

## MARYELLEN NERZ-STORMES

Academic Address:

*Department of Chemistry  
Bryn Mawr, Pennsylvania 19010  
(215) 526-5102*

*Pennsylvania*

### ***Education***

**Ph.D.** in Organic Chemistry, University of Pennsylvania. Completed October 1985.  
Thesis: I. "Carbon-13 Spin-Lattice Relaxation Studies of  $G_{D1a}$  Micelles. Limited Segmental Motion of Head Group Saccharide Units." II. "Enantioselective Titanium-Mediated Aldol Reactions with Chiral Imide Enolates Consistent with Chelation Control."

**B.S.** in Biochemistry, College of Mount St. Vincent (Manhattan College Chemistry Department). Completed May 1980.

### ***Professional Appointments***

#### **Bryn Mawr College:**

Senior Laboratory Lecturer in Chemistry, September 1996 – present.

Acting Undergraduate Health Professions Advisor, September 1999-August 2000

Laboratory Lecturer in Chemistry, September 1988 – August 1996

*Teaching:* Lecture and laboratory Instructor for Organic Chemistry I (fall 1988, summer 1989, 1990, 1994-2000, 2008, 2009) and Organic Chemistry II (summer 1989). Lecture Instructor for Organic Chemistry I (summer 1992, fall 1995, fall 2002, summer 2003, summer 2004, fall 2006). Lecture Instructor for Organic Chemistry II (spring 2000, spring 2004, spring 2007, summer 2009). Laboratory Instructor for Organic Chemistry I (fall 1989 –1994, 1996-2000, 2003, 2004, 2005, 2007, 2008, 2009) and Organic Chemistry II (spring 1989-1999, 2001, 2003, 2006, 2008, 2009).

Responsibilities for these courses include preparing and delivering all lectures. Development and implementation of innovative teaching methods and materials, including use of the web in and outside the classroom. See: <http://www.brynmawr.edu/Acads/Chem/mnerzsto/index.html>. Grading all exams and approximately one-third of all laboratory reports. Testing new and updating old experiments. Writing, updating and publishing two lab manuals per year. Purchasing, maintaining, updating laboratory equipment including five Gow-Mac 350 Series gas chromatographs with Hewlett-Packard automatic integrators, four Buck Scientific Gas Chromatograph and accompanying computers, six rotary evaporators, two Perkin-Elmer Paragon 1000 FT Infrared Spectrometers.. Ordering and preparing laboratory chemicals. Supervision of as many as eight teaching assistants, two preparatory assistants and up to one-hundred and twenty students in the laboratory.

Instruction and supervision of students operating the gas chromatograph-mass spectrometer and 300 MHz NMR spectrometer.

Marshall Fellow Teaching Mentor : 1992/1993 (Tabassum Salam), 1996/1997 (Eliana Saxon), 2004/2005 (Kirbi Krisfalusi)

Advising: Advised undergraduates contemplating the health profession during 2000/2001. Responsibilities included day to day advising and associated research, delivered several lectures/workshops on aspects of the medical school application process, arranged speakers, met with special groups (pre-vet students, minority students, etc.), advised the premed club, composed committee letters for students applying to medical school and other health professions schools. Created and maintained web page for the health professions at Bryn Mawr College:

#### *Committees/College Service*

Admissions Committee, fall 1990 to spring 1991, fall 1998-2000  
Chemistry Search Committees, 1990-1991, 1999-2000, 2004-2005  
Division of General Studies Council, fall 1995-spring 1996  
Enrollment Planning Committee, fall 1999 – 2000  
Learning Disabilities Committee, summer 1999-2000  
Medical Scholarship Committee, spring 1990 - 2003  
Orientation Workshop Leader(OWL), fall 1994-spring 1996, fall 1997-  
spring 1998, fall 2000, spring 2001  
Parent's Day Committee, fall 1996  
Undergraduate Council, fall 1994-2001  
Undergraduate Council Executive Committee, spring 1997-2000  
Undergraduate Health Professions Advisor, Fall 1999-summer 2000  
Undergraduate Pre-Medical Advisory Committee, summer 1998-  
present

*Current Pedagogical Research:* Lab work directed toward undergraduate synthesis of Chiral Coumadin and Coumadin derivatives and the synthesis of a peptide.

*Research:* The study of "through-space" nuclear spin coupling by measuring  $^{19}\text{F}$ - $^{19}\text{F}$  coupling constants as a function of internuclear distance in collaboration with Professor Frank B. Mallory (1989-1994). In addition to carrying out some basic research in this area, I have periodically assisted in the supervision of undergraduate and graduate research students

**Message Pharmaceutical:** Visiting Scientist, September 2001 – January 2002.

*Research:* Synthesis of biologically active molecules having potential RNA binding properties. Molecules were tested via high throughput screening techniques. Learned more about micro techniques and the synthesis of peptides which directly influenced the way I am currently teaching lab. Learned about the pharmaceutical industry and how target molecules are discovered and tested. Large experience and review of Flash Chromatography and HPLC techniques.

**College of Staten Island:** Part-time Postdoctoral Research Fellow, June 1988 - August 1988.

*Research:* Quasi-elastic light scattering studies of model digestive lipid aggregates to determine aggregate size and polydispersity as a function of several variables.

**Wagner College:** Assistant Professor of Chemistry, September 1986 - August 1988.

*Teaching:* Lectures and laboratories for Organic Chemistry I, Organic Chemistry II. Biochemistry (undergraduate), Biochemistry (graduate), and Physical Science. Laboratory for Inorganic and Theoretical Chemistry I. Discussion sessions for Interdisciplinary Studies - "The City". Direction of two students in research and seven laboratory assistants.

*Committees/Advisement:* Admissions Review Committee, Health Professions Advisory Committee, Freshman Advisement Team, Advisor to A.C.S. Student Affiliate, Admissions and Financial Aid Committee.

**University of North Carolina at Chapel Hill:** Postdoctoral Fellow, September 1985 - April 1986.

*Research:* Studies of intramolecular hydrogen bonding in chiral sulfides and sulfoxides via IR, NMR and optical rotation. Research included operation of Nicolet 20DX FTIR, Bruker WM 250 NMR and IBM 200 AC NMR with Aspect 3000 computer as well as low temperature NMR techniques.

### *Honors and Awards*

*Community:* Named the 2005 May Queen by the Archdiocese of Philadelphia.

**Bryn Mawr College:** Rosalyn R. Schwartz Teaching Award 2000  
Christain and Mary Lindback Award for Distinguished Teaching 2007

**University of North Carolina at Chapel Hill:** Sigma Xi (full member).

**University of Pennsylvania:** Phi Lambda Upsilon, University of Pennsylvania Teaching Award 1981, University of Pennsylvania Teaching Award 1983.

### *Current Professional Organizations*

American Chemical Society

### *Scholarly Publications*

#### *Scientific Papers*

Nerz-Stormes, M.; Thornton, E. R. "Carbon-13 Spin-Lattice Relaxation Studies of G<sub>D1a</sub> Micelles. Limited Segmental Motion of Head Group Saccharide Units" *Journal of the American Chemical Society* **1984**, *106*, 5240-5246.

Nerz-Stormes, M.; Thornton, E. R. "Apparent Chelation Control in Aldol Reactions of Chiral (Me<sub>2</sub>CHO)<sub>3</sub>Ti-Enolates" *Tetrahedron Letters* **1986**, *27*, 897-900.

Shrodkar, S.; Nerz-Stormes, M.; Thornton, E. R. "Asymmetric Aldol Reactions. Mechanism of Solvent Effect on Stereoselectivity is Specific, Stoichiometric Binding of Tetrahydrofuran to a Chiral Titanium Enolate" *Tetrahedron Letters* **1990**, *31*, 4699-4702.

Nerz-Stormes, M.; Thornton, E. R. "Asymmetric Aldol Reactions. Use of the Titanium Enolate of a Chiral N-Acyloxazolidinone to Reverse Diastereofacial Selectivities" *Journal of Organic Chemistry* **1991**, *56*, 2489-2498.

Mallory, F. B.; Mallory, C. W., Butler, K. E.; Lewis, M. B.; Xia, A. Q.; Luzik, E. D. Jr.; Fredenburgh, L. E.; Ramanjulu, M. M. ; Van, Q.N.; Francl, M. M.; Freed, D. A.; Wray, C. C.; Hann, C. ; Nerz-Stormes, M.; Carroll, P. J.; Chirlian, L. E. "Nuclear Spin-Spin Coupling via Nonbonded Interactions 8: The Distance Dependence of Through-Space Fluorine-Fluorine Coupling" *Journal of the American Chemical Society* **1999**, *122*, 4108-4116

### ***Laboratory Manuals***

Nerz-Stormes, M. , *Bryn Mawr College Organic Laboratory Manual, Fall 2009* in house publication, 235 + p. see <http://www.brynmawr.edu/Acads/Chem/mnerzsto/schedule.html> for current version of lab manual and associated Youtube videos.

Nerz-Stormes, M. (principal contributing author and editor), *Bryn Mawr College Organic Laboratory Manual, Spring 2010* see <http://www.brynmawr.edu/Acads/Chem/mnerzsto/schedule.html> for current version of lab manual and associated Youtube videos.

### ***Educational Videos***

Approximately 45 Youtube videos produced during the 2009-2010 academic year on various lab techniques, the operation of instruments and lecture topics such as NMR spectroscopy and stereochemistry. See ["http://www.brynmawr.edu/Acads/Chem/mnerzsto/schedule.html"](http://www.brynmawr.edu/Acads/Chem/mnerzsto/schedule.html) and Youtube.

### ***Panel Discussions/Talks given to Bryn Mawr Community***

"The Doctor/Patient Relationship". Given at Bryn Mawr , March 2004

"On Being My Own Advocate: The Power of the Bald Head" Given at Bryn Mawr in January of 2006.

“On Being My Own Advocate: The Power of the Bald Head” Given at Bryn Mawr in March of 2007.

“Conversation with Dr. Nerz” Given at Bryn Mawr in April of 2009 – describing my experiences fighting for my life as a cancer patient with incurable, usually deadly cancer.

“Conversation with Dr. Nerz” Given at Bryn Mawr in February of 2010 – describing my experiences fighting for my life as a cancer patient with incurable, usually deadly cancer.

***Community Service:***

writing on cancer advocacy, working toward better conditions for long term cancer patients.

Member of Church Choir, Our Lady of the Assumption Church in Strafford since 2001

Member of the Institutional Review Board of the Lankenau, Bryn Mawr and Paoli Hospitals (board reviews clinical trials with the goal of protecting patients in trials) since 2003

Volunteer at the Catholic Worker Free Clinic in Philadelphia (2005)

Guest on national PBS program, “Second Opinion”, dealing with the secondary health issues cancer patients from chemotherapy and radiation. Filmed in May 2010.

