



Idaho State Police Forensic Services



Celena D. Shrum

Forensic Scientist III
5255 S. 5th Ave., Suite 2
Pocatello, ID 83204
Phone: (208) 239-9900, Fax: (208) 239-9887
celena.shrum@isp.idaho.gov

EDUCATION

Pending Idaho State University- Pocatello, ID
Master of Science- Microbiology

2009 Idaho State University- Pocatello, ID
Bachelor of Science- Microbiology

EXPERIENCE

11/2015-Present Idaho State Police Forensic Services
Toxicology Discipline Lead
Duties: all duties of Forensic Scientist (below) as well as research new instruments and methods, design and perform validations, prepare annual toxicology report, and conduct method reviews/revisions

08/2011-Present Idaho State Police Forensic Services
Forensic Scientist- Blood Toxicology Analyst
Duties: conduct blood toxicology analysis, provide peer review of toxicology reports, and provide expert testimony

08/2005-05/2011 Idaho State University Department of Biological Sciences
Research Analyst
Duties: data collection of extreme microbes, DNA isolation, PCR amplification, DNA purification and quantification, DNA sequence sample preparation, editing and alignment

TESTIMONY

I have been qualified as and have testified in Idaho and Oregon courts as an expert witness in the field of blood toxicology analysis

<https://isp.idaho.gov/forensics>

EQUAL OPPORTUNITY EMPLOYER

Revised 1/23/19

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CONTINUING EDUCATION; ASSOCIATION MEETINGS; CONFERENCES

- 2018
- Agilent LC/MS-QQQ User Workshop
 - Society of Forensic Toxicologists (SOFT) Meeting (Minneapolis, MN)
 - Forensic Toxicology Board Certification Preparation Course
 - Drug Recognition Expert School (Audited)
- 2017
- California Association of Toxicologists Spring Meeting (San Diego, CA)
 - Agilent QQQ LC-MS Workshop
- 2016
- Forensic Toxicology Instrumentation Techniques and Applications (The Center for Forensic Science Research & Education, online)
- 2015
- Society of Forensic Toxicologists (SOFT) Meeting (Atlanta, GA)
 - Northwestern Association of Forensic Scientists Meeting (Spokane, WA)
 - Mass Spectral Interpretation Workshop (Spokane, WA)
 - GC/HS Training- MLS Technologies (Redmond, WA)
 - HPLC Training- MLS Technologies (Redmond, WA)
 - LC/MS/MS Instrument Training (Coeur d'Alene, ID)
- 2014
- GC/MS Instrument Troubleshooting and Maintenance- MLS Technologies (Pocatello, ID)
- 2013
- Joint Meeting of the California Association of Toxicologists and the Southwestern Association of Toxicologists (Las Vegas, NV)
 - LC/MS/MS Validation of a Cannabinoid and Benzodiazepine Method with Comparison to the Proposed SWGTOX Method Validation Standards (RTI and Virginia DFS, online)
- 2012
- Robert F. Borkestein Course on the Effects of Drugs on Human Performance and Behavior (Philadelphia, PA)
 - Courtroom Presentation of Evidence (Boise, ID)
 - West Virginia University Online Courses

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- Perspectives in Expert Testimony
- Forensic Mass Spectrometry
- Fundamentals of Forensic Toxicology

2011 -Ethics in Forensic Science (West Virginia University, online)

VALIDATIONS

- 2017 -Validation of Blood Multi-Drug Confirmation by LCMS-QQQ and Blood THC and Metabolites Confirmation by LCMS-QQQ methods (in conjunction with PinPoint Testing, Tamara Salazar, and Sarah Pickle)
- 2016 -Validation of Blood Multi-Drug Screen by LCMS-QQQ and Blood THC and Metabolites Screen by LCMS-QQQ methods (evaluator; in conjunction with PinPoint Testing, Anne Nord, and Britany Wylie)
- 2012 -Validation of a derivitization option for an existing method with the goal of increasing sensitivity for several drugs (primary validator; data analysis in conjunction with Toxicology Discipline Leader, Anne Nord)

TEACHING; PRESENTATIONS

- 2014 -Forensic Science (Pocatello High School)
- 2013 -Forensic Science (Pocatello High School)
- 2012 -Forensic Science (Marshall Public Library Community Education)
- Forensic Science (Pocatello High School)
- 2010 -Poster Presentation
-**Shrum, C.**, Cherry, M., Sheridan, P. DeVeaux, L., *Relationship Between Halotolerance and Ionizing Radiation Resistance of Antarctic Bacteria*, American Society for Microbiology 110th General Meeting, San Diego, California.
- 2008 -Poster Presentation
-**Shrum, C.**, Downey, J., Pierson, B., Hobdey, S., DeVeaux, L., *Genetic Regulation of the Persistent State in Deinococcus radiodurans*, American Society for Microbiology Intermountain Branch Meeting, Logan, UT.

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- 2007 -Poster Presentation
-**Shrum, C.**, Watts, C., Newbold, W., Hansen, S., Kelchner, S.,
The D4 Set: Using Intron Structure to Target Rapidly Evolving Chloroplast Loci in Flowering Plants, Undergraduate Research Symposium, Idaho State University, Pocatello, ID.

CERTIFICATIONS; AWARDS; MEMBERSHIPS

- 2018 Diplomate of the American Board of Forensic Toxicology
- 2016 Society of Forensic Toxicologists Associate Member
- 2015 Fellow of the American Board of Criminalistics (ABC)
- 2014 Forensic Scientist of the Year 2014
Awarded by: Idaho State Police and Pocatello Chamber of Commerce

RESEARCH; PUBLICATIONS

- 2009-2011 Research: The Relationship Between Halotolerance and Ionizing Radiation Resistance of Antarctic Bacteria
- 2009 Watts, C. D., Fisher, A. E., **Shrum, C. D.**, Newbold, W. L., Hansen, S., Liu, C. and Kelchner, S. A. (2008), The D4 set: primers that target highly variable intron loops in plant chloroplast genomes. *Molecular Ecology Resources*, 8: 1344–1347.