LAURA M. WYSOCKI

Howard Hughes Medical Institute
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EDUCATION

2003–2008 **Ph.D., Organic Chemistry**
University of Wisconsin–Madison, Madison, WI
Dissertation: "Progress Toward the Total Synthesis of Trilobin and Trilobacin and Investigation of the Synthesis of Phorboxazole B"

1999–2003 **B.A., Chemistry, Integrated Science Program** with honors, *magna cum laude*
Northwestern University, Evanston, IL
Honors Thesis: "Development of an Improved Method for Solid–Phase Synthesis of Cyclic Peptides"

RESEARCH EXPERIENCE

2008-present **Postdoctoral Associate**
Howard Hughes Medical Institute, Janelia Farm Research Campus, Ashburn, VA
Advisor: Dr. Luke D. Lavis
- Developed a modular synthesis of caged xanthene dyes via reduced intermediates
- Promoted the growth of the Lavis lab as the first group member
- Performed microwave reactions and reverse-phase chromatography purification

2003–2008 **Graduate Research Fellow**
University of Wisconsin–Madison, Madison, WI
Advisor: Dr. Steven D. Burke
- Optimized Pd(0)-mediated/chiral ligand-controlled bis(cycloetherification) to form the core of trilobin and trilobacin in 2 steps, 84% yield, and 20:1 selectivity
- Explored challenging differentiation of similar functional groups on small molecules
- Co-designed, developed, and completed a concise, convergent, scalable synthesis of the C20–C46 subunit of the phorboxazoles utilizing a unique bicyclic silyl orthoester
- Maintained, taught group members, and used chiral analytical and semi-prep HPLC
- Performed air-sensitive experiments and used high field NMR spectrometers

2003 **Summer Research Internship**
Lucent Technologies, Bell Labs, Murray Hill, NJ
Advisor: Dr. Joanna Aizenberg
- Investigated the effect of the concentration of magnesium ions on the formation of calcite crystals on various self-assembled monolayers
- Operated and prepared samples for scanning electron microscope

2002–2003 **Undergraduate Researcher**
Northwestern University, Evanston, IL
Advisor: Dr. Richard B. Silverman
- Investigated the development of a "traceless linker" from silicon to aryl carbon
- Performed solid phase organic chemistry reactions

TEACHING EXPERIENCE

2010 Undergraduate Mentor, Howard Hughes Medical Institute
- Mentored the summer internship of a University of California-Berkeley undergraduate

2005–2006 Undergraduate Mentor, University of Wisconsin–Madison
- Directed and managed the honors thesis projects of two undergraduates

2004–2005 Instructor of *Organic Boot Camp*, University of Wisconsin–Madison
- Co-created the weekly lecture/problem solving session designed to give undergraduate students a more focused look at organic chemistry topics in an informal environment, without any faculty guidance

2004–2005 Organic Chemistry Lecture Teaching Assistant, University of Wisconsin–Madison

2003 General Chemistry Lab Teaching Assistant, University of Wisconsin–Madison

2003–2004 Private Tutor in Physics, Chemistry, Biology, and Math

2003 Guest Lecturer, Evanston Township High School
- Undertook independent study of teaching integrated science at the high school level

ACTIVITIES AND AFFILIATIONS

2003–present American Chemical Society

2008–present Janelia Academic Research Society

2005–2008 Synthetic Joint Group Meeting Coordinator
- Organized literature and research presentations involving four research groups for biweekly meetings and maintained web-based schedule and problem sets

2006–2007 Samuel M. McElvain Lecture Series Representative
- Hosted two speakers from academia and industry for a student-focused seminar
- Arranged formal seminars, student research presentations, and meal-time gatherings

2000–2003 Kappa Delta Sorority, Northwestern University
- President (2001–2002), Assistant Treasurer 2000–2001)

2000–2003 United States Academic Decathlon Assistant Coach

2000 Peer Advisor, Northwestern University

FELLOWSHIPS

2003–2008 Chemistry–Biology Interface NIH Training Grant
University of Wisconsin–Madison

2003–2007 Graduate Research Program for Women Fellowship
Lucent Technologies Foundation

2003 McElvain Fellowship
University of Wisconsin–Madison

2002 Undergraduate Summer Research Grant
Northwestern University

AWARDS AND HONORS

2005 Outstanding Teaching Assistant Award
University of Wisconsin–Madison

2002 Phi Beta Kappa Honor Society
Northwestern University

2002 Gamma Sigma Alpha Honor Society
Northwestern University

2001–2003	Rho Lambda Honor Society *Northwestern University*
2001–2003	Order of Omega Honor Society *Northwestern University*
1999–2003	National Society of Collegiate Scholars *Northwestern University*
1999	National Merit Scholar

PUBLICATIONS

1. Wysocki, L. M.; Tkachuk, A. N.; Brown, T. A.; Betzig, E.; Lavis, L. D. Synthesis of Caged Fluoresceins and Rhodamines via Reduced Intermediates. (paper in preparation)
2. Lucas, B. S.; Wysocki, L. M.; Gopalsamuthiram, V.; Hawk, L. L.; Burke, S. D. Total Synthesis of Phorboxazole B. (full paper in preparation)
3. Wysocki, L. M.; Dodge, M. W.; Voight, E. A.; Burke, S. D. A Stereochemically General Approach to Adjacent Bis(tetrahydrofuran) Cores of Annonaceous Acetogenins. *Org. Lett.* **2006**, *8*, 5637–5640.
4. Han, Y.-J.; Wysocki, L. M.; Thanawala, M. S.; Siegrist, T.; Aizenberg, J. Template-Dependent Morphogenesis of Oriented Calcite Crystals in the Presence of Magnesium Ions. *Angew. Chem., Int. Ed.* **2005**, *44*, 2386–2390.

PRESENTATIONS

1. Wysocki, L. M.; Betzig, E.; Lavis, L. D. Facile Synthesis of Caged Xanthene Dyes via Leuco Derivatives. Poster Presentation at the American Chemical Society 239th National Meeting & Exposition, San Francisco, CA, March 2010.
2. Wysocki, L. M.; Burke, S. D. Efficient Synthesis of the Bis(tetrahydrofuran) Ring Core of Trilobin and Trilobacin and Progress Toward the Synthesis of the Natural Products. Poster Presentation for the Academic Employment Initiative at the American Chemical Society 232nd National Meeting & Exposition, San Francisco, CA, September 2006.
3. The Hetero-Ene Reaction: Development and Synthetic Utility. 3rd Year Departmental Seminar, University of Wisconsin–Madison, Madison, WI, October 2005.
4. Wysocki, L. M.; Burke, S. D. Progress Toward the Synthesis of Trilobin and Trilobacin. Poster Presentation at the American Chemical Society 229th National Meeting & Exposition, San Diego, CA, March 2005.

REFERENCES

Luke D. Lavis, Ph.D.
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