TRISHA L. CONTI, Ph.D.
Curriculum Vitae

Senior Forensic Chemist, Alcohol Program Supervisor, *Interim* Biology Supervisor
Vermont Forensic Laboratory
Department of Public Safety
103 South Main Street
Waterbury, VT 05671
Phone: (802) 244-8788
Fax: (802) 241-5557
Email: trisha.conti@state.vt.us

EDUCATION

Degree	Ph.D.
Major	Pharmacology & Toxicology
College	Dartmouth College, Hanover, NH
Year	2005
Coursework	Includes Biochemistry, Immunology, Receptors and Signaling Pathways, Cancer Biology, Pathophysiology of Human Disease, Experimental Therapeutics, Toxicology, and Medical Pharmacology

Degree	B.S. *cum laude*
Major	Biomedical Technology
Minor	Hematology
College	University of Vermont, Burlington, VT
Year	2001
Coursework	Includes Toxicology (graduate course), Physics, and Experimental Techniques

PROFESSIONAL WORK EXPERIENCE

Senior Forensic Chemist, *Interim* Biology Program Supervisor: April 2013 to present
Vermont Forensic Laboratory, Waterbury, VT

- Supervises Biology Program staff to include Forensic Chemists in the Serology and DNA disciplines.
- Organizes annual Green Mountain DNA Conference.
- Performs administrative and director reviews of Biology case files.

Senior Forensic Chemist, Alcohol Program Supervisor: January 2012 to present
Vermont Forensic Laboratory, Waterbury, VT

- Supervises Alcohol Program staff to include Forensic Chemists, Electronics Technician and Administrative Assistant.
- Performs qualitative and quantitative analysis of alcohol in evidentiary blood samples.
- Performs calibration, certification, installation and maintenance of evidential DataMaster DMT breath alcohol testing instruments.
- Reviews documentation and reports generated by DataMaster DMT breath alcohol testing instruments.
- Instructs police officers in the proper use as operators and supervisors using DataMaster DMT breath alcohol testing instruments.
- Provides expert witness testimony regarding alcohol physiology, pharmacology and testing, including policies and procedures.

Forensic Chemist III, DNA Database Analyst: April 2010 - December 2011
Vermont Forensic Laboratory, Waterbury, VT

- Processed convicted offender and arraignee samples for inclusion into the CODIS database.
- Performed ongoing validations for new instrumentation and methodologies involved in DNA profiling.
- Performed other duties as required including: organization of annual Green Mountain DNA Conference, routine quality control checks of laboratory equipment, reagent preparation.

Forensic Chemist II/III, Research: October 2005 – April 2010
Vermont Forensic Laboratory, Waterbury, VT

- Performed research using specific mRNAs as an indicator of tissue and fluid origin through various real-time PCR applications.
- Performed research using sperm filter device as a replacement for the manual differential extraction method.
- Conducted research to validate and bring online a GC-IR instrument as an alternative to GC-MS for samples that aren't easily identified using the latter method.

Graduate Student: Dartmouth College 2001-2005
Dissertation: **Mechanisms by which arsenite decreases CYP3A**
Advisor: Jacqueline Sinclair

- Initiated projects to elucidate how arsenite affects CYP3A levels in mammalian liver cells.
- Developed and validated two experimental methods for quantitating protein degradation.
- Instituted a FRET-based signal amplification technique for measuring mRNA.

Technical Assistant: Green Mountain Antibodies, Burlington, VT 2000-2001
Undergraduate Research, University of Vermont
Advisors: Anne Huot and William Church

- Implemented system to assess ability of test substances to benefit bleeding disorders.
- Discussed research project at company lab meetings.
- Wrote technical report on developmental problems and solutions.

Undergraduate Honors Thesis: University of Vermont 2000-2001
Thesis: **Heroin Crisis in Vermont: Fact or Myth**
Advisor: Anne Sullivan

- Performed in-depth literary review of heroin and its abuse in Vermont.
- Catalogued heroin-related fatalities for Medical Examiner's Office in Burlington, VT.
- Reviewed heroin-related cases and evidence-processing procedures at Vermont Forensic Laboratory in Waterbury, VT.

PROFESSIONAL TRAINING

Advanced Roadside Impaired Driving Enforcement, Vermont Criminal Justice Training Council, St. Albans, VT, April 29-30, 2014

ASCLD/LAB-International Internal Audits, Natick, MA, April 14-17, 2014

Vermont Drugged Driving Summit, Vermont Department of Public Safety in partnership with AAA of Northern New England, Montpelier, VT, March 10, 2014

Drug Recognition Expert Course, IACP Drug Evaluation and Classification Program, Burlington, VT, February 5-13, 2014

Preliminary Training, IACP Drug Evaluation and Classification Program, Burlington, VT, February 3-5, 2014

Case Acceptance Policies and Guidelines, RTI International, online, January 22, 2014

The Paradox of Backlog Reduction – How Doing Less Can Be Doing More, RTI International, online, January 2, 2014

Synthetic Drugs – Evolution to Solution, The Evidence Conference Educational Webinar Series, online, September 27, 2013

Green Mountain DNA Conference, Burlington, VT, July 29-31, 2013

DataMaster DMT Advanced Training Course, National Patent Analytical Systems, Inc., Waterbury, VT, July 22-23, 2013

Crime Laboratory Backlogs: The Impact on Justice, RTI International, online, May 21, 2013

Expert Witness Training Webinar, The Evidence Conference Webinar Series, online, April 25, 2013

Introduction to Uncertainty in Forensic Chemistry and Toxicology 1, 2 & 3, RTI International, online, January 7 & 16, 2013

ASCLD/LAB-International Measurement Confidence for the Forensic Laboratory 100 Series, online, December 17-19, 2012

38th Annual Meeting of Northeastern Association of Forensic Scientists, Saratoga Springs, NY, November 13-16, 2012

Method Validation in Forensic Toxicology and Chemistry Workshop, Northeastern Association of Forensic Scientists, Saratoga Springs, NY, November 13, 2012

Recreational Asphyxia: Chemical, RTI International, online, October 31, 2012

Indiana BAC Datamaster Recert (Demo Only), RTI International, online, October 31, 2012

Green Mountain DNA Conference, Burlington, VT, August 1-3, 2012

Supervisor's Development Program, The Summit: Center for State Employee Development, Berlin, Vermont, April - July 2012

DataMaster DMT Factory Training, National Patent Analytical Systems, Inc., Mansfield, OH, February 21, 2012

DataMaster DMT Supervisor & Record Administrator Training, Vermont Department of Health Laboratory, Burlington, VT, January 26, 2012

DataMaster DMT Operator Course, Vermont Department of Health Laboratory, Burlington, VT, January 23, 2012

Blood Alcohol Analysis by Headspace GC Training, Vermont Department of Health Laboratory, Burlington, VT, January 2012

Answering the NAS: The Ethics of Leadership and the Leadership of Ethics, RTI International, online, December 20, 2011

Fundamentals of Non-Mass Selective Detectors, RTI International, online, December 19, 2011

ASCLD/LAB-International Measurement Confidence for the Forensic Laboratory Level 100 Courses, online, November 29-December 1, 2011

CODIS 7.0 Required Training, online, October – November, 2011

To Hell and Back: The Ethics of Stewardship and the Stewardship of Ethics, RTI International, online, October 20, 2011

Life Technologies 2011 *HID Future Trends in Forensic DNA Technology* Seminar Series, Burlington, VT, July 27, 2011

Green Mountain DNA Conference, Burlington, VT, July 25-27, 2011

3500 Genetic Analyzer Install Training, Applied Biosystems, Waterbury, VT, March 2, 2011

The 2010 NEAFS & NEDIAI Joint Meeting, Manchester, VT, November 8-12, 2010

Preliminary Training on Regulations, Operation and Use of Bio-Safety Cabinets, Chemical Fume Hoods and Adjustable Snorkels, Waterbury, VT, September 28, 2010

Applied Biosystems HID University 2010 *Future Trends in Forensic DNA Technology* Seminar Series, Burlington, VT, July 28, 2010

Bias in Forensic Science Workshop, Burlington, VT, July 27, 2010

Green Mountain DNA Conference, Burlington, VT, July 26-28, 2010

Applied Biosystems HID University 2009 *Future Trends in Forensic DNA Technology* Seminar Series, Burlington, VT, July 29, 2009

Ethics and Forensic Science Workshop, Burlington, VT, July 28, 2009

Green Mountain DNA Conference, Burlington, VT, July 27-29, 2009

Green Mountain DNA Conference, Burlington, VT, August 4-6, 2008

Fss-i^3 Software Product Training, Promega Corporation, Waterbury, VT, May 5-9, 2008

Hostile Persons Response Training, Waterbury, VT, July 20, 2007

Blood Borne Pathogen Training, Waterbury, VT, December 18, 2006

17th International Symposium on Human Identification, Nashville, TN, October 9-12, 2006

NIJ Annual DNA Grantees Workshop, Arlington, VA, June 26-28, 2006

Courtroom Testimony Training, Waterbury, VT, June 6, 2006

NSC Defensive Driving II, Waterbury, VT, May 12, 2006

Recognizing and Preventing Sexual Harassment in the Workplace, Waterbury, VT, March 1, 2006

NCBI Conference, Burlington, VT, November 15-17, 2005

PUBLICATIONS IN PEER-REVIEWED JOURNALS

Barchowsky, A., Soucy, N., O'Hara, K., Hwa, J., **Noreault, T.**, Andrew, A., "A Novel Pathway for Nickel-induced Interleukin-8 Expression." J. Biol. Chem. 277: 24225-24231. 2002.

Noreault, T., Kostrubsky, V., Wood, S., Nichols, R., Strom, S., Trask, H., Wrighton, S., Evans, R., Jacobs, J., Sinclair, P., Sinclair, J., "Arsenite Decreases CYP3A4 and RXRα in Primary Human Hepatocytes." Drug Metab. Dispos. 33: 993-1003. 2005.

Noreault, T., Jacobs, J., Nichols, R., Trask, H., Wrighton, S., Sinclair, P., Evans, R., Sinclair, J., "Arsenite Decreases CYP3A23 Induction in Cultured Rat Hepatocytes by Transcriptional and Translational Mechanisms." Toxicol. Appl. Pharmacol. 209: 174-182. 2005.

Noreault, T., Jacobs, J., Nichols, R., Trask, H., Wrighton, S., Sinclair, P., Sinclair, J., "Mechanism of Arsenite-Mediated Decreases in CYP3A23 in Rat Hepatocytes." Biochem. Biophys. Res. Commun. 333: 1211-1217. 2005.

Noreault-Conti, T., Jacobs, J., Trask, H., Wrighton, S., Sinclair, J., Nichols, R., "Effect of Proteasome Inhibition on Toxicity and CYP3A23 Induction in Cultured Rat Hepatocytes: Comparison with Arsenite." Toxicol. Appl. Pharmacol. 217: 245-251. 2006.

Noreault-Conti, T., Buel, E., "The Use of Real-Time PCR for Forensic Stain Identification." Profiles in DNA. 10: 3-5. 2007.

Noreault-Conti, T., Buel, E., "Bringing tissue identification into the 21st century: mRNA analysis as the next molecular biology revolution in forensic science?", F. Gonzalez-Andrade Ed., Forensic Genetics Research Progress, 2010.

Nicklas, J., **Noreault-Conti, T.**, Buel, E. "Development of a real-time method to detect DNA degradation in forensic samples." J. Forensic Sci. 57: 466-471. 2012.

Nicklas, J., **Noreault-Conti, T.**, Buel, E. "Development of a Fast, Simple Profiling Method for Sample Screening Using High Resolution Melting (HRM) or STRs." J. Forensic Sci. 57: 478-488. 2012

Noreault-Conti, T., Fellows, A., Jacobs, J., Trask, H., Strom, S., Evans, R., Wrighton, S., Sinclair, P., Sinclair, J., Nichols, R. "Arsenic decreases RXRα-dependent transcription of CYP3A and suppresses immune regulators in hepatocytes." Int. Immunopharmacol. 12(4): 651-656. 2012.

PROFESSIONAL MEMBERSHIPS

Albert J. Ryan Foundation – *current member*
American Academy of Forensic Sciences – *current member*
International Association for Chemical Testing – *current member*
Northeastern Association of Forensic Scientists – *current member*
International Society for the Study of Xenobiotics – *past member*
Society of Toxicology – *past member*