

Shauna M. Paradine, Ph.D. [she/her|they/them]

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Professional Experience

- Assistant Professor**, *University of Rochester*, 2018 – present
- NIH Postdoctoral Fellow**, *Harvard University*, 2015 – 2018
Research Advisor: Prof. Eric N. Jacobsen
- NSF Graduate Research Fellow**, *University of Illinois at Urbana-Champaign*, 2008 – 2015
Research Advisor: Prof. M. Christina White
- DAAD ACS-RISE Scholar**, *Universität Mainz, Germany*, 2007
Research Supervisor: Prof. Bernhard Witulski
- Visiting Undergraduate Scholar**, *Cardiff University, Wales, UK*, 2006
Research Supervisor: Prof. Thomas Wirth
- Undergraduate Research Assistant**, *Albion College*, 2004 – 2008
Research Advisor: Prof. Andrew N. French

Education

- University of Illinois at Urbana-Champaign**, Urbana, IL
Ph.D. in Chemistry, 2015
- Albion College**, Albion, MI
B.A. in Chemistry – Summa cum Laude, with Albion College Honors, 2008

Honors and Awards

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| 2023 | Eli Lilly Grantee Award |
| 2023 | UR Course Development Fellowship |
| 2023 | NIH Maximizing Investigators' Research Award (MIRA) |
| 2022 | NSF CAREER Award |
| 2020 | Thieme Chemistry Journals Award |
| 2015-2018 | Ruth L. Kirschstein NIH Postdoctoral Fellow (NIGMS) |
| 2012-2013 | Philanthropic Educational Organization (P.E.O.) Scholar Award |
| 2009-2012 | NSF Graduate Research Fellow |
| 2008-2009 | Sylvia Stoesser Fellow (UIUC Department of Chemistry) |
| 2008 | David L. Randall Award for the Outstanding Senior Chemistry Major (Albion) |
| 2008 | The Phi Beta Kappa Society |
| 2007-2008 | Marvin F. Grostic Endowed Scholarship in Chemistry (Albion) |
| 2007 | DAAD ACS-RISE Scholar |
| 2007 | IUPAC Undergraduate International Summer Research ACS Poster Award |

2006	USTFCCCA All-Academic, Women's Cross-Country
2006	Mark E. Putnam Memorial Outstanding Sophomore Chemistry Major Award (Albion)
2004	ACS Kalamazoo Section Competitive Chemistry Exam, 2 nd Place scholarship winner

Publications

[Google Scholar profile](#)

[PubMed Profile](#)

** denotes that authors contributed equally; underline denotes undergraduate co-authors*

Independent Career:

15. McNichol, C.P.; Borrego, L.; Ertekin, E.; **Paradine, S.M.** "Catalyst-Controlled, Regiodivergent Aminooxygenation Reactions of Dienes." *ChemRxiv* **2025**, DOI: [10.26434/chemrxiv-2025-530gt](https://doi.org/10.26434/chemrxiv-2025-530gt). [also submitted, under review]
14. O'Neil, S.E.; Monteferrante, O.E.; Stanley, B.M.; **Paradine, S.M.** "Generation of Polysubstituted Tetrahydrofurans via Urea-Enabled, Pd-Catalyzed Olefin Heteroannulation." *ChemRxiv* **2025**, DOI: [10.26434/chemrxiv-2025-xdbwz](https://doi.org/10.26434/chemrxiv-2025-xdbwz). [also submitted, under review]
13. **Paradine, S.M.** "Ureas and their derivatives as ligands in transition metal catalysis." *Tetrahedron*, **2025**, 184, 134781. DOI: [10.1016/j.tet.2025.134781](https://doi.org/10.1016/j.tet.2025.134781) [invited contribution to special issue in honor of Professor Eric Jacobsen, 2024 Tetrahedron Prize for Creativity in Organic Chemistry]
12. DeCicco, E.M.; Tlapale Lara, N.; **Paradine, S.M.** "Incorporating Azaheterocycle Functionality in Aerobic, Copper-Catalyzed Alkene Aminooxygenation." *RSC Advances*, **2024**, 14, 28822-28826. DOI: [10.1039/D4RA06178K](https://doi.org/10.1039/D4RA06178K) [cited 3 times]
 - Also appearing in: *ChemRxiv* **2024**, DOI: 10.26434/chemrxiv-2024-8ptxs.
11. Monteferrante, O.E.; Houghtling, K.E.; Kropiwnicki, A.R.; **Paradine, S.M.** "Urea Ligand-Promoted Chainwalking Heteroannulation for the Synthesis of 6- and 7-Membered Azaheterocycles." *Chemistry – A European Journal*, **2024**, e202402587. DOI: [10.1002/chem.202402587](https://doi.org/10.1002/chem.202402587) [cited 3 times]
 - Also appearing in: *ChemRxiv* **2024**, DOI: 10.26434/chemrxiv-2024-5dz98.
10. Rodina, D.*; Vaith, J.*; **Paradine, S.M.** "Ligand Control of Regioselectivity in Palladium-Catalyzed Heteroannulation Reactions of 1,3-Dienes." *Nature Communications*, **2024**, 15, 5433. DOI: [10.1038/s41467-024-49803-y](https://doi.org/10.1038/s41467-024-49803-y) [cited 3 times]
 - Also appearing in: *ChemRxiv* **2023**, DOI: 10.26434/chemrxiv-2023-bztxr
9. Canfield, A.M.; Rodina, D.; **Paradine, S.M.** "Dienes as Versatile Substrates for Transition Metal-Catalyzed Reactions." *Angewandte Chemie, International Edition*, **2024**, 63, e202401550. DOI: [10.1002/anie.202401550](https://doi.org/10.1002/anie.202401550) [cited 37 times]
8. McNichol, C.P.*; DeCicco, E.M.*; Canfield, A.M.; Carstairs, D.; **Paradine, S.M.** "Copper-Catalyzed, Aerobic Aminooxygenation of Cinnamyl N-Alkoxy Carbamates via Substrate-Promoted Catalyst Activation." *ACS Catalysis*, **2023**, 13, 6568-6573. DOI: [10.1021/acscatal.3c01431](https://doi.org/10.1021/acscatal.3c01431) [cited 15 times]
 - Also appearing in: *ChemRxiv* **2023**, DOI: 10.26434/chemrxiv-2023-2shgz
7. Houghtling, K.E.; Canfield, A.M.; **Paradine, S.M.** "Convergent synthesis of dihydrobenzofurans via urea ligand-enabled heteroannulation of o-bromophenols with 1,3-

dienes.” *Organic Letters*, **2022**, 24, 5787-5790. DOI: [10.1021/acs.orglett.2c02301](https://doi.org/10.1021/acs.orglett.2c02301) [**cited 10 times**]

6. Vaith, J.; Rodina, D.; Spaulding, G.C.; **Paradine, S.M.** “Pd-Catalyzed Heteroannulation Using *N*-Arylureas as a Sterically-Undemanding Ligand Platform.” *Journal of the American Chemical Society*, **2022**, 144, 6667-6673. DOI: [10.1021/jacs.2c01019](https://doi.org/10.1021/jacs.2c01019) [**cited 19 times**]
 - Among top 20 “Most Read Articles” in *JACS* for April and May 2022

Mentored Work:

5. **Paradine, S.M.***; Ronchi, E.*; Jacobsen, E.N. “Enantioselective, multicomponent synthesis of homoallylic amines enabled by hydrogen bonding and dispersive interactions.” *Journal of the American Chemical Society*, **2021**, 143, 7272-7278. [**cited 28 times**]
 - Also appearing in: *ChemRxiv* **2021**, DOI: 10.26434/chemrxiv.14333459
4. **Paradine, S.M.***; Griffin, J.R.*; Zhao, J.; Petronico, A.L.; Miller, S.; White, M.C. “A Manganese Catalyst for Highly Reactive yet Selective Intramolecular C(sp³)-H Amination.” *Nature Chemistry*, **2015**, 7, 987-994. [**cited 308 times**]
 - News of the Week, *Chemical & Engineering News*, 12 October 2015
 - Editors’ Choice, *Science*, 30 October 2015 (350, pp. 525)
 - “White-Paradine Catalyst” available from Sigma-Aldrich: Product #799688
3. **Paradine, S.M.**; White, M.C. “Iron-Catalyzed Intramolecular Allylic C-H Amination.” *Journal of the American Chemical Society*, **2012**, 134, 2036-2039. [**cited 413 times**]
2. Altermann, S.M.; Richardson, R.D.; Page, T.K.; Schmidt, R.K.; Holland, E.; Mohammed, U.; **Paradine, S.M.**; French, A.N.; Richter, C.; Bahar, A.M.; Witulski, B.; Wirth, T. “Catalytic Enantioselective α -Oxysulfonylation of Ketones Mediated by Iodoarenes.” *European Journal of Organic Chemistry*, **2008**, 5315-5328. [**cited 94 times**]
1. Richardson, R.D.; Page, T.K.; Altermann, S.; **Paradine, S.M.**; French, A.N.; Wirth, T. “Enantioselective α -Oxytosylation of Ketones Catalysed by Iodoarenes.” *Synlett*, **2007**, 538-542. [**cited 119 times**]

Patents

1. White, M.C.; **Paradine, S.M.**; Griffin, J.R.; Zhao, J.; Petronico, A.L. “General Catalyst for C-H Functionalization.” U.S. Patent 9,770,711, **2017**.

Invited Lectures

- 2025: February:** City College of New York, New York City, NY; New York University, New York City, NY; University of Illinois Urbana-Champaign, Urbana, IL; University of California-Irvine, Irvine, CA. **March:** University of Michigan, Ann Arbor, MI; Michigan State University, Lansing, MI. **April:** Princeton University, Princeton, NJ; **May:** University of Chicago, Chicago, IL; University of California Los Angeles, Los Angeles, CA; Scripps Research Institute, La Jolla, CA. **July:** Telluride Workshop, “Accelerating Reaction Discovery,” Telluride, CO. **August:** Bristol Myers-Squibb, New Brunswick, NJ. **September:** Genentech, South San Francisco, CA. **November:** University of California-Riverside, Riverside, CA.
- 2024: February:** Dartmouth College, Dartmouth, NH. **May:** AbbVie, Chicago, IL [virtual seminar]. **July:** Organic Reactions and Processes GRC [selected poster talk], Smithfield, RI. **September:** Virginia Tech University, Blacksburg, VA. **October:** University of

Wisconsin-Madison, *Madison, WI*. **November:** Ohio State University, *Columbus, OH*.
December: Johnson & Johnson, *La Jolla, CA* [virtual seminar].

2023: **February:** Rochester Institute of Technology, *Rochester, NY*. **March:** University of Buffalo, *Buffalo, NY*. **May:** Cornell University, *Ithaca, NY*. **June:** ACS Northeast Regional Meeting, *Boston, MA*, Symposium: "Enablement of Novel and Sustainable Cross-Coupling Methodologies for Increasing Saturation." **August:** ACS National Meeting, *San Francisco, CA*, Symposium: Division of Organic Chemistry Academic Young Investigator Award Symposium. **October:** Colgate University, *Hamilton, NY*; Eli Lilly, *Indianapolis, IN*. **November:** Albion College, *Albion, MI*.

2022: **March:** Florida Heterocyclic and Synthetic Chemistry Conference, *Gainesville, FL*. **July:** Stereochemistry GRC [selected poster talk], *Newport, RI*. **August:** Organic Syntheses Workshop on Synthetic Organic Chemistry, *Steamboat Springs, CO*. **October:** Syracuse University, *Syracuse, NY*; Iowa State University, *Ames, IA*.

2020: **February:** Eric Jacobsen 60th Birthday Symposium, *Cambridge, MA*.

2019: **September:** SUNY-Brockport, *Brockport, NY*. **November:** SUNY-Fredonia, *Fredonia, NY*.

Pre-2018: Alma College, *Alma, MI*, *October 2012*; Albion College (Seemon Pines Award Lecture), *Albion, MI*, *October 2012*; Albion College, *Albion, MI*, *October 2017*.

Teaching Experience

University of Rochester

Organic Chemistry II [CHEM 204]

Spring 2026

Frontiers of Research in Chemistry & Biology [CHEM 409]

Fall 2025

Elements of Communication [CHEM 472]

Spring 2024, Fall 2025

First-Year Organic Chemistry [CHEM 171]

Fall 2022, Fall 2023, Fall 2024

First-Year Organic Chemistry Laboratory [CHEM 173]

Fall 2021

Organotransition Metal Catalysis in Organic Synthesis I/II [CHEM 436/438]

Spring 2020, Spring 2021, Spring 2022, Spring 2023, Spring 2024

Organic Reactions [CHEM 435]

Fall 2018, Fall 2019

University of Illinois at Urbana-Champaign

Organotransition Metal Chemistry [CHEM 538]

Spring 2014 (Head TA)

Organic Chemistry for Majors Laboratory [CHEM 237]

Fall 2008 (TA), Spring 2009 (Head TA)

Albion College

Introductory Organic Chemistry Laboratory [CHEM 211, CHEM 212]

Fall 2006, Fall 2007, Spring 2008 (TA)

General Chemistry Laboratory [CHEM 121]

Spring 2007 (TA)

Service

Department/University Service

- 2025-present** Chemistry Dept. Graduate Studies Committee – Chair
- April 2024** Instructor Spotlight: Teaching with Images – workshop lead
- 2023-present** UR Beckman Scholars Program – co-PI
- 2023-present** Preceptor, NIH T32 Medical Scientist Training Program
- 2022-2025** Chemistry Dept. Faculty Recruiting Committee – Member
- 2021-2025** Chemistry Dept. Graduate Studies Committee – Member
- 2021-present** Chemistry Dept. Seminar Committee – Member
- 2020-2025** Chemistry Dept. CHEMeliora Committee – Member
- Fall 2019** CAS 207 Instructor – STEM outreach-based course
- 2019-present** Reviewer: University Research Award, Provost Fellowship, Schwartz Discover Grant, Hooker Fellowship
- 2019-present** Preceptor, NIH T32 Chemical-Biology Interface Training Program
- 2018-2021** Chemistry Dept. Graduate Recruiting Committee – Member

Professional Service

- 2025-present** NIGMS Reviewer: MRA-E
- Jul 2024** Organic Reactions & Processes GRC – discussion leader
- 2024-present** *Tetrahedron/Tetrahedron Letters* Early Career Editorial Advisory Board – member
- Oct 2022** ACS Northeast Regional Meeting – symposium co-chair
- Jul 2022** Stereochemistry GRC – discussion leader
- 2020-present** Chemistry Women Mentorship Network (Chem WMN) – Mentor
- 2020-present** ACS Petroleum Research Fund – Reviewer
- 2020-present** NSF Review Panelist: NSF-GRFP, NSF-ASCEND, NSF Division of Chemistry
- 2018-present** Reviewer: *J. Am. Chem. Soc.*, *ACS Cat.*, *Org. Lett.*, *J. Org. Chem.*, *Synlett*, *Angew. Chem. Int. Ed.*, *J. Nat. Prod.*, *Eur. J. Org. Chem.*, *Helv. Chim. Act.*, *Nat. Commun.*, *Sci. Adv.*, *Nat. Comm. Chem.*, *Tet. Chem.*

Outreach and Other Service

- Nov 2024** National Chemistry Week school outreach event – volunteer
- Jul 2023** Rochester Central Library “World at Work” STEAMM event
- Feb 2020** North Shore CC – STEM Club featured speaker
- Feb 2020** Rochester Community Girl Scout Troop – Women in STEM visit

Mentoring/Advising

Current research group

Graduate Students: Owen Monteferrante (2021), Shannon O’Neil (2021), Roberto Leon Baxin (2023), Livan Borrego (2024), Neively Tlapale Lara (2024), Arundhuti Chakraborty (2024)

Undergraduate Students: Brooke Stanley ('26), Erhan Ertekin ('26), Risa Kunitake ('27), Iris Gardner ('27)

Group alumni

Postdoctoral Scholars: Dr. Patrick Harrington (2019-2021, current: medicinal chemistry, Curia)

Graduate Students: Emily Lasher (MS 2020, current: clinical research associate, IQVIA), Dr. Kaitlyn Houghtling (PhD 2023, current: scientist, Alsym Energy), Dr. Jakub Vaith (PhD 2023, current: scientist, Hexagon Bio), Dr. Dasha Rodina (PhD 2024, current: senior scientist, Pfizer), Dr. Amanda Canfield (PhD 2024, current: chemistry technology specialist, Hodgson Russ), Lauren Morano (MS 2024, current: TBD), Dr. Ethan DeCicco (PhD 2024, current: patent agent, Cooley Law), Dr. Caitlyn McNichol (PhD 2025, current: leadership development program, BASF)

Undergraduate Students: Jisoo Woo (2018-2020, BS Chemistry 2020, current: postdoctoral fellow, Prof. Eric Jacobsen), Brina Patel (2018, BS ChemE 2020, current: Automation Validation Engineer, Panacea Technologies), Yeonseong (Catherine) Seo (2019-2021, BA Chemistry + BS Molecular Genetics 2021, current: PhD student, UC-Irvine), Daniel Carstairs (2020-2022, BS Chemistry 2022, current: chemist II, Planet Pharma), Jacob Ritterman (2021, BS Chemistry 2023), Kathryn Hardin (2021, BS Anthropology 2023), Aidan Kropiwnicki (2021-2023, BS Chemistry + BA Environmental Sciences 2023, current: PhD student, Brown University), Joseph DeRosa (2022-2023, BA Chemistry 2025), Priscilla Peters (2022-2025, BA Chemistry 2025, current: dental school, UPenn)

Visiting Scholars: Gregory Spaulding (UR postbac 2019-2021, current: MD student, SUNY-Downstate), Nicholas Kaltenhauser (REU 2023, current: PhD student, University of Rochester), Neively Tlapale Lara (iScholar 2023, current: PhD student, University of Rochester), Wesley Gibson (REU 2024, current: PhD student, University of Rochester)

Prior to Rochester

Harvard University: Dr. Elisabetta Ronchi (Graduate, current: senior advisor, Eli Lilly)

University of Illinois at Urbana-Champaign: Dr. Shannon Miller (Undergraduate, current: PI/fellow, Scripps Research Institute), Dr. Jennifer Griffin (Graduate, current: senior scientist, Neomorph), Dr. Jinpeng Zhao (Graduate, current: research investigator, Corteva), Dr. Aaron Petronico (Graduate, current: battery safety engineer, HP)

Albion College: Dr. Stacy Capehart (Undergraduate, current: director, Mosaic Biosciences), Dr. Matthew Logan (Undergraduate, current: principal scientist, Vividion Biosciences)

Current & Recently Completed Funding

Eli Lilly, ACC Lilly Grantee Award

Amount: \$100,000

Grant Period: 01/12/2024 – 01/11/2026

Role: PI

National Institutes of Health (NIGMS), Maximizing Investigators' Research Award (MIRA)

Grant: R35GM150584

Title: Discovering catalytic strategies for transition metal-catalyzed reactions to construct topologically complex organic scaffolds

Amount: \$1,694,000

Grant Period: 08/01/2023 – 07/31/2028

Role: PI

University of Rochester, University Research Award (URA)

Title: Aerobic, radical functionalization reactions via ligand-enabled copper catalysis
Amount: \$74,000
Grant Period: 07/01/2023 – 06/30/2025
Role: PI

National Science Foundation, Faculty Career Development Program (CAREER)

Grant: 22-38081
Title: CAREER: Establishing ligand platforms to enable selective, catalytic olefin difunctionalization reactions for preparation of diverse heterocyclic scaffolds
Amount: \$770,000
Grant Period: 07/01/2023 – 06/30/2028
Role: PI

Arnold and Mabel Beckman Foundation, Beckman Scholars Program

Title: University of Rochester Beckman Scholars Program
Amount: \$156,000
Grant Period: 05/01/2023 – 08/31/2026
Role: co-PI

National Science Foundation, Major Research Instrumentation Program (MRI)

Grant: 22-15973
Title: MRI: Acquisition of a CryoProbe 500 MHz Nuclear Magnetic Resonance (NMR) Spectrometer
Amount: \$605,314
Grant Period: 08/01/2022 – 07/31/2024
Role: co-PI

American Chemical Society Petroleum Research Fund, Doctoral New Investigator

Grant: 62449-DNI
Title: Chiral manganese carboxylate complexes for catalytic, enantioselective oxidative radical olefin addition reactions
Amount: \$110,000
Grant Period: 09/01/2021 – 08/31/2023
Role: PI

Professional Affiliations

American Chemical Society
Phi Beta Kappa