Sheryl L. Wiskur

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University of South Carolina
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EDUCATION

Doctor of Philosophy, Organic Chemistry, University of Texas at Austin, 2003
Adviser: Professor Eric V. Anslyn
Dissertation: "Boronic Acid and Guanidinium Based Synthetic Receptors: New Applications in Differential Sensing"

Bachelor of Science, Chemistry, Arizona State University, Tempe, AZ, 1997
Cum Laude
Undergraduate Research Adviser: Professor Devens Gust

University of Michigan at Flint, 1992-1994
Honors College

PROFESSIONAL EXPERIENCE

2016-Present	**Associate Professor**	**University of South Carolina**
2008-2016	**Assistant Professor**	**University of South Carolina**
2005-2008	**Research Assistant Professor**	**University of South Carolina**
2003-2005	**Postdoctoral Associate** **Adviser**: Professor Gregory C. Fu	**Massachusetts Institute of Technology**
1999-2003	**Research Assistant** **Adviser**: Professor Eric V. Anslyn	**University of Texas at Austin**
1998-2002	**Teaching Assistant**	**University of Texas at Austin**
1997	**Research Assistant/Sponsored by NSF** (Center for the Study of Early Events in Photosynthesis)	**Arizona State University**
1996	**Internship in Chemistry Department**	**General Motors, Flint, Michigan**

FUNDING

USC Office of Research Aspire Award - 2017
USC Office of Research Aspire Award - 2015
USC Office of Research Aspire Award – (Co-PI L Shimizu) 2015
SC EPSCoR SANS Award, 2015
SC EPSCoR Diversity Award, 2012
NSF Early Faculty Development CAREER Award (2011-2016)
ACS – Petroleum Research Fund – Type G
USC Research Foundation – Research and Productive Scholar
South Carolina Scientific – Synthesis and purification of analytical standards
USC Research Foundation, Magellan Scholar Award – Undergraduate Research (3)

HONORS AND AWARDS

NSF CAREER Award (2011-2016)
Division of Organic Chemistry Young Academic Award 2014
USC AI Faculty Partner of the Year 2014
Breakthrough Rising Star – University of South Carolina 2013

In Focus Alumni Magazine Highlight, Spring/Summer 2012
Organic, Reactions, & Processes - Gordon Conference Invited Speaker (2008)
Organic, Reactions, & Processes - Gordon Conference Discussion Leader (2007)
Centenary Assistant Professor (2005-2008)
Dorothy A. Banks Fellowship – UT Austin (2002)
Welch Academic Excellence Fellowship – UT Austin (2001)
Welch Excellence Teaching Award – UT Austin (1999)
NSF Undergraduate Fellowship in Photosynthesis – ASU (1997)
Honors College at The University of Michigan at Flint (1992-1994)
University of Michigan Academic/Honors Scholarship (1992-1994)

PROFESSIONAL ASSOCIATIONS

American Chemical Society, Division of Organic Chemistry
Association of Women in Chemistry (AWIS)
Alpha Chi Sigma, Chemical Fraternity

PRESENTATIONS

Academic Invited Seminars

Tulane University, New Orleans, LA, Dept. of Chemistry and Biochemistry, 2015
Rutgers, New Brunswick, NJ, Dept. of Chemistry and Biochemistry, 2015
University of Alabama – Tuscaloosa, AL, Dept. of Chemistry and Biochemistry, 2014
University of Texas – Austin, Dept. of Chemistry and Biochemistry, 2014
University of Richmond, Richmond, VA, Dept. of Chemistry and Biochemistry, 2014
Winthrop University, Rock Hill, SC, Dept. of Chemistry and Biochemistry, 2013
University of North Carolina – Wilmington, Wilmington, NC, Dept. of Chemistry & Biochemistry, 2013
University of North Carolina – Greensboro, Greensboro, NC, Dept. of Chemistry & Biochemistry, 2013
West Virginia University, Morgantown, WV, Dept. of Chemistry and Biochemistry, 2013
College of Charleston, Columbia, SC, Department of Chemistry and Biochemistry, 2012
Columbia College, Columbia, SC, Division of Biology and Physical Sciences, 2011
Davidson College, Davidson, NC, Department of Chemistry and Biochemistry, 2010
Louisiana State University, Baton Rouge, LA, Department of Chemistry, 2008
University of South Carolina, Columbia, SC, Department of Chemistry and Biochemistry, 2008
Rochester Institute of Technology – Rochester, NY, Department of Chemistry, 2007
University of Nevada – Las Vegas, NV, Department of Chemistry, 2007
George Washington University, Washington, D.C., Department of Chemistry, 2007
Miami University, Oxford, OH, Department of Chemistry and Biochemistry, 2007
Ohio University, Athens, OH, Department of Chemistry and Biochemistry, 2007
University of South Carolina, Columbia, SC, Department of Chemistry and Biochemistry, 2006,
Dartmouth, Hanover, NH, Department of Chemistry, 2006
New Mexico Tech., Socorro, NM, Department of Chemistry, 2006
University of Notre Dame, Notre Dame, IN, Department of Chemistry and Biochemistry, 2006
University of South Carolina, Columbia, SC, Department of Chemistry and Biochemistry, 2005

Conference Invited Seminars

46th Silicon Symposium, UC Davis, CA, 2015
Midwest Regional Meeting ACS, Columbia, MO, 2014

American Chemical Society National Meeting, San Francisco, CA, 2014 Division of Organic Chemistry Young Academic Award Symposium

American Chemical Society, SERMACS, Atlanta, GA, 2013

CASE Conference, Austin, 2013. (Unable to attend due to the birth of my child.)

NSF Physical Organic Workshop, Austin, 2010

NIH Mentoring Workshop, Dallas, 2009

Gordon Research Conference – Organic, Reactions, & Processes – Bryant University, 2008

Industrial Invited Seminars

Bristol-Myers Squibb, New Brunswick, NJ, 2015

Mettler Toledo Information Sharing Event, Durham, NC, 2014

Biogen Idec, Boston, MA, 2005

Saoirse Corporation, Cambridge, MA, 2005

Exxon Mobil, New Jersey, 2004

Bridgestone Firestone, Akron, OH, 2004

Presentations (Submitted)

Gordon Research Conference – Stereochemistry – Salvi Regina University, 2014 (Poster)

American Chemical Society National Meeting, Philadelphia 2012; (Talk).

Gordon Research Conference – Stereochemistry – Salvi Regina University, 2012 (Poster)

American Chemical Society National Meeting, Boston, 2010 (Talk)

Gordon Research Conference – Stereochemistry – Salvi Regina University, 2010 (Poster)

ACS National Meeting, Salt Lake City, 2009 (Talk)

Gordon Research Conference – Organic, Reactions, & Processes – Bryant University, 2009 (Poster)

American Chemical Society, Boston, 2007 (Poster)

Gordon Research Conference – Organic, Reactions, and Processes – Bryant University, 2007 (Poster)

58th *Southwest ACS Regional Meeting*, Austin, 2002.

ACS National Meeting, Boston, 2002; (Poster).

ACS National Meeting, Boston, 2002; (Talk).

ACS National Meeting, Chicago, 2001; (Poster).

STUDENTS AND POSTDOCTORAL SCHOLARS

Undergraduate Students

1. Barry Roberts
2. Ryan Nangreave
3. John Hodgson
4. Christopher Roberts
5. Latonya Jones
6. Jeremy Gleaton
7. Vincent Slay
8. Jessica Taylor
9. Ashley Maharana
10. Jamin Lester
11. Richard Craven
12. Nasse Williams
13. William Mackay
14. Timothy Deaton
15. Matthew Mango
16. Suzanne Campbell
17. Philip Scott
18. Preston Gainey
19. Julia Pribyl
20. Mary Margavio
21. Alejandro Ortega
22. Naomi Plummer
23. Gilly Levy
24. Julia Fountain
25. Summer York
26. Mia Jenty

Graduate Students Receiving Ph.D. Degrees

1. Dieu Nguyen, PhD 2010
2. Sachin G. Patel, PhD 2010
3. Maggie Klauck, PhD 2012
4. Yan Zhang, MS 2013
5. Cody Sheppard, PhD 2013
6. Ravish Akhani, PhD 2014
7. Robert Clark, PhD 2015
8. Li Wang, current
9. Brandon Redden, current
10. Tian Zhang, current
11. Shelby Dickerson, current

Postdoctoral Scholars

1. Marc S. Maynor 2007-2008

Visiting Faculty

1. Julia Baker – Columbia College (Spring 2012 (sabbatical)/Summer 2013)

Student Awards

Graduate

USC Joseph W. Bouknight Teaching Award – Li Wang (Spring 2016, Summer 2016)
USC Graduate School Travel Grants – Li Wang (Spring 2015)
Oakwood Products Best Poster Award – Ravish Akhani (Spring 2014)
ACS – Division of Organic Chemistry Travel Award – Robert Clark (Spring 2013)
USC Graduate School Travel Grants – Ravish Akhani (Spring 2013)
GlaxoSmithKline Internship – Cody Sheppard (2012-2013)
ACS – Division of Organic Chemistry Travel Award – Ravish Akhani (Spring 2012)
J.R. During Graduate Student Travel Award – Ravish Akhani (Spring 2012)
ACS – Division of Organic Chemistry Travel Award – Cody Sheppard (Fall 2011)
J.R. During Graduate Student Travel Award – Maggie Klauck (Fall 2011)
J.R. During Graduate Student Travel Award – Sachin Patel (Spring 2009)

Undergraduate

Magellan Scholar Julia Fountain, 2017, $2000
Who's Who Among Students in American Colleges and Universities – Julia Pribyl, 2014
ACS Undergraduate Award in Organic Chemistry, Julia Pribyl, 2014
ACS Undergraduate Award in Organic Chemistry, T. Max Deaton, 2013
Magellan Scholar Julia Pribyl, 2012, $2000
Magellan Honors College Fellowship, Julia Pribyl, 2012,
In Focus Alumni Magazine Highlight, Jessica L. Taylor Spring/Summer 2012
Magellan Scholar Jessica L. Taylor, 2010, $3000
Magellan Scholar, John Hodgson, 2008, $3000

OTHER PROFESSIONAL ACTIVITIES

Advisory Boards

Reaction Chemistry and Engineering

Symposium/Conference Organizing

68th SERMACS ACS 2016 – 2-day symposium entitled ""Asymmetric Chemistry Throughout the Southeast." Co-Organizer: Kimberly Petersen (Asst. Prof. – UNC Greensboro.)

65th SERMACS ACS 2013 – 2-day symposium entitled ""Approaches to Organic Synthesis Across Disciplines." Co-Organizer: Daniel Whitehead (Asst. Prof. – Clemson Univ.)

REFEREEING

Journal Reviews

Angew. Chem. Int. Ed.
ARKIVOC
ChemCatChem
ChemPhysChem
Chemical Communications
Chemistry Letters
European Journal of Organic Chemistry
Journal of Organic Chemistry
Journal of Organometallic Chemistry
Journal of the American Chemical Soc.
Letters of Organic Chemistry
Langmuir
Molecules
Nature
Nature Chemistry
Nature Communications
Organic Chemistry International
Organic Letters
Organic Preparations & Procedures International
Supramolecular Chemistry
Synthesis
Tetrahedron
Tetrahedron Asymmetry

Research Proposal Reviews

National Science Foundation
ACS – Petroleum Research Fund
Louisiana Board of Regents' Pilot Funding for New Research (Pfund) program
Northern Illinois University Grant Program
University of South Carolina

Book Reviews

Wiley
Oxford
Cengage

COMMITTEE SERVICE

University

Women's Faculty Organization Steering Committee (University)
Safety Task Force (University)

Department

Admissions Committee, Chair
Industrial Advisory Board
Dry Still Committee
Organic Seminar
AWIS South Carolina Chapter President
Faculty Search Committee – Cancer Therapeutics
Graduate Student Career Workshop

CLASSES TAUGHT

1. CHEM 333 – Organic Chemistry I (Undergraduate)
2. CHEM 334 – Organic Chemistry II (Undergraduate)
3. CHEM 701 – Organic Seminar (Graduate)
4. CHEM 736 – Advanced Organic Synthesis (Graduate)

PUBLICATIONS *(from USC)*

Wang, L.; Zhang, T.; Redden, B. K.; Sheppard, C. I.; Clark, R. W.; Smith, M. D.; Wiskur, S. L. "Understanding Internal Chirality Induction of Triarylsilyl Ethers Formed from Enantiopure Alcohols" *J. Org. Chem*. **2016**, *81*, 8187-8193.

Clark, R. W.; Akhani, R. K.; Wiskur, S. L. "Polymers and Kinetic Resolutions: The Insolubility of It All" *ChemCatChem* **2016**, *8*, 879-885.

Wang, L.; Akhani, R. K.; **Wiskur, S. L**. "Diastereoselective and Enantioselective Silylation of 2-Aryl Cyclohexanols" *Org. Lett.* **2015**, *17*, 2408−2411.

Akhani, R. K.; Clark, R. W.; Yuan, L.; Wang, L.; Tang, C.; **Wiskur, S. L.** "Polystyrene-Supported Triphenylsilyl Chloride for the Silylation-Based Kinetic Resolution of Secondary Alcohols" *ChemCatChem* **2015**, *7*, 1527-1530.

Akhani, R. K.; Moore, M. I.; Pribyl, J. G.; **Wiskur, S. L.** "Linear Free-Energy Relationship and Rate Study on a Silylation-Based Kinetic Resolution: Mechanistic Insights" *J. Org. Chem*. **2014**, *79*, 2384-2396.

Clark, R. W.; Deaton, T. M.; Zhang, Y.; Moore, M. I.; **Wiskur, S. L.** "Silylation-Based Kinetic Resolution of α-Hydroxy Lactones and Lactams" *Org. Lett.*, **2013**, *15*, 6132-6135.

Nguyen, D.; Akhani, R. K.; Sheppard, C. I.; **Wiskur, S. L.** "A Structure-Activity Relationship of Formamides as Organocatalysts: The Significance of Formamide Structure and Conformation." *Eur. J. Org. Chem.* **2013,** 2279–2283.

Wiskur,S. L.; Maynor, M. S.; Smith, M. D.; Sheppard, C. I.; Akhani, R. K.; Pellechia, P. J.; Vaughn, S. A.; Shieh, C. "Chiral pyridinyloxazolidine ligands and copper chloride complexes." *J. Coord. Chem.*, **2013**, *66*, 1166-1177

Klauck, M; Patel, S. G.; **Wiskur, S. L.** "Obtaining Enriched Compounds via a Tandem Enantioselective Reaction and Kinetic Resolution Polishing Sequence." *J. Org. Chem.* **2012**, *77*, 3570-3575.

Sheppard, C. I.; Taylor, J. L.; **Wiskur, S. L**. "Silylation-Based Kinetic Resolution of Monofunctional Secondary Alcohols." *Org. Lett*. **2011**, *13*, 3794–3797.

Patel, S. G.; **Wiskur, S. L.** "Mechanistic Investigations of the Mukaiyama Aldol Reaction as a Two Part Enantioselective Reaction." *Tetrahedron Lett*., **2009**, *50*, 1164-1166.

BOOK CHAPTERS (*from USC)*

Clark, R. W.; **Wiskur, S. L.**, Silyl Hydrides. In *Science of Synthesis, Knowledge Updates 2015/1*; Oestreich, M., Ransden, C., Wirth, T., Eds; Georg Thieme Verlag KG: Stuttgart, 2015; pp 1-58

Bicker, K; **Wiskur, S. L.**; Lavigne, J. J. Colorimetric Sensor Design, In *Chemosensors: Principles, Strategies, and Applications*; B. Wang, E. V. Anslyn, Eds.; Wiley Series in Drug Discovery and Development; Wiley: New York, 2011.

PUBLICATIONS *(PhD/Postdoc)*

Wiskur, S. L.; Fu, G. C. "Catalytic Asymmetric Synthesis of Esters from Ketenes." *J. Am. Chem. Soc*. **2005**, *127*, 6176-6177.

Wiskur, S. L.; Korte, A.; Fu, G. C. "Cross-Couplings of Alkyl Electrophiles Under "Ligandless" Conditions: Negishi Reactions of Organozirconium Reagents." *J. Am. Chem. Soc.* **2004**, *126*, 82-83.

Wiskur, S. L.; Lavigne, J. J.; Metzger, A.; Tobey, S.; Lynch, V.; Anslyn, E. V. "Thermodynamic Analysis of Receptors Based on Guanidinium/Boronic Acid Groups for the Complexation of

Carboxylates, α-Hydroxycarboxylates, and Diols: Driving Force for Binding and Cooperativity." *Chem. Eur. J.* **2004**, *10*, 3792-3804.

Manimala, J. C.; **Wiskur, S. L.**; Ellington, A. D.; Anslyn, E. V. "Tuning the Specificity of a Synthetic Receptor Using a Selected Nucleic Acid Receptor." *J. Am. Chem. Soc.* **2004**, *126*, 16515-16519.

Nguyen, B. T.; **Wiskur, S. L.**; Anslyn, E. V. "Using Indicator-Displacement Assays in Test Strips and to Follow Reaction Kinetics." *Org. Lett.* **2004**, *6*, 2499-2501.

Piatek, A. M.; Bomble, Y. J.; **Wiskur, S. L.**; Anslyn, E. V. "Threshold Detection Using Indicator-Displacement Assays: An Application in the Analysis of Malate in Pinot Noir Grapes." *J. Am. Chem. Soc.* **2004**, *126*, 6072-6077.

McCleskey, S. C.; Floriano, P. N.; **Wiskur, S. L.**; Anslyn, E. V.; McDevitt, J. T. "Citrate and Calcium Determination in Flavored Vodkas Using Artificial Neural Networks." *Tetrahedron* **2003**, *59*, 10089-10092.

Wiskur, S. L.; Floriano, P. N.; Anslyn, E. V.; McDevitt, J. T. "A Multicomponent Sensing Ensemble in Solution: Differentiation between Structurally Similar Analytes." *Angew. Chem., Int. Ed.* **2003**, *42*, 2070-2072.

Ait-Haddou, H.; Sumaoka, J.; **Wiskur, S. L.**; Folmer-Andersen, J. F.; Anslyn, E. V. "Remarkable Cooperativity Between a "Zn^{II} Ion and Guanidinium/Ammonium Groups in the Hydrolysis of RNA." *Angew. Chem., Int. Ed.* **2002**, *41*, 4014-4016.

Wiskur, S. L.; Ait-Haddou, H.; Lavigne, J. J.; Anslyn, E. V. **"**Teaching Old Indicators New Tricks.**"** *Acc.Chem. Res.* **2001**, *34*, 963-972.

Wiskur, S. L.; Anslyn, E. V. "Using a Synthetic Receptor to Create an Optical-Sensing Ensemble for a Class of Analytes: A Colorimetric Assay for the Aging of Scotch." *J. Am. Chem. Soc.* **2001**, *123*, 10109-10110.

Wiskur, S. L.; Lavigne, J. J.; Ait-Haddou, H.; Lynch, V.; Chiu, Y. H.; Canary, J. W.; Anslyn, E. V. "pK_a Values and Geometries of Secondary and Tertiary Amines Complexed to Boronic Acids-Implications for Sensor Design." *Org. Lett.* **2001**, *3*, 1311-1314.

Ait-Haddou, H.; **Wiskur, S. L.**; Lynch, V. M.; Anslyn, E. V. "Achieving Large Color Changes in Response to the Presence of Amino Acids: A Molecular Sensing Ensemble with Selectivity for Aspartate." *J. Am. Chem. Soc.* **2001**, *123*, 11296-11297.

BOOK CHAPTER *(PhD)*

Wiskur, S. L.; Metzger, A.; Lavigne, J. J.; Schneider, S. E.; Anslyn, E. V.; McDevitt, J. T.; Neikirk, D.; Shear, J. B. "Mimicking the Mammalian Sense of Taste Through Single and Multi-Component Analyte Sensors." in *Chemistry of Taste*; Given, P., Paredes, D., Eds.; ACS Symposium Series 825; American Chemical Society: Washington, D. C., 2002; pp.276-288.