

Kevin Michael Shea

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Work Address:

Clark Science Center
Smith College
Northampton, MA 01063
(413) 585-4687

EDUCATION

Massachusetts Institute of Technology Cambridge, MA
Doctor of Philosophy in Organic Chemistry June 2000

Worcester Polytechnic Institute Worcester, MA
Bachelor of Science in Chemistry, with high distinction May 1995

PROFESSIONAL EXPERIENCE

Smith College Northampton, MA
Associate Professor of Chemistry July 2007 to present
Assistant Professor of Chemistry July 2000 to June 2007

RESEARCH EXPERIENCE

Smith College
Assistant and Associate Professor July 2000 to present
Ongoing research involves expanding the use of cobalt-alkyne complexes in organic synthesis. One project is focused on the application of tandem Nicholas and Pauson-Khand reactions for the synthesis of tricyclic heterocycles. Another project involves production of dienes containing cobalt-alkyne complexes and evaluation of these materials in Diels-Alder reactions. Our ultimate goal is to develop a tandem Diels-Alder/Pauson-Khand protocol for the production of tricyclic compounds. A third project aims to develop novel cationic Diels-Alder dienophiles stabilized by cobalt-alkyne complexes. Previous research focused on the preparation of unknown and naturally occurring analogs of farnesol and on the viability of a new carbon-carbon bond-forming radical reaction.

Undergraduate Research Assistants: Josephine Nakhla '03, Christina Longo '04, Miriam Quintal '04, Jennifer Breidenich '05, Nicole Rosendale '05, An Tran '05, Amanda Freeman '06J, Elizabeth Crawford '06, Mary Banks '07, Kristi Closser '07, Erin Davis '07, Kathryn Robinson '07, Lisa Rosenberg '07, Florina Voica '07, Vida Chen '08, Seiko Fujii '08, Christina Lioce '08, Maureen Reilly '08, Kate Whitesell '08, Julia Wu '08, Hannah Buettner '09, Rachel Dorset '10, Julie Olson '10, Keturah Edwards '11, Farah Ousman '11

Massachusetts Institute of Technology

Graduate Research Assistant January 1996 to June 2000
Research involved the synthesis of cyclopenta[*a*]phenalene, a theoretically interesting aromatic molecule, and investigation of the synthesis and chemistry of unsaturated (trialkylsilyl)ketenes. A new, general strategy for the synthesis of substituted azulenes was also investigated, as well as its application in the total synthesis of the antiulcer drug Azuletil sodium.
Advisor: Professor Rick L. Danheiser

Worcester Polytechnic Institute

Research Assistant

Summer 1995

Research involved studies toward the synthesis of a molecule with interesting electron transfer characteristics.

Advisors: Professors Stephen J. Weininger and W. Grant McGimpsey

Undergraduate Research Assistant

Spring 1994 to May 1995

Research explored approaches to the total synthesis of huperzine A, a natural product currently in clinical trials for the prevention of Alzheimer's disease.

Advisor: Professor James P. Dittami

**TEACHING
EXPERIENCE**

Smith College

July 2000 to present

Assistant and Associate Professor

- CHM 111: Chemistry I (General Chemistry I) – lecture course of approximately 55 students; team taught with Kate Queeney
- CHM 222: Chemistry II (Organic Chemistry I) – lecture course of between 50 and 100 predominantly first-year students
- CHM 222: Chemistry II (Organic Chemistry I) – lab instructor for sections of between ten and fifteen students
- CHM 223: Chemistry III (Organic Chemistry II) – lecture course of between 70 and 90 predominantly sophomore students
- CHM 223: Chemistry III (Organic Chemistry II) – lab instructor for sections of between ten and sixteen students
- CHM 226: Synthesis and Structural Analysis – advance lab/seminar course with 13 students
- CHM 321: Organic Synthesis – advanced lecture/seminar course for between four and seventeen students
- CHM 347: Instrumental Methods of Analysis – advanced lab/seminar course with seven students; team taught with Kate Queeney

Massachusetts Institute of Technology

Fall 1995-January 1999

Teaching Assistant

- 5.30 (Chemistry Laboratory Techniques) – helped design and subsequently helped teach intensive laboratory course to eight Freshmen during January
- 5.13 (Organic Chemistry II) – led two recitation sections of approximately fifteen students each, one semester was head teaching assistant
- 5.11 (General Chemistry) – led recitation section of thirty students

Worcester Polytechnic Institute

Fall 1992

Laboratory Teaching Apprentice

- General Chemistry – along with a graduate student and faculty member, helped explain laboratory techniques and monitor equipment usage

PUBLICATIONS

Shea, K. M. "Martin's Sulfurane Dehydrating Reagent," In *Name Reactions for Functional Group Transformations*; Li, J. J., Corey, E. J., Eds.; John Wiley & Sons, Inc.: Hoboken, NJ, 2007; 248-264.

Shea, K. M. "Furans and benzo[b]furans," In *Palladium in Heterocyclic Chemistry: A Guide for the Synthetic Chemist*, 2nd Ed., Li, J. J., Gribble, G. W., Eds.; Elsevier: Boston, MA, 2007; 303-344.

Shea, K. M.; Closser, K. D.; Quintal, M. M. "Nicholas Reactions with Carboxylic Acids for the Synthesis of Macrocyclic Diolides," *J. Org. Chem.* **2005**, *70*, 9088-9091.

Quintal, M. M.; Closser, K. D.; Shea, K. M. "Tandem Intramolecular Nicholas and Pauson-Khand Reactions for the Synthesis of Tricyclic Oxygen-Containing Heterocycles," *Org. Lett.* **2004**, *6*, 4949-4952.

Crombie, A. L.; Kane, J. L., Jr.; Shea, K. M.; Danheiser, R. L. "Ring Expansion-Annulation Strategy for the Synthesis of Substituted Azulenes and Oligoazulenes. 2. Synthesis of Azulenyl Halides, Sulfonates, and Azulenylmetal Compounds and Their Application in Transition-Metal-Mediated Coupling Reactions," *J. Org. Chem.* **2004**, *69*, 8652-8667.

Shea, K. M. "Feist-Bénary furan synthesis," In *Name Reactions in Heterocyclic Chemistry*; Li, J. J., Ed.; John Wiley & Sons: Hoboken, NJ, 2004; 160-167.

Shea, K. M. "Paal-Knorr furan synthesis," In *Name Reactions in Heterocyclic Chemistry*; Li, J. J., Ed.; John Wiley & Sons: Hoboken, NJ, 2004; 168-182.

Kane, J. L., Jr.; Shea, K. M.; Crombie, A. L.; Danheiser, R. L. "A Ring Expansion-Annulation Strategy for the Synthesis of Substituted Azulenes. Preparation and Suzuki Coupling Reactions of 1-Azulenyl Triflates," *Org. Lett.* **2001**, *3*, 1081.

Shea, K. M.; Lee, K. L.; Danheiser, R. L. "Synthesis and Properties of 9-Alkyl- and 9-Arylcyclopenta[*a*]phenalenes," *Org. Lett.* **2000**, *2*, 2353.

**PUBLISHED
ABSTRACTS**

Reilly, M. K.; Shea, K. M. "Synthetic Utility of Carbocations Stabilized by Cobalt-Complexed Alkynes" Celebrating Ten Years of Beckman Scholars in Chemistry, 235th American Chemical Society National Meeting, New Orleans, Louisiana, April 6, 2008. (Poster)

Fujii, S.; Shea, K. M. "Synthesis of a Novel Diels-Alder Diene" 40th National Organic Chemistry Symposium, Duke University, Durham, North Carolina, June 3-7, 2007; Paper A88. (Poster)

Olson, J. A.; Shea, K. M. "Women's Contribution to Named Organic Reactions" 40th National Organic Chemistry Symposium, Duke University, Durham, North Carolina, June 3-7, 2007; Paper C63. (Poster)

Reilly, M. K.; Voica, F. A.; Shea, K. M. "Carbocations Stabilized by Cobalt-Alkyne Complexes as Dienophile Withdrawing Groups in Diels-Alder Reactions" 40th National Organic Chemistry Symposium, Duke University, Durham, North Carolina, June 3-7, 2007; Paper C84. (Poster)

Shea, K. M.; Robinson, K. W. "A Tandem Diels-Alder/Pauson-Khand Strategy for the Synthesis of Tetracycles" 40th National Organic Chemistry Symposium, Duke University, Durham, North Carolina, June 3-7, 2007; Paper D30. (Poster)

Closser, K. D.; Quintal, M. M.; Shea, K. M. "Tandem Intramolecular Nicholas and Pauson-Khand Reactions for the Synthesis of Tricyclic Heterocycles" Presented at the 39th National Organic Chemistry Symposium, The University of Utah, Salt Lake City, UT, June 12-16, 2005; Paper A53. (Poster)

Freeman, A. K.; Closser, K. D.; Quintal, M. M.; Shea, K. M. "The Effects of Chiral and Achiral Promoters on Diastereoselectivities in Intramolecular Pauson-Khand Reactions" Presented at the 39th National Organic Chemistry Symposium, The University of Utah, Salt Lake City, UT, June 12-16, 2005; Paper A85. (Poster)

Voica, F. A.; Crawford, E. A.; Shea, K. M. "Synthesis of Dienes Containing Cobalt-Complexed Alkynes and Their Reactivity in Diels-Alder Reactions" Presented at the 39th National Organic Chemistry Symposium, The University of Utah, Salt Lake City, UT, June 12-16, 2005; Paper D63. (Poster)

Longo, C. M.; Shea, K. M.; Wills, M. B. "Synthesis Using Carbonyls as Indirect Geminal Radical Acceptor/Precursors," Presented at the 15th Annual St. Joseph's University Sigma Xi Student Research Symposium, Philadelphia, PA, April 23, 2004; Poster #84.

Crombie, A. L.; Shea, K. M.; Kane, J. L.; Danheiser, R. L. "Synthesis of Highly-Substituted Azulenes and Polyazulenes. Transition Metal-Mediated Coupling Reactions of Azulenyl Halides, Sulfonates, and Azulenylmetal Compounds," Presented at the 226th National Meeting of the American Chemical Society, New York, NY, September, 2003; Paper ORGN 377. (Talk)

Nakhla, J. S.; Shea, K. M. "Synthesis of 7-Substituted Farnesyl Derivatives," Presented at the 38th National Organic Symposium, Indiana University, Bloomington, IN, June 8-12, 2003; Paper A73. (Poster)

Longo, C. M.; Shea, K. M.; Wills, M. B. "Development of an Intramolecular, Carbon-Carbon Bond Forming Radical Reaction," Presented at the 38th National Organic Symposium, Indiana University, Bloomington, IN, June 8-12, 2003; Paper B87. (Poster)

Quintal, M. M.; Shea, K. M. "Synthesis and Selectivity in Cobalt-Mediated Reactions," Presented at the 38th National Organic Symposium, Indiana University, Bloomington, IN, June 8-12, 2003; Paper A63. (Poster)

Crombie, A. L.; Shea, K. M.; Kane, J. L.; Danheiser, R. L. "Ring Expansion-Annulation Strategy for the Synthesis of Substituted Azulenes. Transition Metal-Mediated Coupling Reactions of Azulenyl Halides and Sulfonates," Presented at the 224th National Meeting of the American Chemical Society, Boston, MA, August, 2002; Paper ORGN 63. (Talk)

Shea, K. M.; Lee, K. L.; Danheiser, R. L. "Synthesis and Properties of 9-Alkyl and -Aryl Cyclopenta[*a*]phenalene Derivatives," Presented at the 216th National Meeting of the American Chemical Society, Boston, MA, August, 1998; Paper ORGN 52. (Talk).

PRESENTATIONS Shea, K. M. "New Applications of Cobalt-Alkyne Complexes in Organic Synthesis" Wellesley College, Wellesley, Massachusetts, April 28, 2008. (Talk)

Shea, K. M. "Preparing for Life as a Faculty Member at a Liberal Arts College" Part of a Preparing Future Faculty Symposium, University of Massachusetts, Amherst, Massachusetts, July 24, 2007. (Talk)

Shea, K. M. "New Applications of Cobalt-Alkyne Complexes in Organic Synthesis" Worcester Polytechnic Institute, Worcester, Massachusetts, November 1, 2006. (Talk)

Shea, K. M. "New Approaches to the Synthesis of Carbo- and Heterocyclic Compounds: The Utility of Cobalt-Alkyne Complexes" Organic Reactions and Processes Gordon Research Conference, Bryant University, Smithfield, Rhode Island, July 16-21, 2006. (Poster)

Shea, K. M. "Cobalt-Complexed Alkynes: Recent Advances in Pauson-Khand, Nicholas, and Diels-Alder Reactions" National Science Foundation Workshop on Organic Synthesis, Minary Conference Center on Squam Lake, Holderness, New Hampshire, June 1-5, 2006. (Talk)

Shea, K. M. "New Applications of Cobalt-Alkyne Complexes in Organic Synthesis" Williams College, Williamstown, Massachusetts, February 24, 2006. (Talk)

Kevin M. Shea

Shea, K. M. "New Applications of Cobalt-Alkyne Complexes in Organic Synthesis" University of Arkansas, Fayetteville, Arkansas, October 20, 2005. (Talk)

Shea, K. M. "From *The Moonstone* to Organic Chemistry: Crystals in Detective Stories" Liberal Arts Luncheon, Smith College, Northampton, MA, December 2, 2004. (Talk)

Shea, K. M. "New Applications of Cobalt-Alkyne Complexes in Organic Synthesis" Connecticut College, New London, Connecticut, September 28, 2004. (Talk)

Quintal, M. M.; Closser, K. D.; Voica, F.; Shea, K. M. "New Applications of Cobalt-Complexed Alkynes in Organic Synthesis" Organic Reactions and Processes Gordon Research Conference, Roger Williams University, Bristol, Rhode Island, July 19, 2004. (Poster)

Shea, K. M. "New Applications of Cobalt-Alkyne Complexes in Organic Synthesis" Middlebury College, Middlebury, VT, April 2, 2004. (Talk)

Shea, K. M. "Nuts and Bolts of the Academic Job Search Process" Presented at MIT as part of a series of discussions relating to academic employment, Cambridge, MA, June 24, 2003. (Panelist)

Shea, K. M. "Development of New Farnesyl Transferase Inhibitors: Synthesis of Substituted Farnesyls" Mount Holyoke College, South Hadley, MA, October 17, 2002. (Talk)

Shea, K. M. "Development of New Farnesyl Transferase Inhibitors: Synthesis of Substituted Farnesyls" New England Workshop on Synthesis and Materials, UMASS, Amherst, MA, October 5, 2002. (Talk)

Shea, K. M. "Development of New Farnesyl Transferase Inhibitors: Synthesis of Substituted Farnesyls" Amherst College, Amherst, MA, September 20, 2002. (Talk)

Shea, K. M. "Organic Synthesis: We Can Make Anything We Want, Right?" Presented at the Sigma Xi Meeting, Smith College, Northampton, MA, October 2000. (Talk)

Shea, K. M.; Franz, K. J.; Danheiser, R. L.; Swager, T. M. "Preparing Freshmen for Chemistry Research: An Intensive Four-Week Course," Presented at the Gordon Research Conference on Innovations in College Chemistry Teaching, Connecticut College, New London, CT, June, 1999. (Poster).

**STUDENT
PRESENTATIONS**

Chen, V.; Olson, J.; Shea, K. M. "Synthesis of Steroid Derivatives" Celebrating Collaborations, Smith College, Northampton, MA, April 12, 2008. (Poster)

Fujii, S.; Shea, K. M. "Synthesis of a Novel Diels-Alder Diene" Celebrating Collaborations, Smith College, Northampton, MA, April 12, 2008. (Poster)

Reilly, M. K.; Shea, K. M. "Synthetic Utility of Carbocations Stabilized by Cobalt Complexed Alkynes" Celebrating Collaborations, Smith College, Northampton, MA, April 12, 2008. (Poster)

Chen, V.; Olson, J.; Shea, K. M. "Synthesis of Steroid Derivatives" 2008 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Smith College, Northampton, MA, April 26, 2008. (Poster)

Davis, E. K.; Shea, K. M. "Synthesis of Cyclic Diels-Alder Dienes" 2008 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Smith College, Northampton, MA, April 26, 2008. (Poster)

Fujii, S.; Shea, K. M. "Synthesis of a Novel Diels-Alder Diene" 2008 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Smith College, Northampton, MA, April 26, 2008. (Talk)

Reilly, M. K.; Shea, K. M. "Synthetic Utility of Carbocations Stabilized by Cobalt Complexed Alkynes" 2008 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Smith College, Northampton, MA, April 26, 2008. (Talk)

Closser, K. D.; Shea, K. M. "Investigating the Nicholas and Pauson-Khand Reactions Through the Synthesis of Polycyclic Compounds" 2007 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Bard College at Simon's Rock, Great Barrington, MA, April 28, 2007. (Talk)

Voica, F.; Shea, K. M. "Synthesis of Cobalt-Complexed Substrates for the Diels-Alder Reaction" 2007 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Bard College at Simon's Rock, Great Barrington, MA, April 28, 2007. (Talk)

Closser, K. D.; Whitesell, K. L.; Shea, K. M. "Synthesis of Novel Tricyclic Compounds" 2007 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Bard College at Simon's Rock, Great Barrington, MA, April 28, 2007. (Poster)

Fujii, S.; Shea, K. M. "Synthesis of a Novel Diels-Alder Diene" 2007 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Bard College at Simon's Rock, Great Barrington, MA, April 28, 2007. (Poster)

Reilly, M. K.; Voica, F.; Shea, K. M. "Synthesis of a Heterocycle with Dienophile Capacity Via the Nicholas Reaction" 2007 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Bard College at Simon's Rock, Great Barrington, MA, April 28, 2007. (Poster)

Closser, K. D.; Whitesell, K. L.; Shea, K. M. "Synthesis of Novel Tricyclic Compounds" Celebrating Collaborations, Smith College, Northampton, MA, April 21, 2007. (Poster)

Fujii, S.; Shea, K. M. "Synthesis of a Novel Diels-Alder Diene" Celebrating Collaborations, Smith College, Northampton, MA, April 21, 2007. (Poster)

Reilly, M. K.; Voica, F.; Shea, K. M. "Synthesis of a Heterocycle with Dienophile Capacity Via the Nicholas Reaction" Celebrating Collaborations, Smith College, Northampton, MA, April 21, 2007. (Poster)

Olson, J. A., Shea, K. M. "Women's Role in the Discovery and Development of Named Organic Reactions" STRIDE Poster Session, Smith College, Northampton, MA, April 19, 2007. (Poster)

Robinson, K.; Shea, K. M. "Development of a Tandem Diels-Alder/Pauson-Khand Strategy for the Synthesis of Tetracycles" Summer Undergraduate Research Student Symposium, Bristol-Myers Squibb, Wallingford, Connecticut, January 22, 2007. (Talk)

Reilly, M. K., Rosenberg, L. M.; Shea, K. M. "The Synthesis of a Novel Diels-Alder Diene" 2006 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Wesleyan College, Middletown, Connecticut, April 29, 2006. (Poster)

Lioce, C. G., Whitesell, K. L.; Shea, K. M. "The Effects of Chiral Amine Promoters on the Pauson-Khand Reaction" 2006 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Wesleyan College, Middletown, Connecticut, April 29, 2006. (Poster)

Reilly, M. K., Rosenberg, L. M.; Shea, K. M. "The Synthesis of a Novel Diels-Alder Diene" Celebrating Collaborations, Smith College, Northampton, MA, April 22, 2006. (Poster)

Lioce, C. G., Whitesell, K. L.; Shea, K. M. “The Effects of Chiral Amine Promoters on the Pauson-Khand Reaction” Celebrating Collaborations, Smith College, Northampton, MA, April 22, 2006. (Poster)

Lioce, C. G., Whitesell, K. L.; Shea, K. M. “The Effects of Chiral Amine Promoters on the Pauson-Khand Reaction” STRIDE Poster Session, Smith College, Northampton, MA, April 20, 2006. (Poster)

Closser, K. D.; Freeman, A. K.; Quintal, M. M.; Shea, K. M. “New Applications of Cobalt-Complexed Alkynes in Organic Synthesis” 2005 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Mount Holyoke College, South Hadley, Massachusetts, April 23, 2005. (Poster)

Voica, F. A.; Crawford, E. A.; Shea, K. M. “Synthesis and Reactivity of Novel Dienes in the Diels-Alder Reaction” 2005 Undergraduate Research Symposium of the Connecticut Valley Section of the American Chemical Society, Mount Holyoke College, South Hadley, Massachusetts, April 23, 2005. (Poster)

Closser, K. D.; Freeman, A. K.; Quintal, M. M.; Shea, K. M. “New Applications of Cobalt-Complexed Alkynes in Organic Synthesis” Celebrating Collaborations, Smith College, Northampton, MA, April 16, 2005. (Poster)

Voica, F. A.; Crawford, E. A.; Shea, K. M. “Synthesis and Reactivity of Novel Dienes in the Diels-Alder Reaction” Celebrating Collaborations, Smith College, Northampton, MA, April 16, 2005. (Poster)

Closser, K. D.; Freeman, A. K.; Quintal, M. M.; Shea, K. M. “New Applications of Cobalt-Complexed Alkynes in Organic Synthesis” STRIDE Poster Session, Smith College, Northampton, MA, April 14, 2005. (Poster)

Quintal, M. M.; Closser, K. D.; Voica, F.; Shea, K. M. “New Applications of Cobalt-Complexed Alkynes in Organic Synthesis” The 70th Meeting of the Israel Chemical Society, Bar-Ilan University, Tel-Aviv, Israel, February 15-16, 2005. (Poster)

Quintal, M. M.; Closser, K. D.; Voica, F.; Shea, K. M. “New Applications of Cobalt-Complexed Alkynes in Organic Synthesis” 2004 Symposium of the Lise Meitner-Minerva Center: When Experimental Chemistry Meets Quantum Chemistry, Technion-Israel Institute of Technology, Haifa, Israel, December 19, 2004. (Poster)

Quintal, M. M.; Closser, K. D.; Shea, K. M. "Synthesis of Tricyclic Compounds Employing Cobalt-Alkyne Complexes" Presented at Celebrating Collaborations: Students and Faculty Working Together, Smith College, Northampton, MA, April 17, 2004. (Poster)

Longo, C. M.; Shea, K. M.; Wills, M. B. "Synthesis with Carbonyls as Radical Acceptor/Precursor Systems" Presented at Celebrating Collaborations: Students and Faculty Working Together, Smith College, Northampton, MA, April 17, 2004. (Poster)

Quintal, M. M.; Closser, K. D.; Shea, K. M. "Synthesis of Tricyclic Compounds Employing Cobalt-Alkyne Complexes" Presented at the STRIDE Poster Session, Smith College, Northampton, MA, April 15, 2004. (Poster)

Quintal, M. M.; Shea, K. M. "Novel Combinations of the Nicholas and Pauson-Khand Reactions" Presented at the Summer Undergraduate Research Fellows Symposium, Pfizer Central Research, Groton, CT, October 10, 2003. (Poster)

Quintal, M. M.; Shea, K. M. "Synthesis and Selectivity in Cobalt-Mediated Reactions" Presented at Celebrating Collaborations: Students and Faculty Working Together, Smith College, Northampton, MA, April 12, 2003. (Poster)

Longo, C. M.; Shea, K. M.; Wills, M. B. "Development of an Intramolecular, Carbon-Carbon Bond Forming Radical Reaction" Presented at Celebrating Collaborations: Students and Faculty Working Together, Smith College, Northampton, MA, April 12, 2003. (Poster)

Nakhla, J. S.; Shea, K. M. "Synthesis of 7-Substituted Farnesyl Derivatives" Presented at Celebrating Collaborations: Students and Faculty Working Together, Smith College, Northampton, MA, April 12, 2003. (Poster)

Rosendale, N. L.; Shea, K. M. "In Search of a New Synthesis for Substituted Aromatic Compounds" Smith College, Presented at the STRIDE Poster Session, Smith College, Northampton, MA, April 10, 2003. (Poster)

Nakhla, J. S.; Shea, K. M. "Development of New Farnesyl Transferase Inhibitors: Synthesis of Substituted Farnesyls" Presented at the Summer Undergraduate Research Fellows Symposium, Pfizer Central Research, Groton, CT, October 4, 2002. (Poster)

Nakhla, J. S.; Shea, K. M. "Synthesis and Bioactivity of 7-Substituted Farnesyls" Presented at Celebrating Collaborations: Students and Faculty Working Together, Smith College, Northampton, MA, April 2002. (Talk)

Lemkau, K. L.; Shea, K. M. "Application of the Diels-Alder Reaction to the Synthesis of Substituted Benzene Compounds" Presented at the STRIDE Poster Session, Smith College, Northampton, MA, April 2002. (Poster)

Nakhla, J. S.; Shea, K. M. "Synthesis and Biological Activity of 7-Substituted Farnesols," Presented at the Biosciences Student Research Symposium, Smith College, Northampton, MA, February 2002. (Poster).

GRANTS

- Faculty Travel Award to attend the 40th National Organic Symposium at Duke University - \$600 June 2007
- Pfizer Summer Undergraduate Research Fellowship – Awarded to Maureen Reilly '08 \$5,000, Summer 2007 (Declined since Maureen was designated as a 2007-2008 Beckman Scholar.)
- Bristol-Myers Squibb Summer Undergraduate Research Fellowship – Awarded to Kathryn Robinson '07 \$5,000, Summer 2006
- Smith College Committee on Faculty Compensation and Development – Student Salary \$860, Spring 2006
- Petroleum Research Fund Type G Award (American Chemical Society) Summer Supplement for Underrepresented Minority Research for "New Applications of Cobalt-Alkyne Complexes in Organic Synthesis" - \$3,668, June 2005-August 2005
- Smith College Committee on Faculty Compensation and Development – Student Salaries \$2,100, January 2005
- Petroleum Research Fund Type G Award (American Chemical Society) for "New Applications of Cobalt-Alkyne Complexes in Organic Synthesis" - \$35,000, September 2004-August 2006
- Cottrell College Science Award (Research Corporation) for "A New Strategy for the Synthesis of Tricyclic Compounds Using Cobalt Mediated Reactions" – \$33,684, May 2004-April 2006
- Smith College Committee on Faculty Compensation and Development – Summer Research Supplies \$2,250, Summer 2004
- Smith College Committee on Faculty Compensation and Development – Student Salary \$750, January 2004
- Jean Picker Fellowship – Funding for research supplies and a course release \$11,000, September 2003-May 2004
- Pfizer Summer Undergraduate Research Fellowship – Awarded to Miriam Quintal '04 \$5,000, Summer 2003
- Smith College Committee on Faculty Compensation and Development – Summer Research Supplies \$3,000, Summer 2003
- Pfizer Summer Undergraduate Research Fellowship – Awarded to Josephine Nakhla '03 \$5,000, Summer 2002
- Smith College Committee on Faculty Compensation and Development – Summer Research Supplies \$3,000, Summer 2002
- Smith College Venture Fund – Partial Funding for a New Solvent Purification System \$18,625, April 2002
- Council on Undergraduate Research – Summer Research Fellowship \$4,000, Summer 2001

**HONORS
AND
AWARDS**

Smith College

- Sherrerd Prize for Distinguished Teaching – presented annual to four Smith faculty members (2006)

Massachusetts Institute of Technology

- Goodwin Medal - presented to one TA per year for "conspicuously effective teaching" at MIT (1998)
- Teaching Leadership Award - presented by the Sixth National Conference on the Education and Employment of Graduate Teaching Assistants (1997)
- Chemistry Department Outstanding Teaching Award (1997)
- Chemistry Department Outstanding Teaching Award (1996)
- Department of Defense Fellowship, Honorable Mention (1996)

Worcester Polytechnic Institute

- Class of 1995 Graduation Speaker
- Stephen Salisbury Prize (1995) - presented to the top chemistry major
- Department of Defense Fellowship, Honorable Mention (1995)
- National Science Foundation Fellowship, Honorable Mention (1995)
- Two Towers Prize (1994) - presented to one junior who best combines theoretical knowledge and practical application in the first 3 years at WPI.
- Pfizer Summer Undergraduate Research Fellowship (1994)
- CRC Freshman Chemistry Award (1992)

**PROFESSIONAL
AND HONOR
SOCIETIES**

- American Chemical Society, member of organic and education divisions
- Tau Beta Pi - National Engineering and Science Honor Society
- Sigma Xi - National Research Honor Society
- Council on Undergraduate Research
- Phi Lambda Upsilon - Honorary Chemical Society
- Skull - WPI Senior Honor Society
- Charles O. Thompson - WPI Freshmen Honor Society

**ADDITIONAL
EXPERIENCE**

Massachusetts Institute of Technology Cambridge, MA
Outreach Program Volunteer 1996 to 2000
Participated in the chemistry department's Outreach Program, visiting at least four Massachusetts high schools each spring. Presented shows consisting of numerous interesting and fun chemical demonstrations.

TA Trainer Fall 1996, 1997, 1998, 1999
Led group discussions. Provided feedback for mock teaching exercises.

Organizing Committee Member Fall 1997
Symposium on "Careers in Education at Principally Undergraduate Institutions" October 4, 1997

Kevin M. Shea

Worcester Polytechnic Institute

Worcester, MA

Student Hall Director

1993- 1995

- Supervised six resident advisors and 230 students in an upper-class residence hall
- Supervised five resident advisors and 180 students in a first-year student residence hall.

Resident Advisor

1992-1993

Supervised sixty male Freshmen, with the aid of a co-resident advisor.

Study Abroad - Venice, Italy

Summer 1993

Worked with an Italian architect and two project partners to develop a computerized method of appraising church renovation costs, then prioritizing renovations for all Venetian churches.