

# Michael W. Fowler, Ph.D.

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Education	1963-1965	Ada High School	Ada, OK
		College Preparatory	
	1965-1969	Oklahoma Christian University	OKC, OK
		BS in Chemistry	
	1969-1973	The Ohio State University	Columbus, OH
		Ph.D. in Physiological Chemistry	
	1976-1878	Oklahoma Children's Hospital	OKC, OK
		Post-doctoral Training in Laboratory Medicine and Toxicology	
Professional experience	1973-1976	Ohio Valley College	Parkersburg, WV
		Assistant Professor of Natural Science	
	1976-1978	Oklahoma Children's Hospital	OKC, OK
		Post-doctoral Training	
		▪ Trained in Laboratory Medicine, Therapeutic Drug Monitoring and Toxicology	
	1978-1981	Univ. of Oklahoma College of Medicine	OKC, OK
		Instructor of Pathology	
		▪ Taught in Systemic and Organ System Pathology courses and trained residents in clinical chemistry and toxicology	
	1978-1981	Oklahoma Children's Hospital	OKC, OK
		Scientific Director of Clinical Chemistry	
		▪ Directed all scientific and technical aspects of the clinical chemistry and therapeutic drug monitoring laboratory	

1981-1983 Oklahoma Christian University OKC, OK  
Associate Professor of Biology and Chemistry

- Taught courses in cell biology, microbiology, human physiology and biochemistry

1981-2001 St. Anthony Hospital OKC, OK  
Director of Clinical Chemistry and Toxicology

- Technical direction of clinical chemistry and toxicology; technical oversight of quality assurance for clinical laboratory
- Responsible Person for HHS/NLCP-Certified Toxicology Laboratory

1981-1988 Mercy Health Center OKC, OK  
Professor of Medical Technology

- Taught clinical chemistry, immunology, therapeutic drug monitoring and toxicology

1981-2001 St. Anthony Hospital OKC, OK  
Professor of Medical Technology

- Taught clinical chemistry, immunology, therapeutic drug monitoring and toxicology

1983-1992 Oklahoma Christian University OKC, OK  
Professor of Biology and Chemistry

- Taught courses in cell biology, human physiology, biochemistry and organic chemistry

1988-1993 Oklahoma Christian University OKC, OK  
Chair, Department of Natural Science

1994-1998 Oklahoma Christian University OKC, OK  
Dean, College of Science and Engineering

1992-2001 Oklahoma Christian University OKC, OK  
Distinguished Professor of Biology and Chemistry

- Taught courses in cell biology, human physiology, biochemistry and organic chemistry

2001-2003 Alliance Laboratory Services Cincinnati, OH  
Scientific Director of Clinical Chemistry, Toxicology and  
Automated Testing

- Scientific directorship of a large core laboratory facility and six affiliated hospital rapid response laboratories
- Participation in Univ. of Cincinnati Medical Center Clinical Toxicology Group
- Participation in weekly clinical conferences of the SE Ohio Regional Drug Information Center
- Responsible Person for NLCP (HHS) – Certified Drug Testing Laboratory

2001-2003 University of Cincinnati Cincinnati, OH  
Volunteer Assistant Professor of Pathology and Laboratory  
Medicine

- Preceptor for pathology residents in laboratory medicine
- Preceptor for pharmacy students in toxicology and therapeutic drug monitoring during rotation to Drug Information Center

2003 – Dec. 2004 Oklahoma Christian University OKC, OK  
Distinguished Professor of Chemistry and Biology

- Taught courses in organic chemistry and general chemistry

Dec. 2004 – July 2006 Medpace, Inc. Cincinnati, OH  
Laboratory Director

- Medpace, Inc. was a full-service clinical research organization providing clinical trial support to the pharmaceutical and biotechnology industry
- Directed (CAP Medical Director) all aspects of the clinical laboratory

August 2006 - April 2008 Lipscomb University Nashville, TN  
Professor of Biology and Chemistry and Pre-clinical Nursing  
Coordinator

- Teach Human Anatomy and Physiology for nursing students
- Coordinate pre-clinical advising and course requirements
- Coordinate activities of the Lipscomb/Vanderbilt Nursing partnership including recruitment, service learning and assessment
- Teaching Medicinal Chemistry for Chemistry Department

May 2008 - Present      Lipscomb University      Nashville, TN

Vice Chair, Department of Pharmaceutical Sciences and  
Associate Professor of Pharmaceutical Sciences

- Teach Human Anatomy and Physiology, Biochemistry, Pharmaceutics, Drug Metabolism and Laboratory Medicine and Toxicology for PharmD students
- Serve as Vice Chair of Pharmaceutics Sciences Department

Publications,  
Abstracts and  
Presentations

### Publications

1. Merola, A.J., **Fowler, M.W.** and Brierley, G.P., N,N'-bis-dichloroacetamide Induction of Anion Permeability in Beef Heart Mitochondria. Myocardial Metabolism: Recent Advances in Studies on Cardiac Structure and Function. Baltimore, University Press, 1974.
2. McDowell, T.L., Passey, R. and **Fowler, M.W.**, An Evaluation of Temperature Control System of the CentrifChem 400, Clin. Chem. Acta, 110, 35-42, 1981.
3. Krous, H.F., Campbell, G.A., **Fowler, M.W.**, Catron, A.C. and Farber, J.P., Maternal Nicotine Administration and Fetal Brainstem Damage: A Rat Model with Implications for Sudden Infant Death Syndrome, Am. J. of Obstetrics and Gynecology, 140, F43-F46, 1981.
4. Frederick, D., Green, J and **Fowler M.W.**, Comparison of Six Cannabinoid Metabolite Assays, Journal of Analytical Toxicology, May/June 1985.
5. Above article included in Marijuana: Determination in Human Body Fluids published by Journal of Analytical Toxicology in 1987.
6. **Fowler, M.W.** What a Pain: Drug Testing for Pain Management Programs, Therapeutics and Toxins News, 17:5, 2002.
7. **Fowler, M.W.**, Autoverification Strategies for Clinical Chemistry, Advance for Administrators of the Laboratory, 14, 36-40, Aug 2005.

### Abstracts of Papers Presented

1. Brierley, G.P., Scott, K.M., Jurkowitz, M., **Fowler, M.W.** and Merola, A.J., Proton and Ion Movements Associated with Anaerobic-Aerobic Transitions in Heart Mitochondria, Biophysical Society Annual Meeting, 1973
2. Altmiller, D.A. and **Fowler, M.W.**, Analysis of Salicylic Acid in Serum by Reverse Phase Liquid Chromatography, Clin. Chem. 23:1138, 1977
3. Altmiller, D. and **Fowler, M.W.**, Stability of Adenosine 3',5'-Monophosphate (cyclic-AMP) and Creatinine in Human Urine, Clin. Chem. 23: 1147, 1977.
4. Blackett, P., **Fowler, M.W.**, Altmiller, D.A.. and Seely, J. Changes in Urinary Cyclic-3',5'-Adenosine Monophosphate and Osmolality in Familial Diabetes Insipidus treated with 1-Diamino-8-Arginine Vasopressin (DDAVP), Clin. Res. 2567A, 1977.
5. **Fowler, M.W.** and Altmiller, D.A., A Rapid, Micromethod for the Determination of Acetaminophen in Serum by High Performance Liquid Chromatography, Clin. Chem. 24:1007, 1978.
6. Altmiller, D.A. and Fowler, M.W., Determination of Diphylline in Serum by High Performance Chromatography, Clin. Chem. 24:1007, 1978.
7. McDowell, T, Passey, R., Altmiller, D.A. and **Fowler, M.W.**, An Improved Method for Calibrating the Cuvette Temperature on the CentrifChem, Clin. Chem. 25:1121, 1979.
8. Frederick, D., Kelly, B., **Fowler, M.W.** and Altmiller, D.A., A Rapid Gas-Liquid Chromatographic Analysis for Valproic Acid in Serum, Clin. Chem. 25:1121, 1979.
9. **Fowler, M.W.**, Evens, C., Marberry, M. and Passey, R., Comparison of Serum Iron Determinations Using the ESA Ferrochem and DuPont ACA, Clin. Chem. 1980.
10. McDowell, T., Passey, R., and **Fowler, M.W.**, Thermal Equilibrium Time of the CetrifiChem 400, Clin. Chem. 1980.
11. Krous, H., **Fowler, M.W.**, Catron, A., and Kern, J. Maternal Nicotine Administration and Fetal Brainstem Damage: A Rat Model with Implications for Sudden Infant Death Syndrome, Laboratory Invest., 42:6, 1980.
12. **Fowler, M.W.**, Collelo, T. and Pysher, T.J., Age-Related Reference Ranges for Hepatic Enzymes: Alkaline Phosphatase, Aspartate Aminotransferase and Gamma Glutamyltransferase, Cli. Chem. 1981

13. Violett, T.W. and **Fowler, M.W.**, Microwave Thawing of Fresh Frozen Plasma, presented at the American Association of Blood Banks Annual Meeting, New Orleans, 1982.
14. Fowler, M.W. and Gowen-Kropp, N. Limit of Detection and Limit of Quantitation: A Comparison of Methods. Presented at the Fall Meeting of the Southwest Association of Toxicologists, OKC, OK, 1991.
15. Gowen-Kropp, N. and Fowler, M.W., Confirmation of Amphetamine/Methamphetamine in the Presence of High Concentrations of Phenylpropanolamine, Ephedrine and Pseudoephedrine, presented at the Fall Meeting of the Southwest Association of Toxicologists, OKC, OK, 1991.
16. Fowler, M.W. How Much Change Is Significant? A Look at Biological, Pre-analytical and Analytical Variation. Presented at the Winter Workshop Day. A joint program of the Alliance Laboratory Service and Clinical Management Association, Dec. 2002.

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#### **Recent Workshops and Roundtable Presentations**

1. What a Pain: Drug Testing for Pain Management Programs (Roundtable). Presented at the American Association for Clinical Chemistry (AACC) National Meeting, Philadelphia, 2003.
2. Developing Autoverification Strategies in Clinical Chemistry (Workshop). Presented at the AACC National Meeting, Philadelphia, 2003.
3. Cardiac Natriuretic Peptides and Congestive Heart Failure. Invited lecture presented at the Spring Clinical Laboratory Management and AACC (Ohio Valley Section) Spring Meeting in Dayton, OH, 2004.
4. Autoverification Strategies in Clinical Chemistry. Invited lecture presented at the Spring Clinical Laboratory Management and AACC (Ohio Valley Section) Spring Meeting in Dayton, OH, 2004.
5. What a Pain: Drug Testing for Pain Management Programs (Roundtable). Presented at the American Association for Clinical Chemistry (AACC) National Meeting, Los Angeles, 2004.
6. Developing Autoverification Strategies in Clinical Chemistry (Workshop). Presented at the American Association for Clinical Chemistry (AACC) National Meeting, Los Angeles, 2004.
7. What a Pain: Drug Testing for Pain Management Programs (Roundtable). Presented at the American Association for Clinical Chemistry (AACC) National Meeting, Orlando, 2005.

### Recent Continuing Education

1. Benzodiazepines...The Basics and Beyond. Workshop #1 (8 hours) at the Society of Forensic Toxicology National Meeting, Research Triangle Park, NC, 2007
2. Liquid Chromatography-Mass Spectroscopy in the 21<sup>st</sup> Century Workshop #6 (8 hours) at the Society of Forensic Toxicology National Meeting, Research Triangle Park, NC, 2007
3. New Antidepressants and Antiepileptics: Clinical Pharmacology, Pharmacogenomics, Gene Expression, and Neurobiology of Depression and Suicide and Forensic Toxicology. Workshop (4 hour) at Society of Forensic Toxicology National Meeting, Austin, TX, 2006.
4. Addiction and Pain Management for Forensic Toxicologists – Update on Drug Therapy, Clinical and Forensic Toxicology and the Emerging Pole of Pharmacogenomics. Workshop (4 hour) at Society of Forensic Toxicology National Meeting, Austin, TX, 2006.

Additional professional activities

1. Inspector - Federal Health and Human Services National Laboratory Certification Program (NLCP)

Professional memberships

1. American Association for Clinical Chemistry (AACC) – 30 year member.
2. Society of Forensic Toxicologists (SOFT)

Awards received

1. AACC Outstanding Speaker Award – 2003
2. Gaylord Chair of Distinguished Teaching - 1989