects with me.

August 2018-
December 2018 **UNIVERSITY OF NORTH CAROLINA**, Chapel Hill, NC
Sam Ottavi, BBSP rotation student

November 2016-
February 2017 **UNIVERSITY OF NORTH CAROLINA**, Chapel Hill, NC
Drew Cesta, CBMC rotation student

May 2013-July 2013 **BOSTON UNIVERSITY**, Boston, MA
Tiara Bloodworth, NSF REU student, Bay State College

May 2011-August 2011 **UNIVERSITY OF MISSISSIPPI**, University, MS
Jasmine T. Collins, SRIU Student, Tougaloo College

January 2007-April 2010 **UNIVERSITY OF MISSISSIPPI**, University, MS
Robert Peel, Pharm.D. Student, University of Mississippi

SERVICE

University of North Carolina, Chapel Hill, NC
EHS Lab & Chemical Safety Committee
(July 2018-present)

University of North Carolina, Chapel Hill, NC
Drug Discovery Session Leader at the PharmAlliance Research Symposium
(September 2017-November 2017)

University of North Carolina, Chapel Hill, NC
CBMC Research Assistant Professor Committee (April 2017-present)

University of North Carolina, Chapel Hill, NC
CBMC Student Advisory Committee (August 2016-May 2017)

University of Mississippi, University, MS
AACP Student Community Engaged Service Awards Reviewer 2011-2012

University of Mississippi, University, MS
ACS University of Mississippi Local Chapter Student Outreach Committee 2011

University of Mississippi, University, MS
NIH-NCRR COBRE CORE-NPN Pre-doctoral Fellowship ad hoc Study Section 2009-2010

PROPOSALS AND FELLOWSHIPS

Submitted (funded):

March 2017 **Inspired by Nature: Enhancing the UNC Compound Collection**
Principal Investigator: Kevin J. Frankowski
CO-PI: Sarah M. Scarry
Granting Agency: The Eshelman Institute for Innovation
Amount: \$200,000
Duration: 06/01/2017-05/31/2019

Submitted (not funded):

March 2018 **Novel Covalent Inhibitors of RAS Proteins**
Principal Investigator: Sarah M. Scarry
CO-PI: Jeffrey Aubé and Sharon Campbell
Granting Agency: The Eshelman Institute for Innovation
Amount: \$200,000
Duration: 06/01/2018-05/31/2020

- March 2013** **Synthesis and Target Identification of Sinuleptolide-Inspired Natural Product Fragments as Anticancer Probes**
Principal Investigator: Sarah M. Scarry
CO-PI: Aaron B. Beeler
Granting Agency: Damon Runyon Postdoctoral Fellowship
Amount: \$150,000
Duration: 07/01/2013-06/30/2016
- December 2012** **Synthesis and Target Identification of Sinuleptolide-Inspired Anticancer Probes**
Principal Investigator: Sarah M. Scarry
CO-PI: Aaron B. Beeler
Granting Agency: L'Oréal USA Fellowships for Women in Science
Amount: \$58,670
Duration: 10/24/2013-10/24/2014
- October 2012** **Synthesis and Target ID of Sinuleptolide-Inspired Anticancer Probes**
Principal Investigator: Sarah M. Scarry
CO-PI: Aaron B. Beeler
Granting Agency: American Cancer Society Postdoctoral Fellowship
Amount: \$150,000
Duration: 07/01/2013-06/30/2016