

SARAH STRATTON

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EDUCATION

Master of Professional Studies in Forensic Science- Chemistry. May 2019.
The Pennsylvania State University (State College, PA)

Bachelor of Science in Chemistry (Honors) with a Minor in Biochemistry. May 2017.
The College of William and Mary (Williamsburg, VA)

Honors Thesis: Tuning the pK_a of Fluorescent Rhodamine pH Probes via Substituent Effects

Relevant Coursework:

Undergraduate: Freshman Honors Chemistry, General Chemistry Lab II, Organic Chemistry I and II with associated labs, Biochemistry, Instrument Analysis, Physical and Analytical Chem Lab I and II, Organic Spectroscopy, Advanced Analytical Chemistry

Graduate: Drug Chemistry and Toxicology, Chromatography and Electrochemistry, Forensic Chemistry, Courtroom Proceedings and Testimony, Forensic Chemistry II, Criminalistics-Biology

EXPERIENCE

Forensic Chemist III, Vermont Forensic Lab
Previously: *Forensic Chemist II*

March 2021-Present
June 2019-March 2021

- Reviews current literature on alcohol and drug pharmacology, physiology, and testing.
- Trained to provide expert testimony regarding alcohol impairment and the results of breath/blood alcohol testing as well as forensic interpretation of that testing (retrograde extrapolation). Trained to provide expert testimony regarding the results of blood drug testing.
- Performs service and maintenance of breath alcohol testing instrumentation (DMT), as well as the preparation and certification of simulator solutions.
- Performs blood alcohol analysis using gas chromatography (PerkinElmer GC-FID).
- Performs toxicological analysis for drugs in whole blood using immunoassay (Randox Evidence Investigator) and liquid chromatography-mass spectrometry (Waters Acquity UPLC H-class- MS/MS).

Teaching Assistant, Penn State, Forensic Science Program
Class: Introduction to Forensic Science (FRNSC 100)

August 2018-May 2019

- Assisted professor in grading and developing assignments as well as answering student questions pertaining to the course material.

PUBLICATIONS

Stratton SG, Taumoefolau GH, Purnell GE, Rasooly M, Czaplyski WL, Habron EJ. Tuning the pK_a of Fluorescent Rhodamine pH Probes via Substituent Effects. *Chemistry: A European Journal*, 2017 Oct 09; 23(56): 14064-14072.

PRESENTATIONS

Cannabis and Alcohol, IACT Workshop Charleston, April 2023
 Presentation
 Title: Innovative Sample Preparation, Screening, and Confirmation for Cannabinoids
Vermont DRE School Online, December 2020
 Recorded Presentation/Live Q&A
 Title: $\Delta 8$ - and $\Delta 9$ -THC Presentation
Pittcon Conference and Expo NIJ Poster Presentation Philadelphia, March 2019
 Poster Presentation
 Project: Validation of a Lateral Flow Immunoassay Test Strip for the Detection of Fentanyl Class Opioids Dissolved in Water
NC Photochem Conference North Carolina, September 2016
 Poster Presentation
 Project: Tuning the pK_a of Fluorescent Rhodamine pH Probes via Substituent Effects

RESEARCH EXPERIENCE

Graduate Student, Pennsylvania State University, Forensic Science Department
 State College, PA, May 2018-May 2019

- Validated lateral flow fentanyl urine test strip for use with fentanyl class powders dissolved in water.

Research Assistant, College of William and Mary, Chemistry Department
 Williamsburg, VA, September 2013-May 2017

- Synthesized rhodamine derivatives, purified molecules, and studied effects of steric interactions on pH-dependent fluorescence of the rhodamine-based derivatives.
- Utilized thin-layer chromatography and column chromatography.

PROFESSIONAL DEVELOPMENT

Pineapples, Ghosts, and Pralines: The Charleston Version of Breath Alcohol Standardization
Workshop- IACT April 20, 2022
 International Association of Chemical Testing 2023
Charleston, SC April 16-21, 2022
 An Introduction to Drug Categories in Drug DUI Cases: Cannabis, Part 2- The Toxicologist
TSRP Webinars April 5, 2023
 An Introduction to Drug Categories in Drug DUI Cases: Narcotic Analgesics, Part 2- The Toxicologist
TSRP Webinars March 8, 2023

An Introduction to Drug Categories in Drug DUI Cases: Dissociative Anesthetics, Part 2- The Toxicologist <i>TSRP Webinars</i>	February 22, 2023
An Introduction to Drug Categories in Drug DUI Cases: Stimulants, Part 2- The Toxicologist <i>TSRP Webinars</i>	February 1, 2023
Marijuana & Driving in 2023: It's Not Just Delta-9-THC Anymore <i>TSRP Webinars</i>	January 17, 2023
An Introduction to ANSI/ASB Standard 036: Standard Practices for Method Validation in Forensic Toxicology <i>Webinar- AAFS</i>	October 21, 2022
Delta-8 THC: Legal Statue, Widespread Interest & Availability Leading to Substantial Safety Concerns <i>TSRP Webinars</i>	August 30, 2022
SFSTs & Drugs: Hit or Miss? <i>TSRP Webinars</i>	July 26, 2022
Know Your Limit: Vermont Impaired Driving Summit <i>Killington, VT</i>	May 11, 2022
Expert Testimony Training: 300 Level <i>Workshop- IACT</i>	April 14, 2022
International Association of Chemical Testing 2022 <i>Tucson, AZ</i>	April 10-14, 2022
New England Area Toxicologists Meeting <i>Maynard, MA</i>	April 6, 2022
An Introduction to Drug Categories in Drug DUI Cases: Dissociative Anesthetics <i>TSRP Webinars</i>	February 9, 2022
Interpretation of Forensic Toxicology Results Around the Globe and Into the Future <i>Webinar- SOFT</i>	December 7, 2021
2021 Virtual Impaired Driving Conference <i>Online Conference- NH Office of Highway Safety</i>	November 15-17, 2021
Robert F. Borkenstein Course on the Effect of Drugs on Human Performance and Behavior <i>Online Course- CFSRE</i>	August 30-September 3, 2021
General Pharmacology for the Forensic Toxicologist <i>Online Course- CFSRE</i>	July 13-15, 2021
2021 Online Symposium: Current Trends in Forensic Toxicology <i>Online Conference- CFSRE</i>	June 4, 2021
Recommended Specimens, Scope, Cutoffs, and Strategies for DUI/D Testing & the Impact of Stop Testing Limits <i>Online Workshop- IACT</i>	April 16, 2021
Development and Validation: Plan, Execute, Succeed! <i>Online Workshop- IACT</i>	April 15, 2021
Alcohol Concentration Extrapolation <i>Online Workshop- IACT</i>	April 14, 2021
Quality Assurance and Uncertainty of Measurement: Fundamentals and Implementation <i>Online Workshop- IACT</i>	April 12, 2021
SOFTember <i>Online Conference- SOFT</i>	September 8-30, 2020

2020 Online Symposium: Current Trends in Forensic Toxicology <i>Online Conference- CFSRE</i>	June 8-12, 2020
Maintaining Lab Operations- GC Support Topics <i>Webinar- Agilent</i>	April 30, 2020
Maintaining Lab Operations- LC/QQQ and LC/QToF Support Topics <i>Webinar- Agilent</i>	April 23, 2020
Maintaining Lab Operations- HPLC and LC/MSD Support Topics <i>Webinar- Agilent</i>	April 17, 2020
Introduction to Measurement Uncertainty (EMU 101W) <i>Online Course- A2LA</i>	April 13-14, 2020
Advanced Roadside Impaired Driving Enforcement (A.R.I.D.E.) <i>State of Vermont Criminal Justice Training Council, Stowe, VT</i>	March 12-13, 2020
Value of Oral Fluid Screening for Safer Roads <i>Webinar- Abbott, 2020 Toxicology Webinar Series</i>	February 26, 2020
Marijuana or Hemp: From Farm Bill to Forensic Analysis <i>Webinar- RTI International</i>	January 15, 2020
Robert F. Borkenstein Course on Alcohol & Highway Safety: Testing, Research, and Litigation <i>Indiana University, San Diego, CA</i>	December 8-13, 2019
Driving High, the Emerging DUI <i>Webinar- IACP</i>	November 22, 2019
DMT Operator Course <i>Vermont Police Academy, Pittsford, VT</i>	October 18, 2019
DMT Supervisor Course <i>Vermont Police Academy, Pittsford, VT</i>	August 27, 2019
Contextual Bias- Objectivity, Subjectivity, and Bias in Firearm and Toolmark Identification <i>Webinar- Nichols Forensic Science Consulting</i>	August 8, 2019
Pittcon Conference and Expo <i>Philadelphia, PA</i>	March 18-19, 2019
American Academy of Forensic Sciences Annual Meeting <i>Baltimore, MD</i>	February 18-22, 2019
The NC Statewide Medical Examiner System Laboratory Approach <i>Webinar- NIJ</i>	November 21, 2017
North Eastern Association of Forensic Scientists Annual Meeting <i>Pocono Manor, PA</i>	November 8-9, 2017

CERTIFICATIONS

ACS (American Chemical Society) certification in chemistry

MEMBERSHIP

IACT (International Association for Chemical Testing) 2021-Present

AWARDS

Honors Fellowship, College of William and Mary
Received funding for summer chemistry research Summer 2016