

**Sarah S. Urfer, M.S.**  
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**EDUCATION**

- University of Illinois Chicago, Chicago, IL** *July 2006*  
M.S. Forensic Science
- University of Colorado at Boulder, Boulder, CO** *May 2005*  
B.A. Biochemistry
- Minor: Chemistry
  - Graduated with Departmental Honors
- University of Lancaster, Lancaster, England** *2004*  
Study Abroad

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**EXPERIENCE**

- ChemaTox Laboratory, Inc.** *May 2006-Present*  
Forensic Chemist/Toxicologist, Lab Director
- Responsible for alcohol analysis in blood samples. Validation and calibration of the Headspace Gas Chromatographs. Other responsibilities include the analysis of blood and other body fluids for the presence of drugs and other toxic substances using Immunoassay and Gas Chromatography/Mass Spectrometry. Expert testimony on alcohol analysis, drug determination and the effects of drugs and alcohol on the body. Providing services to governmental and private agencies for analysis of body fluids and tissues for alcohol, drugs and other toxic substances. Supervise laboratory operations and train personnel.
- University of Illinois Chicago, College of Pharmacy** *August 2005-July 2006*  
Forensic Science M.S. Program Teaching Assistant
- Assisting professors prepare for class by photocopying and providing any necessary equipment for the lecture. Set up lab experiments for students to complete. Make reagents for student labs. Help students with class-related issues.
- University of Colorado at Boulder, Biochemistry Laboratory** *May 2003-July 2005*  
Student Researcher supervised by Dr. Shelley Copley
- Developed a new research project from a previously unnoticed pattern I observed. Designed and implemented effective methods for conducting my research. Wrote a final report summarizing my two years of research and drawing conclusions on its possible implications.

**University of Colorado at Boulder, Chemistry and Bio-chemistry Department** *Fall 2003 & Fall 2004*

Teaching Assistant

- Introduction to General Chemistry teaching assistant for two semesters. Wrote and graded quizzes, instructed students on the proper use of equipment and chemicals in the lab, supervised lab activities and evaluated students for part of the final grade.

**PROFESSIONAL PRESENTATIONS**

**DUI Update 2010 - Teacher** *1/21/2010*

Colorado Bar Association, Continuing Legal Education in Colorado, Inc. Accredited Class. Testing for Drugs in Blood and Urine: What it Does and Doesn't Mean

**Toxicology for Coroners - Presenter** *6/13/2009*

Colorado Coroners Association 21<sup>st</sup> Annual Death Investigation Conference

**Drug Testing: Monitoring Drug and Alcohol Abuse - Presenter** *12/5/2008*

Colorado Bar Association, Continuing Legal Education in Colorado, Inc. Accredited Class

**Blood Alcohol Analysis 101 - Teacher** *9/9/2008, 11/11/2008*

Colorado Bar Association, Continuing Legal Education in Colorado, Inc. Accredited Class

**Workshop "Progress in Field Forensics"** *6/4/2008*

American Society for Mass Spectrometry Annual Meeting

**CONTINUING EDUCATION**

**Annual Society of Forensic Toxicologists meeting** *October 19<sup>th</sup>-23<sup>rd</sup>, 2009*

Oklahoma City, OK

Workshops

- "Newer" Prescription Drugs: Impairment Potential and Identified Polypharmacies
- Bridging the Gap in Postmortem Laboratory Practices and Case Interpretations
- Envenomations: Toxins, Anti-Venoms and Clinical Course
- Toxicology of Opiate Overdose: Strategies for Analysis and Interpretation

**Annual American Academy of Forensic Sciences meeting** *February 16<sup>th</sup>-20<sup>th</sup>, 2009*

Denver, CO

Workshops

- Solid Phase Extraction in Forensic Science - Principles and Applications
- Pharmacology and Pharmacokinetics for Forensic Toxicologists

**Annual Society of Forensic Toxicologists meeting** *October 27<sup>th</sup>-31<sup>st</sup>, 2008*

Phoenix, AZ

Workshops

- Effects of Drugs on Human Performance and Behavior - A Borkenstein Sampler

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## **PROJECTS**

### **Master's Research Project**

- Conducted research at ISP Forensic Science Center Chicago on the on-column thermal decomposition properties of propoxyphene and norpropoxyphene using gas chromatography mass spectrometry (GC/MS). From this research I was able to develop a procedure to analyze propoxyphene such that it does not break down on column.

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## **AFFILIATIONS & SCHOLARSHIPS**

**American Academy of Forensic Sciences**

**Society of Forensic Toxicologists**

**American Chemical Society**

**Chemistry Club University of Colorado Boulder**

*August 2001-May 2005*

**Touff Memorial Chemistry Scholarship**

*2003-2004*

**Tour Biochemistry Scholarship**

*2004-2005*

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## **SPECIAL COURSES**

- Forensic Drug Analysis and Toxicology
- Forensic Chemistry and Trace Evidence
- Expert Witness Testimony
- QA/QC in Forensic Laboratories
- Forensic Analysis of Biological Evidence
- Physical Pattern Evidence Analysis
- Organic Structure Determination using NMR, UV-spec, IR-spec and MS data