

Scott K. Bur

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Education

University of Texas, Austin
Ph.D. in Chemistry: August, 2000

University of Michigan, Ann Arbor
B.S. in Chemistry: December, 1994

Experience

- 2003-present **Assistant Professor:** Gustavus Adolphus College
Teaching interests includes organic chemistry and the incorporation of computation techniques into the organic curriculum. Research involves the development of new synthetic methods and the application of these methods to natural product synthesis.
- 2000-2003 **NIH Postdoctoral Fellow:** Emory University
Advisor: Professor Albert Padwa
The intramolecular Diels-Alder chemistry of amidofurans was studied.
- 1995-2000 **Graduate Research Assistant:** University of Texas, Austin
Advisor: Professor Stephen F. Martin
Work focused on the development and application of the intermolecular vinylogous Mannich reaction.
- 1994-1995 **Extern Research Assistant:** Parke-Davis Pharmaceutical Research, Ann Arbor
Supervisor: Dr. Ellen Dobrusin
Analogues of Ras Farnesyltransferase inhibitors were synthesized for biological testing.
- 1992-1994 **Undergraduate Research Assistant:** University of Michigan, Ann Arbor
Advisor: Professor William H. Pearson

Honors and Activities

NIH Postdoctoral Fellow, Emory University	2000-2003
Dorothy A. Banks Fellow, University of Texas	1998-1999
Roberts Fellow, University of Texas	1995-1996
Smeton Summer Research Fellow, University of Michigan	1992
University of Michigan Alumni Fellow, University of Michigan	1990

Publications

- 1.) McNamara, D. J.; Dobrusin, E.; Leonard, D. M.; Shuler, K. R.; Kaltenbronn, J. S.; Quin, J.; Bur, S.; Thomas, C. E.; Doherty, A. M.; Scholten, J. D.; Zimmerman, K. K.; Gibbs, B. S.; Gowan, R. C.; Latash, M. P.; Leopold, W. R.; Przybranowski, S. A.; Sebolt-Leopold, J. S. "C-Terminal Modifications of Histidyl-*N*-benzylglycinamides To Give Improved Inhibition of Ras Farnesyltransferase, Cellular Activity, and Anticancer Activity in Mice." *J. Med. Chem.* **1997**, *40*, 3319-3322.
- 2.) Martin, S. F.; Bur, S. K. "The Stereochemical Course of Intramolecular Vinylogous Mannich Reactions." *Tetrahedron Lett.* **1997**, *38*, 7641-7644.
- 3.) Lynch, V. M.; Martin, S. F.; Bur, S. K. "Spiro[1-azabicyclo[5.3.0]decane-6, 2'(5'H)-furan-2', 10-dione; An Example of Kryptoracemic Crystallization." *Acta Cryst.* **1999**, *C55*, 622-624.
- 4.) Martin, S. F.; Barr, K. J.; Smith, D. W.; Bur, S. K. "Applications of Vinylogous Mannich Reactions. Concise Asymmetric Total Syntheses of (+)-Croomine." *J. Am. Chem. Soc.* **1999**, *121*, 6990-6997.
- 5.) Martin, S. F.; Bur, S. K. "Vinylogous Mannich Reactions: the Stereoselective Formal Synthesis of Pumiliotoxin 251D." *Tetrahedron* **1999**, *55*, 8905-8914.
- 6.) Bur, S. K.; Martin, S. F. "Vinylogous Mannich Reactions: Some Theoretical Investigations on the Origins of Diastereoselectivity." *Org. Lett.* **2000**, *2*, 3445-3447.
- 7.) Reichelt, A.; Bur, S. K.; Martin, S. F. "Applications of Vinylogous Mannich Reactions. Enantioselective Synthesis of the Angiotensin Converting Enzyme Inhibitor (–)-A58365A." *Tetrahedron* **2002**, *58*, 6323-6328.
- 8.) Bur, S. K.; Lynch, S. M.; Padwa, A. "The Influence of Ground State Conformations on the Intramolecular Amidofuran Diels-Alder Reaction." *Org. Lett.* **2002**, *4*, 473-476.
- 9.) Padwa, A.; Ginn, J. D.; Bur, S. K.; Eidell, C. K.; Lynch, S. M. "Synthesis of Azapolycyclic Systems via the Intramolecular [4+2] Cycloaddition Chemistry of 2-(Alkylthio-5-amidofurans." *J. Org. Chem.* **2002**, *64*, 3412-3424.
- 10.) Bur, S. K.; Padwa, A. "A Novel Sequential Aminodiene Diels-Alder Strategy for the Rapid Construction of Substituted Kornfeld's Ketone Analogs." *Org. Lett.* **2002**, *4*, 4135-4137.
- 11.) Lynch, S. M.; Bur, S. K.; Padwa, A. "Intramolecular Amidofuran Cycloadditions across Indole: An Efficient Approach to the *Aspidosperma* and *Strychnos ABCE* Core." *Org. Lett.* **2002**, *4*, 4643-4645.
- 12.) Crawford, K. R.; Bur, S. K.; Straub, C. S.; Padwa, A. "Intramolecular Cyclization Reactions of Halogen- and Nitro-Substituted Furans." *Org. Lett.* **2003**, *5*, 3337-3340.
- 13.) Padwa, A.; Bur, S. K.; Zahng, H.-J. "Sequential Aminodiene Diels-Alder Approach to the Ergoline Skeleton." *J. Org. Chem.* **2005**, *70*, 6833-6841.

Reviews

Bur, S. K.; Martin, S. F. "Vinylogous Mannich Reactions: Stereoselectivity and Synthetic Utility." *Tetrahedron* **2001**, *57*, 3221-3242.

Padwa, A.; Bur, S. K.; Danka, D. M.; Ginn, J. D.; Lynch, S. M. "Linked Pummerer–Mannich Ion Cyclizations for Heterocyclic Chemistry." *Synlett*. **2002**, 851-862.

Bur, S. K.; Padwa, A. "The Pummerer Reaction: Methodology and Strategy for the Synthesis of Heterocyclic Compounds." *Chem. Rev.* **2004**, *104*, 2401-2432.

Bur, S. K. "1,3-Sulfur Shifts: Mechanism and Synthetic Utility." *Topics in Current Chemistry*, **2007**, *274*, 125-171

Bur, S.K.; Padwa, A. "Tandem Reactions in Heterocyclic Synthesis." *Advances in Heterocyclic Chemistry*, **2007**, *94*, 1-105.

Padwa, A.; Bur, S. K. "The Domino Way to Heterocycles." *Tetrahedron*, **2007**, *63*, 5341-5378.