

PAMELA K. KERRIGAN, Ph.D.

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Tarrytown, NY 10591

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Education:

Ph.D. - Chemistry (Bioorganic)

Arizona State University, Tempe, AZ

August 1993

M.S. - Chemistry (Bioinorganic)

University of Wisconsin-Milwaukee, Milwaukee, WI

December 1986

B.A. - Chemistry/ Biology

Lakeland College, Sheboygan, WI

May 1981

Professional Experience:

Associate Professor- Biochemistry

Associate Chairperson (1999 – 2006)

Department of Chemistry and Biochemistry

Division of Science

College of Mount St. Vincent

Riverdale, NY 10471

August 1994 to present

Director

Advanced Placement Summer Institute

Manhattan College

Riverdale, NY 10471

May 1999 – 2009

Senior Lecturer-General Chemistry/Biochemistry and Organic Chemistry

Mary Washington College

Fredericksburg, VA 22401

August 1993 to August 1994

Research Associate - Bioorganic

Teaching Associate - General Chemistry/Biochemistry

Arizona State University, Tempe, AZ

August 1989 to August 1993

Lecturer - General Chemistry

University of Wisconsin-La Crosse, La Crosse, WI

August 1987 to May 1989

Professional Societies:

American Chemical Society 1986 – present
Chair-Elect, NY section 2013
Division member - Biochemistry and Chemical Education
Secretary, NY section (2000-2004), Alternate councilor 2004-2009
Task Force for Undergraduate Programming (2002-2005)
Program Chair for the Anaheim meeting
Student Affiliate committee, NY section (1999 – present)

Alpha Chi Sigma Fraternity
National Science Teachers Association (NSTA) – 1997 - 2005
Science Teachers Association for New York State (STANYS) – 1997 - 2005
Sigma Xi – 1995 to present
Director, Northeast Region (2011-2014)
Associate Director for the Northeast Region (2007-2011)
Secretary, Manhattan College Chapter (2001 – 2009)
President, College of Mount Saint Vincent Chapter (2009 – present)

Gamma Sigma Epsilon – National Chemistry Honor Society
Executive President – 2003-2005, 2009-2011
Executive President – Elect – 2001-2003, 2007-2009

Research Grants funded:

"Merck/AAAS Undergraduate Research Student Grant – 1999- 2002; \$60,000 for three years–
co-written with Dr. Suzanne Rudnick

NASA/NY State Space Consortium, 1996 – 2007; For undergraduate students to develop a
chemical demonstration show that is shown at area schools.

"Carotenoporphyrins in Cancer Diagnosis", Howard Hughes Summer Research Grant, 1995,
1996, 2002, 2003, 2004; For undergraduate students and high school teachers to do summer research
projects.

Raskob Foundation Grant, May 1997, \$10,100. Continuation of the “Chemical Magical Mystery
Tour” and funding “Operation Chemistry” workshops during the summer 1997 and academic year 1997-
1998

Pew Summer Research Grant, Summer 1997 – 1999, 2001; For undergraduate students to do
summer research projects

Pew Curriculum Development Grant, 1996/1997, \$3000. To develop new experiments to be
used in the biochemistry unified lab during subsequent school years.

"Operation Chemistry", ACS/NSF, July 7 - August 1, 1996 Awarded: \$1500 stipend, travel to
trainer workshops, travel to NSTA meeting in New Orleans, April, 1997, \$400 for supplies. Grant
involved a trainer of trainer workshops at the University of Wisconsin-Oshkosh and Purdue University
followed by the running of 72 hours of workshops for junior high school science teachers during the
1996-1997 academic school year.

Academic Publications:

Articles:

Schmalz, K., & Kerrigan, P. "Lipid review and teaching tips in nutrition." *California Journal of Health Promotion*, **2003**, *1*, (3), 164-173.

E. Reddi, A. Segalla, G. Jori, P. Kerrigan, P. Liddell, A. Moore, T. Moore, D. Gust, "Carotenoporphyrins as Selective Photodiagnostic Agents for Tumors," *British Journal of Cancer*, **1994**, *69*, 40-45.

S-C. Hung, S. Lin, A. Macpherson, J. DeGraziano, P. Kerrigan, P. Liddell, A. Moore, T. Moore, D. Gust, "Kinetics of Multistep Photoinitiated Electron Transfer Reactions in a Molecular Triad," *J. Photochem. Photobiol. A: Chem*, **1994**, *77*, 207-216

D. Gust, T. Moore, A. Moore, A. Macpherson, A. Lopez, J. DeGraziano, I. Gouni, E. Bittersman, G. Seely, F. Gao, R. Nieman, X. Ma, L. Demanche, S-C. Hung, D. Luttrull, S-J Lee, P. Kerrigan, "Photoinduced Electron and Energy Transfer in Molecular Pentads," *J. Amer. Chem. Soc.*, **1993**, *115*, 11141-11152.

S-J. Lee, J. DeGraziano, A. Macpherson, E-J. Shin, P. Kerrigan, G. Seely, A. Moore, T. Moore, D. Gust, "Photoinduced Charge Separation in a Carotenoid-Porphyrin-Diquinone Tetrad: Enhancement of Quantum Yields via Control of Electronic Coupling," *Chem. Physics* **1993**, *176*, 321-336.

D. Gust, T. Moore, A. Moore, A. Krasnovsky, Jr., P. Liddell, D. Nicodem, J. DeGraziano, P. Kerrigan, L. Makings, and P. Pessiki, "Mimicking the Photosynthetic Triplet Energy Transfer Relay," *J. Amer. Chem. Soc.*, **1993**, *115*, 5684-5691.

K. Radtke, R. Byrnes, P. Kerrigan, W. Antholine, D. Petering, "Requirement of Endogenous Iron for Cytotoxicity Caused by Hydrogen Peroxide in *Euglena gracilis*," *Marine Environmental Research*, **1992**, *34*, 339-343.

S. Lyman, P.K. Taylor*, A. Weir, F. Lornitizo, W.E. Antholine, D. Stone, D.H. Petering, "Activity of Bleomycin in Iron and Copper Deficient Cells," *Biochem. Pharm.*, **1989**, *38*, 4273-4282.

*maiden name

Consultant Work

Test Item Files for the 9th – 11th editions of Stoker's "Introductory Chemistry", 2007, 2010, 2012

Test Item File for the 1st edition of a new book by Frost/Deal, 2010.

Test Item Files for the 6-8th editions of McMurray's "General, Organic and Biochemistry"

Edited the Instructor's Resource Manual for the 9th edition of the Petrucci, Harwood, Herring, Madura, text entitled: "General Chemistry: Principles & Modern Applications". Jan. 2007

Two projects included on the Instructor Resource CD/DVD which accompanied the “Essential Organic Chemistry,” 1E by Paula Bruice. The two projects were the CRS (Classroom Response System) PowerPoint Presentation and the AVLog (art database) content, May 2006

Wrote 4 media labs for the 10th edition of “Chemistry for Changing Times” by Hill and Kolb. I developed questions for the research navigator portion of the text and checked all the quiz questions. See the following web page: http://wps.prenhall.com/esm_hillkolb_chemistry_10 for further information. Nov, 2004

I have reviewed numerous chapters for several textbooks ranging from non-science majors courses to organic and biochemistry.

Abstracts

“The synthesis and characterization of a novel water-soluble porphyrin series, H2TPPPipOH”

J. E. Bradshaw, A. M. Berry, R. J. Hickerson, Pamela Kerrigan, Dr. James Haley, Tan Sirivanta, Sarah Young, and Maria F. Roberto. Department of Chemistry, Ouachita Baptist University, 410 Ouachita, Box 3726, Arkadelphia, AR 71998, Departments of Chemistry and Biochemistry, College of Mount Saint Vincent, 6301 Riverdale Ave., Riverdale, NY 10471

“The use of water soluble, unmetallated porphyrins as light absorbing sensitizers in the photodynamic treatment of cultured C6 cells”, **J.E. Haley**, M.F. Roberto, P. Kerrigan, T. Smith, D. Reeves, J. Quintero and J. Bradshaw, *Journal of Neurochemistry (supplement)*, 90:61, **2004**.

At the National American Chemical Society meetings I have presented several papers on the new teaching methods I have tried to implement at the college. The following are those presentations:

“Using the Internet to address chemical issues facing society. **P. K. Kerrigan**, S. E. Rudnick, , 225th ACS National Meeting (New Orleans), March 2003

“Encouraging teachers to integrate cross-curricular concepts in chemistry instruction” **P. K. Kerrigan** , S. E. Rudnick , W. Dougherty , P. Mielnik, ACS National Convention, Orlando, FL, April 2002

Utilizing writing as a tool in teaching introductory chemistry to nonscience majors. **P. K. Kerrigan**, **S. E. Rudnick**, 221st ACS National Meeting (San Diego)/CHED / Writing in the Discipline: Chemistry Literacy and Beyond, April, 2001

Titration of consumer products in non-science-majors chemistry laboratory. **P. K. Kerrigan**, **S. E. Rudnick**, 220th ACS National Meeting (Washington, DC)/CHED /Incorporating Everyday Chemistry into the Classroom and the Laboratory, August 2000.

Encouraging students to investigate acids and bases using plant indicators. **P. K. Kerrigan**, A. Burns, 218th ACS National Meeting (New Orleans), CHED / Demonstrations with Everyday Substances, March, 2000

Polymers: Those crazy things. **P. K. Kerrigan**, A. Burns , L. Simon , R. Helmy, 218th ACS National Meeting (New Orleans), CHED / Teaching Polymers at All Levels: Kindergarten to Graduate School, March 2000

Student Presentations:

“Synthesis and Purification of Meso-Substituted Porphyrins”, **Vicki Milord**, Paz Julienne Rivera, **Stephanie Tejada**, Division of Natural Sciences, College of Mount Saint Vincent, Riverdale, NY 10471, presented at: NE Regional Student Research Conference, Queens College, Queens, NY, April 21, 2012 and NYSACS Undergraduate Research Conference, SUNY Old Westbury, May 5, 2012.

“Synthesis and Purification of Porphyrin Isomers”, **Joy Cote**, Stephanie Widmer, Pamela Kerrigan, Division of Natural Sciences, College of Mount Saint Vincent, Riverdale, NY 10471, presented at: ACS National Meeting, March 2012, San Diego, CA

“Utilizing photodynamic therapy to generate oxidative stress in C6 astrocytomas”, **Tan Sirivanta**, Pamela Kerrigan, James Haley, Sarah Young, Joseph E. Bradshaw, and Maria F. Roberto, College of Mount St. Vincent, 6301 Riverdale Ave., Bronx, NY 10471; Department of Chemistry, Ouachita Baptist University, 410 Ouachita, Box 3726, Arkadelphia, AR 71998-0001, ACS National Meeting, Chicago, IL

“Photodynamic therapy and porphyrins: Employing water soluble, unmetallated porphyrins as light activated catalysts in the production of free radicals to stimulate C6 glial cell death” **Sarah Young**, Pamela K. Kerrigan, James Haley, Joseph E. Bradshaw, Rachel A. Matundan, and Jaime Padavil, (1) Joined Department of Chemistry and Biochemistry, Manhattan College/College of Mount St. Vincent, 4813 Manhattan College Parkway, Riverdale, NY 10471, ACS National Meeting, Atlanta, GA.

“The phototherapeutic treatment of C6 cells using water soluble porphyrins”, **Jaime Padavil**, Pamela Kerrigan, Rachel Matundan, Dr. James Haley, Maria Roberto, Tanya Smith, and Dr. James Bradshaw Joined Department of Chemistry and Biochemistry, College of Mount St. Vincent/Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, ACS National Meeting, San Diego, CA

“Synthesis of meso-substituted porphyrins using dipyrromethane intermediates,” **Alicia Mullaley**, Pamela K. Kerrigan, and James McCullagh. Joined Departments of Chemistry and Biochemistry, Manhattan College/College of Mount Saint Vincent, 4513 Manhattan College Parkway, Riverdale, NY 10471, ACS National Meeting, San Diego, CA

“The effect of liposome encased porphyrin on C6 cells in phototherapeutic treatment,” **Rachel A. Matundan**, Maria F. Roberto, Dara A. Reeves, Tanya Smith, Pamela K. Kerrigan, and James Haley Joined Departments of Chemistry and Biochemistry, College of Mount Saint Vincent/Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, ACS National Meeting, San Diego, CA

“The phototherapeutic treatment of C6 cells using water soluble and water insoluble porphyrins”
Dara Reeves, Tanya Smith, James Haley, James Bradshaw, and Pamela Kerrigan, 52nd Annual Undergraduate Research Symposium, Queensborough Community College, May 1, 2004

“The Synthesis of p-Tolyl and p-Anisyl Porphyrins” **Mofieni Iniya,** Pamela Kerrigan, Maria Roberto, Sue Soto, Departments of Chemistry/Biochemistry, Manhattan College/ College Of Mount Saint Vincent, Riverdale, NY 10471, 50th Annual Undergraduate Research Symposium, Hofstra University, May 4, 2002

“Isolation and Purification of trans- β -apo-8'-Carotenal and Carotenoid Synthesis for Photoprotection” **Spiro Spiliotis,** Christopher Kiely, Pamela K. Kerrigan, Manhattan College, Riverdale, NY 10471, 50th Annual Undergraduate Research Symposium, Hofstra University, May 4, 2002

“The Synthesis, Liposome Incorporation and Cell Culture Testing of meso-Substituted Porphyrins”, **Kristi Colaccioppo,** Kesha Gaye Anderson, Pamela Kerrigan, Manhattan College, Riverdale, NY 10471, 49th Annual Undergraduate Research Symposium, Pace University, May 5, 2001

“Synthesis of 7'-apo-7'-(4-carbomethoxyphenyl)- β -carotene for use in Carotenoporphyrins,”
Christopher Macaluso, Susan Branciforte, Michael Rosconi, and Pamela Kerrigan, Manhattan College, Riverdale, NY 10471, 47th Annual Undergraduate Research Symposium, College of Mount Saint Vincent, May, 1999

“The Synthesis and Isolation of Methoxyphenylporphyrins for use in PDT”, **James Nitzkorski,** Marissa Raniolo, and Pamela Kerrigan, College of Mount Saint Vincent, Riverdale, NY, 47th Annual Undergraduate Research Symposium, College of Mount Saint Vincent, May, 1999

“Characterization of Porphyrin Encapsulated Liposomes”, **Michelle Rivera,** Robert Youker, and Pamela Kerrigan, College of Mount Saint Vincent, Riverdale, NY, 47th Annual Undergraduate Research Symposium, College of Mount Saint Vincent, May, 1999

“Detecting Mercury Levels In Human Urine via HPLC Analysis”, **Kelene Lyttle,** Barry Kendler, and Pamela Kerrigan, Manhattan College, Riverdale, NY, 47th Annual Undergraduate Research Symposium, College of Mount Saint Vincent, May, 1999

“The phototherapeutic treatment of C6 cells using water soluble porphyrins”, **Dara A. Reeves**¹, Maria F. Roberto¹, Pamela K. Kerrigan¹, James Haley², and Joseph E. Bradshaw³. (1) Joined Departments of Chemistry and Biochemistry, College of Mount Saint Vincent/Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, (2) Department of Biology, College of Mount Saint Vincent, 4513 Manhattan College Parkway, Riverdale, NY 10471, (3) Department of Chemistry, Ouachita Baptist University, 410 Ouachita, Box 3726, Arkadelphia, AR 71998-0001, ACS National Meeting , Anaheim, CA March 2004.

“Synthesis and purification of p-tolyl porphyrins using dipyrromethane intermediates” **Alicia Mullaley,** Kelly A. Daggett, James McCullagh, and Pamela K. Kerrigan. Joined Departments of Chemistry and Biochemistry, Manhattan College/College of Mount Saint Vincent, 4513 Manhattan College Parkway, Riverdale, NY 10471

“Small scale synthesis, purification and characterization of meso-substituted porphyrins” **Kelly Daggett**, E. DeThomas, P. Kerrigan, J. McCullagh, 226th ACS National Meeting CHED / Undergraduate Research Poster Session: Organic Chemistry, New York, Sept. 2003

“Microscale synthesis and purification of p-tolyl and p-anisyl porphyrins” **E. M. DeThomas**, C. Kiely, M. Panos, P. K. Kerrigan, 225th ACS National Meeting/CHED / Undergraduate Research Poster Session, New Orleans, March 2003

“The synthesis and characterization of liposome-encased porphyrins” **M. D'Souza**, M. F. Roberto, E. M. DeThomas, M. Panos, P. K. Kerrigan, 225th ACS National Meeting/CHED / Undergraduate Research Poster Session, New Orleans, March 2003

“The use of water-soluble, unmetallated porphyrins as light-absorbing sensitizers in the phototherapeutic treatment of C6 cells” **M. F. Roberto**, P. K. Kerrigan, J. Haley, J. E. Bradshaw, E. M. DeThomas, M. D'Souza, 225th ACS National Meeting/CHED / Undergraduate Research Poster Session, New Orleans, March 2003

“Synthesis of p-tolyl and p-anisyl porphyrins for cancer treatment” **M. Iniya**, P. Kerrigan, 223rd ACS National Convention, Orlando, FL, April 2002

“Use of phototherapy in C6 cell” **M. F. Roberto**, P. Kerrigan, J. Haley, 223rd ACS National Convention, Orlando, FL, April 2002

“Utilizing HPLC to detect mercury levels in human urine” **A. Burns**, K. Lyttle, P. K. Kerrigan, B. Kendler, 220th ACS National Meeting/CHED / Undergraduate Research Posters: Biochemistry Washington, DC, August, 2000.

Student Chapter posters that I have been involved with:

“The CMSV Science Club”, Vanie Mangal, Chelsea Modferri, Pamela Kerrigan, Division of Natural Sciences, College of Mount Saint Vincent, Riverdale, NY 10471, ACS National Meeting, March 2012, San Diego, CA

“CMSV Science Club: All the cool kids are science majors”, Joy Cote, Pamela Kerrigan, Division of Natural Sciences, College of Mount Saint Vincent, Riverdale, NY 10471, ACS National Meeting, March 2010, San Francisco, CA

“CMSV's new interdisciplinary science club,” **Ana C. Uruena**, Pamela Kerrigan, Thomas J. Pufahl, and Christina M. Lavelle, (1) Department of Chemistry, College of Mount Saint Vincent, 6301 Riverdale Ave., Bronx, NY 10471, (2) The College of Mount St. Vincent, 6301 Riverdale Ave., Bronx, NY 10471. April 2009, ACS National Meeting, Salt Lake City, UT

“Team Chemistry: A dynamic effort” **Connie Levy**, Felisha Santory, Tan Sirivanta, Pamela K. Kerrigan, Departments of Chemistry and Biochemistry, College of Mount Saint Vincent, 6301 Riverdale Ave. Riverdale, NY 10471, March 2007, ACS National Meeting, Chicago. IL

“Creative chemistry: An unconventional journey with the Manhattan College/College of Mount Saint Vincent student affiliates chapter,” **James Kuehn**, Maryanne Santiago, Sarah Young, Tan Sirivanta, and Dr. Pamela Kerrigan, Joined Department of Chemistry and Biochemistry, Manhattan College/College of Mount St. Vincent, 4513 Manhattan College Parkway, Riverdale, NY 10471, ACS National Meeting, Atlanta, GA.

“Healthy mind, healthy body: Chemistry and our lives” **James Kuehn**, **Maryanne Santiago**, Dr. Pamela Kerrigan, Maria Andal, and Alicia Mullaley. Joined Department of Chemistry and Biochemistry, Manhattan College/College of Mount St. Vincent, 4513 Manhattan College Parkway, Riverdale, NY 10471, (2) Joined Department of Chemistry and Biochemistry, College of Mount St. Vincent/Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471 ACS National Meeting, San Diego, CA

“Explore, expand, excel: A journey into the world of chemistry”, **Rachel A. Matundan**, Alicia Mullaley, Kelly A. Daggett, **Maryanne Santiago**, and Pamela K. Kerrigan, Joined Departments of Chemistry and Biochemistry, College of Mount Saint Vincent/Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, ACS National Meeting, San Diego, CA.

The active life of an award winning SAACS Chapter: The activities of the Manhattan College/College of Mount Saint Vincent SAACS chapter. **Alicia Mullaley**, Kelly A. Daggett, Joined Departments of Chemistry and Biochemistry, College of Mount Saint Vincent/Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, 226th ACS National Meeting, New York, Fall 2003

Chemistry and people: The activities of the Manhattan College/College of Mount Saint Vincent SAACS chapter. **A. J. Cedrone** , **N. J. Palma** , *C. Hall* , *E. M. DeThomas*, Joined Departments of Chemistry and Biochemistry, College of Mount Saint Vincent/ Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, 225th ACS National Meeting, New Orleans, March 2003

“Impact of the Monthly Mole on our students' appreciation of chemistry” **P. Mielnik**, **C. Hall**, **M. D'Souza**, S. Tan, Joined Departments of Chemistry and Biochemistry, College of Mount Saint Vincent/Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, ACS National Convention, Orlando, FL, April 2002

Amazing Adventures of the ACS Student Affiliates of Manhattan College/College of Mount St. Vincent Chapter. **Anne Burns**, Roy Helmy, Marissa Raniolo, and Pamela K. Kerrigan, Joined Departments of Chemistry and Biochemistry, Manhattan College/ College of Mount St. Vincent, Riverdale, NY 10417, ACS National Convention, San Diego, April 1-5, 2001.

Amazing Adventures of the ACS Student Affiliates of Manhattan College/College of Mount St. Vincent Chapter. **Anne Burns**, Roy Helmy, Marissa Raniolo, and Pamela K. Kerrigan, Joined Departments of Chemistry and Biochemistry, Manhattan College/ College of Mount St. Vincent, Riverdale, NY 10417, ACS National Convention, Washington, D.C., August 2000.

Chemical magical mystery tour. **A. E. Burns** , **P. K. Kerrigan** , *R. Helmy* , *A. Grunseich* , *L. Simon*, Joined Departments of Chemistry and Biochemistry, College of Mount Saint Vincent/Manhattan College, 4513 Manhattan College Parkway, Riverdale, NY 10471, 218th ACS National Meeting, New Orleans, 1999