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## Elizabeth Landrum Michalets

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**Work Address:**

Mission Hospitals  
 Department of Pharmacy  
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**Home Address:**

32 Woodcrest Road  
 Asheville, NC 28804  
 828-251-0731

**EDUCATION AND PROFESSIONAL TRAINING**

Clinical Pharmacy Practitioner (CPP)	2001 - present
Board Certified Pharmacotherapy Specialist (BCPS)	1997 - present
Clinical Pharmacy Residency Duke University Medical Center Durham, North Carolina	1991 - 1992
Doctor of Pharmacy Degree The University of North Carolina at Chapel Hill Chapel Hill, North Carolina	1989 - 1991
Bachelor of Science in Pharmacy With Highest Honor Auburn University Auburn, Alabama	1984 - 1989

**PROFESSIONAL EMPLOYMENT**

**University of North Carolina (UNC) Clinical Associate Professor of Pharmacy** 1995 - Present  
**Community Based Practice Faculty**

Mission Hospitals (MH), Asheville, NC; Responsibilities include:

- coordination and supervision of all UNC PharmD student clerkships at Mission Hospitals and the provision of practical experiences for student learning
- precepting of PharmD students and pharmacy residents on the Neurotrauma ICU clerkship
- conduction of clinical research, publication and scholarly activities

**Pharmacy Education Coordinator**

1995 - Present

Mission Hospitals (MH), Asheville, NC; Responsibilities include:

- provision of education to the pharmacy staff to support the practice of innovative pharmaceutical care
- implementation and supervision of pharmacy reimbursement system for inpatient cognitive services
- initiation and supervision of pharmacokinetic consult service
- coordination of all staff development and education, including weekly clinical seminars, competencies, and training
- participation in Pharmacy and Therapeutics Committee and Institutional Review Board

Area of Practice (1998 - present) - Neurotrauma Critical Care; Responsibilities include:

- rounding with the trauma surgeon and the trauma multi-disciplinary team in the 14 bed Neurotrauma ICU
- provision of pharmacotherapeutic drug therapy outcome optimization in antibiotic selection, pain and sedation management, prevention of ICU complications, electrolyte replacement, anticoagulation and pharmacokinetic dosing under the Clinical Pharmacy Practitioner model
- development and implementation of medication order sets for adult critical care units

Area of Practice (1995 -1998) - Medical/Surgical Critical Care; Responsibilities included:

- daily rounding with multi-disciplinary team in the 8 bed Medical/Surgical ICU
- provision of pharmacotherapeutic drug therapy outcome optimization in all Medical/Surgical ICU patients
- development and implementation of medication order sets for adult critical care units

**Mountain Area Health Education Center (MAHEC)**

1995 - Present

**Coordinator of Clinical Scholars Program and Student Clerkships**

Asheville, NC; Responsibilities include:

- coordination of the Clinical Scholars Program (2003 – present) including research projects
- provision of seminars for second, third and fourth year PharmD students

**Cardiology Pharmacist**

1994 - 1995

Mission Hospitals, Asheville, NC; Responsibilities included:

- provision of therapeutic drug monitoring, drug information and patient counseling for the 40 bed medical and surgical cardiac units
- medication computer order entry and supervision of medication distribution

**Critical Care Clinical Pharmacist/UNC Clinical Assistant Professor of Pharmacy**

1992 - 1994

University of North Carolina Hospitals, Chapel Hill, North Carolina; Responsibilities included:

- daily rounding with the medical team in the 16 bed Medical/Respiratory ICU
- provision of pharmacotherapeutic management, optimization of drug therapy outcomes, pharmacokinetic monitoring, adverse drug reaction monitoring, and code team participation
- provision of medication education and drug information for medical residents in the ICU
- precepting of UNC PharmD students on the Medical ICU clerkship
- supervision of drug distribution

**Clinical Pharmacy Resident**

1991 - 1992

Duke University Medical Center, Durham, NC

**Drug Regimen Reviewer/Research Assistant**

1990 - 1991

NC Center for Health Promotion and Disease Prevention, Research Center Chapel Hill, NC

**Teaching Assistant**

1990 - 1992

University of North Carolina School of Pharmacy, Chapel Hill, NC

**ACADEMIC HONORS AND AWARDS**

American Association of Colleges of Pharmacy Crystal Apple (Academic-Practice Partnerships for Learning Excellence) Award; 2008

University of North Carolina-Chapel Hill School of Pharmacy AHEC Instructor of the Year Award; 2004

Sandoz PharmD Award; The University of North Carolina at Chapel Hill; 1991

Graduated with Highest Honor; Auburn University School of Pharmacy; 1989

Auburn University President's Award for the School of Pharmacy; 1990

Alabama Hospital Pharmacy Award; 1989 - 1990

Rho Chi Award; Auburn University School of Pharmacy; 1987; Rho Chi Honor Society; 1985 - present

Phi Kappa Phi Honor Society; 1985 – present

**TEACHING AND PROFESSIONAL ACTIVITIES**

Multidisciplinary Team Co-Leader; Drug Specific CPOE Power Plan Design and Build; Mission Hospitals; July 2006 – May 2007

Reviewer for North Carolina Association of Pharmacists platform and poster presentations; 2005 - present

Multi-disciplinary development and implementation of medication specific order sets at Mission Hospitals: potassium and magnesium replacement, sedation and analgesia in the ICU, haloperidol for ICU delirium, recombinant factor VIIa in trauma patients, antithrombin III, anticoagulant and antiplatelet reversal for life-threatening bleeds, adult ICU insulin infusion, octreotide, phenytoin, pentobarbital, procainamide, lidocaine, cisatracurium, pancuronium, vecuronium, valproic acid, warfarin in ortho-trauma, empiric antibiotics for nosocomial pneumonia, corticosteroids for relative adrenal insufficiency, trauma reperfusion therapy, vasopressin, drotrecogin alpha; Mission Hospitals; 1995 - present

Reviewer for Pharmacotherapy Self-Assessment Program - IV (PSAP); Neurotrauma Chapter/Urgent Care Module; June 2002

Member and Assistant Chair of Mission Hospitals Institutional Review Board; February 2000 – 2003  
Alternate Member; 2003 - present

Journal Reviewer: *The Medical Letter*, *Annals of Pharmacotherapy*, *Pharmacotherapy*, *Pharmacy Times*, *Rx Consultant*; 1998 - present

North Carolina Center for Pharmaceutical Care State Certification Program Review Committee; reviewed state certificate programs for approval; 1997 - 2000

Pharmacology Course Co-Coordinator, N229 Pharmacotherapeutics in Advanced Nursing Practice, UNC-Asheville off-campus Masters in Nursing and Post-Master's Family Nurse Practitioners Program; Spring Semester 1997

Participant pharmacist in The City of Asheville/Mission St Joseph's Diabetes and Asthma Patient Management Programs; 1997- 2003

Coordinated and produced four patient medication teaching videos for health system patient education channel, A Answering Questions about your Beta Blocker, Warfarin, ACE-Inhibitor, and Calcium Channel Blocker, Mission St. Joseph's; 1996

Pharmacy and Therapeutics Committee and Protocol Subcommittee, Mission St. Joseph's; 1996 - present

Mechanical Ventilation Clinical Path Work Group, Mission St. Joseph's; 1996 - 1998

CABG and Valve Replacement Clinical Path Development Work Group, Memorial Mission Hospital; 1994 - 1995

**PUBLICATIONS**

McClaskey EM, Michalets EL "Subdural Hematoma After a Fall In An Elderly Patient Taking High Dose Omega-3 Fatty Acids With Warfarin and Aspirin: A Case Report and Review of Literature," *Pharmacotherapy* 2007;27(1):152-60.

McClaskey EM, Michalets EL, Sutherland S "Evaluation of Relative Adrenal Insufficiency in Critically Ill Patients: A Follow-Up Study," platform presentation at the North Carolina Association of Pharmacists (NCAP) Annual Meeting; Greensboro, NC; April 2006; abstract and poster presentation at the American Society of Health-System Pharmacists (ASHP) MidYear Meeting; Anaheim, CA; December 2006; *AJHP* 2006;63(20).

Pounders C, Michalets EL, Phillips J, Sutherland S "Implementation of an AUC<sub>24</sub>/MIC Vancomycin Nomogram at a Community Hospital," abstract and platform presentation at the Southeastern Residency Conference; Athens, GA; May 2008.

Peterson E, Kirkpatrick K, Michalets EL "Evaluation of the Initial Management of Acute Hypertension after Ischemic Stroke," abstract and platform presentation at the Southeastern Residency Conference; Athens, GA; May 2008.

- Carter J, Michalets EL, Long R, Sutherland S "Characterization of Community-Acquired MRSA in a Community Health System," abstract and platform presentation at the NCAP Annual Meeting; Greensboro, NC; April 2007.
- Grondin K, Michalets EM "Evaluation of Recombinant Factor VIIA for Life-Threatening Hemorrhage," abstract and platform presentation at the Southeastern Residency Conference; Athens, GA; May 2007.
- Gurdin L, Michalets EL, Sutherland S "Evaluation of Anti-Xa Level Monitoring and Enoxaparin Dosing," abstract and platform presentation at the NCAP Annual Meeting; Greensboro, NC; April 2007.
- Reavis H, Michalets EL, Sutherland S "Evaluation of Stress Ulcer Prophylaxis in Adult Critically Ill Patients," abstract and platform presentation at the NCAP Annual Meeting; Greensboro, NC; April 2007.
- Shell G, Michalets EL, Sutherland S "Evaluation of Vancomycin AUC/MIC Dosing in Patients with Lower Respiratory Tract Infections Due to MRSA," abstract and platform presentation at the NCAP Annual Meeting; Greensboro, NC; April 2007.
- Conley RM, Michalets EL "Evaluation of Relative Adrenal Insufficiency in Critically Ill Patients," abstract and poster presentation at the NCAP Annual Meeting; Raleigh, NC; April 2004 and at the ASHP MidYear Meeting; Las Vegas, Nevada; December 2005.
- Durell A, Michalets EL, Kirkpatrick K, "Evaluation of Diltiazem Use in Subarachnoid Hemorrhage," abstract and platform presentation at SERC; Athens, GA; May 2005.
- Adkins C, Michalets EL, Sutherland S, "Comparison of Intensive Versus Traditional Glycemic Control in the Intensive Care Unit," abstract and platform presentation at SERC; Athens, GA; May 2005.
- Dzikowski A, Michalets EL, Brown J, Sutherland S, "Evaluation of Early vs Late Onset Nosocomial Pneumonia in Intensive Care Units." abstract and poster presentation at SERC; Athens, GA; May 2005.
- Patel S, Michalets EL, Sutherland S. "Evaluation of Erythropoietin for Anemia of Critical Illness," abstract and poster presentation at the ASHP MidYear Meeting; Orlando, FL; December 2004.
- Randolph S, Michalets EL. "Evaluation of Sedation and Analgesia in the ICU," abstract and poster presentation at the NCAP Annual Meeting; Greensboro, NC; April 2004 and at the ASHP MidYear Meeting; Orlando, FL; December 2004.
- Michalets EL "Inpatient Collaborative Practice," Chapter In: Clinical Pharmacy Services: Successful Practices in Community Hospitals. Koch KE, Lobo BL; published by ACCP; 2005.
- Ellis K, Michalets E, Sutherland S. "Evaluation of Recombinant Factor VIIa in a Level II Trauma Center," poster presentation at the NCAP Annual Meeting; Greensboro, NC; April 2004.
- Pendleton R, Michalets EL, Sutherland S, Creger J. "Assessment and Validation of Creatinine Clearance Estimates in Elderly, Critically Ill Patients," abstract and poster presentation at the NCAP Annual Meeting; Greensboro, NC; April 2003 ASHP MidYear Meeting; Orlando, FL; December 2003.
- Walker MM, Browning AR, Michalets EL, Gleim GW. "Methods for Estimating Creatinine Clearance in Critically Ill Patients," *Pharmacotherapy* 2001;21(10): 1305; abstract and poster presentation at the ACPP Annual Meeting; Tampa, FL; December 2001.
- Michalets EL, Williams CE. Reimbursement for Pharmaceutical Care in the Inpatient Setting: Two Years of Experience. *Am J Health-Syst Pharm* 2001; 58(2):164-6.
- Bennett CL, Connors JM, Bell WR, McCarthy LJ, Sarode R, Tarantola S, Hatfield AJ, Michalets EL, Feldman MD, Davidson CJ, Tsai H-M. A Thrombotic Thrombocytopenic Purpura/Hemolytic Uremic Syndrome Associated with Clopidogrel. *N Eng J Med* 2000; June 15th early release; 342(24):1773-7.
- Michalets EL, Williams CR. Drug Interactions with Cisapride: Clinical Implications. *Clinical Pharmacokinetics*. July 2000; 39(1):49-75.
- Michalets EL, Smith LK, VanTassel E. Torsades de Pointes Resulting From The Addition Of Droperidol To An Existing Cytochrome P450 Drug Interaction. *Ann Pharmacother* 1998;32:761-5.

Michalets EL. Clinically Significant Cytochrome P-450 Drug Interactions. *Pharmacotherapy* 1998;18:892-3.

Michalets EL. Update: Clinically Significant Cytochrome P450 Drug Interactions. *Pharmacotherapy* 1998;18:84-112.

Michalets EL. Immediate Release Nifedipine. *Mission+St Joseph's Health System Pharmacy and Therapeutics Newsletter*, September 1998.

Michalets EL, Jackson D. Calcium Channel Blocker Associated Thrombocytopenia. *Pharmacotherapy* 1997;17(6):1345-8. Bunting B, Gooding A, Michalets EL, Smith L, Williams E; Standard Infusion Handbook; Mission +St. Joseph's Health System: June 1997.

Michalets EL. Life-Threatening Drug Interactions. *Mission+St Joseph's Health System Pharmacy and Therapeutics Newsletter*, March 1997.

Michalets EL.. Adult Aminoglycoside Dosing: Extended Interval Dosing of Aminoglycosides. *Mission+St Joseph's Health System Pharmacy and Therapeutics Newsletter*, 1996.

Pleasants R, Michalets EL, Williams D, et al. The Pharmacokinetic Disposition of Single Dose Vancomycin in Adult Cystic Fibrosis Patients. *Antimicrobial Agents and Chemotherapy* 1996; 40: 186-90.

Landrum EM, Siegert EA, Hanlon JT, Currie MS, Prolonged Thrombocytopenia Associated with Procainamide in an Elderly Patient. *Annals of Pharmacotherapy* 1994; 28(10): 1172-6.

#### **OTHER UNPUBLISHED RESEARCH**

Adkins C, Michalets EL, Kirkpatrick K, "Follow-up Evaluation of Recombinant Factor Via in a Level II Trauma Center," Description: observational retrospective follow-up analysis of 18 adult ICU patients at Mission Hospitals; October 2003 – June 2005.

Creger J, Michalets EL, Gleim G. "Methods for Estimating Creatinine Clearance in Critically Ill Patients: A Comparison," Description: prospective observational correlation analysis study in 50 adult ICU patients at Mission Hospitals; July 2001 – June 2002.

Loveland J, Michalets EL, "Hextend® in a Community Hospital and Its Effect on Albumin Usage in Trauma Patients," Description: Two-part retrospective observational study in neurotrauma ICU patients at Mission Hospitals; February 2002 – April 2002 and February 2003 – April 2003.

Howard J, Michalets EL. "Drug Utilization Evaluation: Cisatracurium," Description: retrospective observational study in 28 adult ICU patients at Mission Hospitals; September 2002 – March 2003.

Lugo A, Michalets EL, "Determining Appropriateness of Propofol use in Adult ICUs," Description: retrospective observational study in 37 adult ICU patients at Mission Hospitals; September 2002.

Michalets EL, "Evaluation of Propofol Utilization in Adult ICUs," Description: retrospective observational study in 725 patients in adult ICUs at Mission St Joseph's Health System; October 1999 – June 2000.

Bhavsar T, Michalets EL, Gleim G. "Pharmacokinetics of Extended Interval Dosing Aminoglycosides in Trauma Patients." Description: concurrent, observational, pharmacokinetic study at Mission Hospitals; August 2001 – July 2002.

Bozik K, Michalets, EL, Gleim G. "Evaluating the Accuracy of Calculated Free Phenytoin Concentrations in ICU Patients Using the Tozer Method," Description: prospective, observational validation study in adult 30 ICU patients at Mission Hospitals; July 2000 - July 2001.

Michalets EL. "Cost Savings Demonstrated from the Addition of a Pharmacist to the Multi-disciplinary ICU Team," Description: demonstrated outcome of \$92,000/ year in medication cost savings and justified the addition of another ICU

pharmacist; Mission St Joseph's Department of Pharmacy; Asheville, North Carolina; September 1999 - February 2000.

Michalets EL, Keel J. "Antithrombin III," Description: drug use evaluation, protocol development, and outcomes monitoring; outcome: \$150,000/year cost savings; Mission St Joseph's Health System Department of Critical Care Medicine and Pharmacy; 1997 - 1999.

## PROFESSIONAL PRESENTATIONS

"Drug Interactions with Statins," North Carolina Pharmaceutical Association Pharmacy Continuing Education Program; Asheville, NC; March 2008.

"Drug Interactions with Statins," Mountain Area Health Education Center (MAHEC) Pharmacy Continuing Education Program; Asheville, NC; October 2007.

"Collaborative Practice and Reimbursement in the Inpatient Setting," North Carolina Association of Pharmacists Acute Care Practice Forum Meeting, Plenary Session; Greensboro, NC; April 2006.

"Age Specific Dosing and Pharmacokinetic Monitoring," Mission Hospitals Department of Pharmacy CE Program; Asheville, NC; November 2005; February 2007.

"Interpretation of Laboratory Values," Mountain Area Health Education Center (MAHEC) Pharmacy Continuing Education Program; Asheville, NC; October 2004.

"Collaborative Practice in the Inpatient Setting," American College of Clinical Pharmacy Annual Meeting; Atlanta, GA; November 2003.

"Fluid and Electrolyte Replacement," Mission+St Joseph's Pharmacy CE Program; Asheville, North Carolina; April 1999, 2003, 2004.

"Therapeutic Drug Monitoring," Mission Hospitals Pharmacy CE Program; Asheville, North Carolina; April 2003.

"Phenytoin Dosing," Mission Hospitals Pharmacy CE Program; Asheville, North Carolina; February 2003, 2005.

"Writing SOAP Notes," Mission Hospitals Pharmacy CE Program; Asheville, North Carolina; November 2002, 2005.

"Stress Ulcer Prophylaxis," Mountain Area Health Education Center (MAHEC) Pharmacy Continuing Education Program; Asheville, NC; May 2002.

"Troubling Drug Interactions," Wake Area Education Center Pharmacy Continuing Education Program; Raleigh, NC; April 2001.

"Clinical Implications of Drug Interactions: Cytochrome, Natural Projects, and Alphabet Soup," Area L Education Center and Wilson Medical Center Continuing Education Symposium; Wilson, NC; November 2000.

"Clinically Important Drug Interactions," Mountain Area Health Education Center (MAHEC) Pharmacy Continuing Education Program; Asheville NC; October 2000.

"Reimbursement for Pharmaceutical Care in the Inpatient Setting: 2 Years of Experience," South Carolina Society of Health-System Pharmacists Fall Seminar; Greenville, SC; October 2000.

"Clinical Implications of Drug Interactions: Cytochrome, Natural Projects, and Alphabet Soup," North Carolina Pharmacy Practice Seminar; Wilmington, NC; September 2000.

"Pharmacology of Trauma Patients," Spring 2000 Regional Trauma Symposium; Rutherfordton, North Carolina; June 2000.

"Pharmacology of Trauma Patients," Spring 2000 Regional Trauma Symposium; Cherokee, North Carolina; May 2000.

"Clinical Implications of Drug Interactions: Cytochrome, Natural Projects, and Alphabet Soup," Northwestern Area Health Education Center Pharmacy CE Program; Winston Salem, North Carolina; May 2000.

"Clinical Implications of Drug Interactions: Cytochrome, Natural Projects, and Alphabet Soup," Coastal Area Health Education Center Pharmacy CE Program, Wilmington, North Carolina; April 2000.

"Review of Liver Function Tests and Drug-Induced Hepatotoxicity," Mission+St Joseph's Pharmacy CE Program; Asheville, North Carolina; April 2000.

"Role of a Pharmacist on the Multi disciplinary Team," Mission+St Joseph's Trauma Service; Asheville, North Carolina; March 2000.

"Clinical Implications of Drug Interactions," Mission St Joseph's Internal Medicine Conference; Asheville, North Carolina; March 2000.

"Clinical Implications of Drug Interactions: Cytochrome, Natural Projects, and Alphabet Soup," North Carolina Association of Pharmacists Winter Meeting; Greensboro, North Carolina; February 2000.

"ATIII, Tromethamine, and Other Trauma Medications," Mission+St Joseph's Trauma Conference; February 2000.

"Polypharmacy: Update on Drug Interactions and Problems with Herbals," University of North Carolina School of Medicine Geriatric Conference; Chapel Hill, NC; January 2000.

"Asthma Management: Pharmacologic Therapy," Mountain Area Health Education Center (MAHEC) Obstetrics and Gynecology Residency Program; continuing education program; September 1999.

"Fluid and Electrolyte Balance: Assessment and Replacement," North Carolina Association of Pharmacist Winter Meeting; Greensboro, North Carolina; February 1999.

"Update on Antibiotics," Mission St Joseph's Nursing Education; Continuing Education Program; Asheville, North Carolina; March 1999.

"Update: Clinically Significant Cytochrome P450 Drug Interactions," Mission+St Joseph's Pharmacy Continuing Education Program; Asheville, North Carolina; January 1999.

"Asthma Management: Pharmacologic Approach," MAHEC-UNC School of Pharmacy Asthma Certificate Program; Asheville, North Carolina; November 1998.

"Update: Clinically Significant Cytochrome P450 Drug Interactions," Maryland Society of Health System Pharmacists Annual Seminar; October 1998.

"Oral Cardiac Medications," Mission Hospitals Nursing Education; Asheville, North Carolina; September 1998, November 2002, 2003, 2004, 2005.

"Cardiology Update," Mountain Area Health Education Center (MAHEC) Regional Pharmacy Continuing Education Program; Asheville, North Carolina; May 1998.

"Inpatient Billing for Cognitive Services," Mountain Area Health Education Center (MAHEC) and North Carolina Center for Pharmaceutical Care Weekend Seminar, Implementing Innovative Pharmaceutical Care Practices; Flat Rock, North Carolina; April 1998.

"Update on Pharmacokinetics," North Carolina Society of Health System Pharmacists Winter Meeting; Greensboro, North Carolina; February 1998.

"Update on Diabetes Medications," Asheville Diabetes Center Support Group; March 1998.

"Update on Asthma Management," Mountain Area Health Education Center (MAHEC) Regional Pharmacy Continuing

Education Program; Asheville, North Carolina; October 1997.

"Update on Stepwise Approach to Asthma," UNC/North Carolina Center for Pharmaceutical Care, Mountain Area Asthma Certification Program; Asheville, North Carolina; May 1997.

"Update on Cytochrome P450 Drug Interactions," MAHEC Regional Pharmacy Continuing Education Program; Asheville, NC; April 1997.

"After Hospital Care: The Adult Cardiac Patient: Management of Warfarin Therapy," MAHEC Regional Cardiovascular Program; Asheville, NC; February 1997.

"Update on Cytochrome P450 Drug Interactions," Mission St. Joseph's Internal Medicine Grand Rounds; Asheville, NC; October 1996.

"Dopamine, Update on Oral Cardiac Medications, and Review of Fosphenytoin," Mission St. Joseph's Nursing Department Education; Asheville, NC; 1996 - 1997.

"Biostatistics: Just say No," North Carolina Society of Health System Pharmacists Fall Seminar, Greensboro, North Carolina; October 1996.

"Abciximab: Pharmacoeconomics Is Here to Stay," South Eastern Regional Society of Hospital Pharmacists Fall Meeting; Asheville, North Carolina; October 1996.

"Pharmacokinetic Dosing Considerations for Procainamide," Mission+St. Joseph Health System, Department of Pharmacy Continuing Education Program; Asheville, NC; June 1996.

"Pharmacokinetic Dosing Considerations for Digoxin," Mission+St. Joseph Health System, Department of Pharmacy Continuing Education Program; Asheville, NC; May 1996.

"Sedation versus Paralysis in the ICU," Annual Mountain Region Air Conference, MAHEC; Asheville, NC; October 1995.

"Pharmacokinetics of Aminoglycosides and Vancomycin," Fayetteville Area Health Education Center Continuing Education Programs; Fayetteville, NC; 1992.

## **MEMBERSHIPS IN ACADEMIC AND PROFESSIONAL ASSOCIATIONS**

American College of Clinical Pharmacy; 1990 - present

American Society of Critical Care Medicine; 1993 - 1997; 2001 - 2004

American Society of Hospital Pharmacists; 1990 - 2003

North Carolina Society of Hospital Pharmacists; 1990 - 1998

Pharmacotherapy Advisory Committee; 1995 - 1996

Triangle College of Clinical Pharmacy; 1992 - 1994

Auburn Pharmacy Alumni Association; 1989 - present

Rho Chi Pharmacy Honor Society; 1988 - present

**LICENSURE:** North Carolina Registered Pharmacist #11207  
North Carolina Clinical Pharmacy Practitioner # 108148

**CERTIFICATIONS:** Board Certified Pharmacotherapy Specialist 1997 – present (#296208)  
Advanced Cardiac Life Support 1996 - 1998  
Basic Cardiac Life Support Instructor 1998 - present  
IRB Human Research Training 2000 - present

**COMMUNITY SERVICE:**

Asheville Catholic School (2001 – present)  
    Science and Math Curriculum Committee Co-Chair (2004 – 2006)  
    Sunshine Math Co-Chair (2004 - present)  
Junior League of Asheville (1995 – 2000)  
    Trinity Place Shelter  
    Lewis Rathburn Center  
    Sojourner House Transitional Home  
    Angels Watch Crisis Nursery - Community Foundation Grant Writer  
Trinity Episcopal Church Handbell Choir (1997-1999)  
Trinity Episcopal Church Sunday School teacher (2003-2005)