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## BIOGRAPHICAL SKETCH

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Owens, Patrick M.	Professor of Chemistry and Chair
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### EDUCATION/TRAINING

INSTITUTION	DEGREE	Year	FIELD OF STUDY
USMA	BS	1975	Chemistry
UNC Chapel Hill	MS	1982	Physical / Analytical Chemistry
UNC Chapel Hill	Ph.D.	1984	Physical / Analytical Chemistry
Long Island University	MBA	1985	Finance

### Positions and Experience

#### Positions

1975-1979 Platoon Ldr, XO, S3-Air, & Company Commander; 1-67 Armor, 2<sup>nd</sup> Armored Division, Ft. Hood, TX  
1982-1985 Assistant Professor of Chemistry, USMA, West Point, NY  
1985-1989 Monitoring Systems Manager, Program Manager Chemical Demilitarization, APG, MD  
1989-1995 Associate Professor of Chemistry, USMA, West Point, NY  
1995-Present Professor of Chemistry and Chair; Department of Chemistry, Physics, and Geology; Winthrop University, Rock Hill, SC

#### Experience, Awards, and Professional Memberships

2012 CDC NCEH and ASTDR Honor Award for Superior Mission Response for Continuous Diligent Public Health Oversight Helping US Army Safely Destroy the Stockpile of Chemical Warfare Agent  
2001-2011 DHHS Federal Occupational Health Program Environmental Chemistry Consultant for CDC National Center for Environmental Health  
1997-2002 Vice Chair, Mecklenburg County Environmental Protection Commission  
2000-2001 Charlotte Air Quality BREATHE Stakeholders Committee  
1999-2000 Central Carolinas Choices Air Quality Action Team Leader  
1980-present Member, American Chemical Society  
2001-2003 Member, Air and Waste Management Association  
2003-2004 Member, National Environmental Health Association  
2000-2001 Member, Council for Undergraduate Research  
2006-present Member, National Organization Professional Advancement of Black Chemists & Chemical Engineers

## Selected Peer-reviewed Publications

1. "Factor Analysis for Real-Time GC/FT-IR Chromatogram Reconstructions," P.M. Owens, R.B. Lam, and T.L. Isenhour, *Analytical Chemistry*, November, 1982.
2. "Infrared Spectral Compression Procedure for Resolution Independent Search Systems," P. M. Owens and T.L. Isenhour, *Analytical Chemistry*, August, 1983.
3. "Effects of Concentration Gradients on Spectra in GC/FT-IR," J.G. White, P.M. Owens, and T.L. Isenhour, *Analytical Chemistry*, 1985.
4. "Instrumental Dependence of Optimal Interferogram Sampling for Gram-Schmidt Reconstructions of GC/FT-IR Data," D.T. Sparks, P.M. Owens, S.S. Williams, C.P. Wang, and T.L. Isenhour, *Applied Spectroscopy*, March, 1985.
5. *The Chemical Stockpile Disposal Program Monitoring Concept Plan*, B.A. Kuryk, R.G. Roux, W.R. Brankowitz, K.J. Flamm, P.M. Owens, L.C. Rowe, W.F. Spurgeon, T.W. Thomas, and C.F. Whyne, Office of the PM for Chemical Demilitarization, September, 1987.
6. *The Laboratory Quality Assurance Program Plan for the Chemical Stockpile Disposal Program*, William K. Fowler, P.M. Owens, and M. Gooden, Office of the Program Manager for Chemical Demilitarization, November, 1988.
7. *Chemical Analysis Program for Chemical Disarmament Verification*, P.M. Owens, Technical Report for CRDEC, July, 1991.
8. *Sampling and Analysis Requirements for Verification Inspections*, P.M. Owens, Technical Report for the U.S. On-Site Inspection Agency, March 1992.
9. *Modern Applications of Chemistry*, Edited by P. M. Owens, R. G. Costella, W. F. Harris, S. G. Harrison, J. R. Eshelman, Eds. Kendall/Hunt Publishing Co.: Dubuque, IA, 1994.
10. "A General Chemistry Course that Focuses on the Emerging Chemical Sciences," P. M. Owens, *Journal of Chemical Education* 72 (6) (June 1995), 528-530.
11. "Parallel Column Gas Chromatography," P.M. Owens, D.W. Loehle, B.S. Scott\*\*, and R.S. Gonzalez\*\*, *J. Microcolumn Separations*, 7(6) 551-566 (Nov-Dec 1995).
12. "Weekday/Weekend Variability and Long-Term Trends in Traffic, CO, NO<sub>y</sub>, and Ozone for the Charlotte Metropolitan Area during the 1990's, J.L. Perry\*\* and P.M. Owens, *Proceedings of the Air and Waste Management Association's 94<sup>th</sup> Annual Conference and Exhibition*, Orlando, FL, June 2001.
13. *Review of the Chemical Warfare Agent Air Monitoring Program at the Pine Bluff Chemical Agent Disposal Facility (PBCDF)*, Technical Evaluation Report, National Center for Environmental Health, October 2010.
14. *Review of the Chemical Warfare Agent Air Monitoring Program at the Umatilla Chemical Agent Disposal Facility (UMCDF)*, Technical Evaluation Report, National Center for Environmental Health, September 2011.
15. *Review of the Chemical Agent Air Monitoring Program at the Tooele Chemical Agent Disposal Facility (TOCDF)*, Technical Evaluation Report, National Center for Environmental Health, September 2011.
16. *Review of the Chemical Agent Air Monitoring Program at the Chemical Agent Munitions Disposal Facility (CAMDS)*, Technical Evaluation Report, National Center for Environmental Health, September 2011
17. T.F. Sumter and P.M. Owens, (2011) "An Approach to Teaching General Chemistry II that Highlights the Interdisciplinary Nature of Science" *Biochem. Mol. Bio. Educ.* 39 (2): 110-116.

## **Extramural Grant Support**

### **Ongoing Grant Support**

**NSF DUE-1154152 Owens, PM (PI)**

**07/01/2012 – 06/30/2017**

**Chem-STEM Scholars Program**

**\$598,500**

Chemistry at Winthrop's Chem-STEM Scholars Program is recruiting 41 academically talented and financially needy students into chemistry and biochemistry over the five years of the project. Students share a common curriculum involving degree tracks meeting American Chemical Society (ACS) guidelines for a professional undergraduate education. Based on historical matriculation patterns at the university, both freshmen and sophomore entry points are being used to recruit students. Entering 2012-2016 freshmen cohorts have \$5,000 scholarships available; all scholars remaining in good standing are supported for four years. 2012-2015 sophomore cohorts, comprised primarily of students from other majors or transfers, have \$5,000 scholarships available; all sophomore scholars maintaining satisfactory progress are supported for three years. At the end of the project, the university is sustaining Chem-STEM scholarships for NSF-funded cohorts who have not yet graduated.

Role: Principal Investigator

Award Amount: \$598,500 for Winthrop University

**2 P20 RR016461-10 Pirizi-Creek (PI)**

**09/17/2010 – 06/30/2015**

**SC Idea Network of Biomedical Research Excellence**

**Winthrop University Molecular Biomedical Research Initiative**

**\$2,660,160**

The three major strategic INBRE II goals at Winthrop University are to further increase research capacity through new target faculty development, to demonstrate sustainability by internally supporting former INBRE target faculty, and to create a science diversity initiative to recruit, to educate / train, and to matriculate students into PhD biomedical science graduate programs.

Role: Principal Investigator for Winthrop University

Award Amount: \$2,660,160 for Winthrop University

### **Completed Grant Support**

**2 P20 RR016461-05A1 Baynes (PI)**

**07/01/2005 – 04/30/2010**

**SC Idea Network of Biomedical Research Excellence**

**Winthrop University Molecular Biomedical Research Initiative**

**\$2,265,219**

The major goal at Winthrop University was to increase research capacity through faculty development, research infrastructure development, and increased student research participation particularly those from underrepresented groups.

Role: Principal Investigator for Winthrop University

Award Amount: \$2,265,219 for Winthrop University

**Research Contract with the North Carolina Division of Air Quality (NC DAQ)  
Owens (PI)**

**08/01/00 – 07/30/02**

Provide quality assurance and analytical support for North Carolina's ozone precursor hydrocarbon sampling and analysis program. The goals of this work were to provide the State of North Carolina with recommendations to improve the quality of analytical PAMS data, to examine the impact of hydrocarbon levels on same-day ozone concentrations, and to develop mathematical techniques for the analysis of ozone PAMS data for the Charlotte region.

Role: Principal Investigator