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NAME:	Erika Phung	DATE:	2/27/2023
LABORATORY:	Houston Forensic Science Center		
JOB TITLE:	Forensic Scientist - Toxicology		

Indicate all disciplines in which you do casework:

<input type="checkbox"/>	Seized Drugs	<input type="checkbox"/>	Forensic Biology/DNA
<input type="checkbox"/>	Crime Scene	<input type="checkbox"/>	Latent Prints
<input type="checkbox"/>	Digital Forensics	<input checked="" type="checkbox"/>	Toxicology
<input type="checkbox"/>	Firearms	<input type="checkbox"/>	Forensic Audio/Video

List all categories or sub-disciplines in which you do casework:

Human Performance Toxicology

Texas Forensic Science Commission (TFSC) Licensing

Per TFSC section 651.203, starting January 1, 2019, the following disciplines are subject to licensing: Seized Drugs, Toxicology, Forensic Biology & Firearms/Toolmarks. If applicable, select the type of license issued by TFSC (Select N/A if not applicable):

Type of License:	Toxicologist (Interpretative)
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Education:

List all higher education institutions attended (list high school if no college degree has been attained)

Institution	Dates Attended	Major	Type of Degree Earned
Boston University School of Medicine	September 2017 – August 2019	Biomedical Forensic Sciences	Master of Science
University of California, Los Angeles	September 2012 – June 2016	Chemistry	Bachelor of Science

Other Training:

List continuing education, workshops, in service, and other formal training received. Please include the course title, source, and dates of training.

<p>American Academy of Forensic Sciences Annual Meetings</p> <ul style="list-style-type: none"> Anaheim, CA, 2020 Virtual Program, 2022 <p>Society of Forensic Toxicologists Annual Meetings</p> <ul style="list-style-type: none"> San Antonio, TX, 2019 Virtual Program, 2020 Nashville, TN, 2021 <p>Northeastern Association of Forensic Scientists Annual Meetings</p> <ul style="list-style-type: none"> Pocono Manor, PA, 2017 Bolton's Landing, NY, 2018 <p>Midwest Association for Toxicology and Therapeutic Drug Monitoring Annual Meeting</p>



- Cleveland, OH, 2019

“Texas Forensic Science Commission Criner/Colone Report Training”, Houston Forensic Science Center, December 16-29, 2022

“Overview of the Advanced Roadside Impaired Driving Enforcement Program”, Houston Police Department, November 16, 2022

“Re-introducing CFSRE’s NPS Discovery Program: Past, Present, and a Look into the Future”, CFSRE, October 11, 2022

“An Introduction to ANSI/ASB Standards 119, 120, 121: Defining the Analytical Scope and Sensitivity Required for Human Performance and Postmortem Forensic Toxicology”, AAFS, September 28, 2022

“2022 Current Trends in Forensic Toxicology Symposium Day 1-5” Webinar, CFSRE, May 16-20, 2022.

“GC Troubleshooting Tips and Tricks from Inlet Through Detection” Webinar, Phenomenex, April 19, 2022

“Essential LC-MS Method Development” Webinar, Phenomenex, March 8, 2022

“Young Forensic Scientists Forum: Meeting and Overcoming Challenges Faced by Young Forensic Scientists”, Virtual Program, February 22, 2022

“Introduction to Pharmacology” Webinar, Houston Forensic Science Center, January 19, 2022

“Robert F. Borkestein Alcohol Course”, Virtual Program, May 18-20, 25-27, 2021

“Drug Interactions – What Every Forensic Toxicologist Should Know” Workshop, SOFT Annual Meeting, September 28, 2021

“Strategies for Screening of NPS in Forensic Toxicology” Workshop, SOFT Annual Meeting, September 27, 2021

“Cannabis Impaired Driving: Where Are We in 2020?” Workshop, SOFT Annual Meeting, September 22, 2020

“GC-MS and LC-MS/MS Method Development – A Step by Step Guide” Workshop, SOFT Annual Meeting, September 24, 2020

“Introduction to Liquid Chromatography-Mass Spectrometry/Mass Spectrometry with applications to Forensic Chemistry”, Agilent/ Houston Forensic Science Center, December 12-13, 17, 2019

“PathWise Technical Writing, Documenting Investigations, Writing Validations Training Course”, 2018



Courtroom Experience:

List the disciplines/sub-disciplines in which you have testified as an expert witness and indicate over what time period and approximately how many times you have testified in each.

Discipline or Sub-Discipline	Time Period	Times Testified
Human performance toxicology	June 2021 – Present	3

Professional Affiliations:

List any professional organizations of which you are or have been a member. Indicate any office(s) or positions held and the dates of these activities.

Organization	Member Status & Position(s) Held	Dates of Membership
Society of Forensic Toxicologists	Full Member; Young Forensic Toxicologist Committee Member	October 2020 – Present; January 2023 - Present
American Academy of Forensic Sciences	Associate Member	February 2021 – Present
Midwest Association of Toxicology and Therapeutic Drug Monitoring	Student Member	April 2019 – April 2020
Women in the Enterprise of Science & Technology	Member	July 2018 – July 2019

Employment History:

List all scientific or technical positions held, particularly those related to forensic science. List current position first. Be sure to indicate employer and give a brief summary of duties. Please list your dates of employment by month and year.

Job Title:	Forensic Scientist - Toxicology	Dates of Employment:	09/2019 – Present
Employer:	Houston Forensic Science Center		
Provide a brief description of duties below:			
Performs routine chemical analysis of human biological specimens using chemical and instrumental methodologies to detect and quantify alcohol and drugs in biological matrices and/or liquid. <ul style="list-style-type: none">Performs technical and/or administrative review of alcohol and drug screening casework			

Job Title:	Graduate Research Assistant	Dates of Employment:	05/2018 – 08/2019
Employer:	Boston University School of Medicine		
Provide a brief description of duties below:			
Evaluated the long-term stability of select synthetic cannabinoids in biological matrices with and without preservatives at room temperature, refrigeration and freezer by quantifying the synthetic cannabinoids present in triplicate samples at set time points using UFLC-MS/MS instrumentation.			



Job Title:	Graduate Teaching Assistant	Dates of Employment:	08/2018 – 05/2019
Employer:	Boston University School of Medicine		
Provide a brief description of duties below:			
Instructed forensic graduate students on proper evidence handling, extraction methods and instrumental analysis for the course: GMS FS708 Forensic Instrumental Analysis Laboratory.			

Job Title:	Analytical Science & Technology Intern	Dates of Employment:	06/2018 – 08/2018
Employer:	Ipsen Bioscience Inc.		
Provide a brief description of duties below:			
Developed and optimized HPLC methods to analyze the manufacturing products of ONIVYDE®, an FDA-approved Irinotecan liposome injection medicine prescribed to treat pancreatic cancer.			

Job Title:	Research Assistant	Dates of Employment:	06/2016 – 08/2017
Employer:	Neurocrine Biosciences Inc.		
Provide a brief description of duties below:			
Assisted with various medicinal chemistry projects to discover and synthesize new ligands for receptors involved in CNS and endocrine expression.			

Job Title:	Work Study Student	Dates of Employment:	10/2015 – 06/2016
Employer:	UCLA Division of Rheumatology		
Provide a brief description of duties below:			
Assisted with clinical research and laboratory blood work in the study of long-term effects of lupus on the cardiovascular system.			

Job Title:	Medicinal Chemistry Intern	Dates of Employment:	06/2014 – 09/2014
Employer:	Takeda Pharmaceutical Company		
Provide a brief description of duties below:			
Researched and proposed synthetic routes for drug analogs to assist the creation of a fragment-based drug development library and synthesized compounds for both the library and various medicinal chemistry projects.			



Other Qualifications:

List below any scientific papers authored or co-authored and/or scientific presentations given, research in which you have been involved, academic or teaching positions you have held, and any other information you consider relevant to your qualification as a forensic scientist.

RESEARCH EXPERIENCE:

- Graduate Thesis Research, Boston University School of Medicine (05/2018 – 08/2019)
 - “Evaluation of the Long-Term Stability of Select Phenylacetylindole, Cycloalkylindole, Quinoliny, and Carboxamide Synthetic Cannabinoids Using LC-MS/MS”
- Graduate Thesis Research (Co-author), Boston University School of Medicine (04/2018 – 08/2018)
 - Lee, Daniel. “Detection and Quantitation of 17 Synthetic Cannabinoids in Human Whole Blood Using LC-MS/MS Following Supported Liquid Extraction”

TECHNICAL SKILLS:

- Sample Preparation: Solid-phase extraction (SPE), supported liquid extraction (SLE), liquid-liquid extraction (LLE), alcohol analysis, organic chemistry synthesis
- Instrumentation: Liquid chromatography-tandem mass spectrometer (LC-MS/MS), gas chromatography-mass spectrometer (GC/MS), headspace gas chromatography flame ionization detector (HS-GC-FID), enzyme-linked immunosorbent assay (ELISA), nuclear magnetic resonance (NMR), refractive index detector (HPLC-RID), evaporative light scattering detector (HPLC-ELSD), charged aerosol detector (UPLC-CAD), Fourier Transform Infrared Spectrometer (FTIR) using Attenuated Total Reflectance (ATR), FTIR-Microscopy, polarized light microscope (PLM), compound microscope, ultraviolet-visible spectrophotometer (UV-Vis)
- Automation: Microlab[®] VANTAGE Liquid Handling System integrated with Verso Sample and Compound Management System (Hamilton), Freedom EVO[®] 75/2 Workstation (Tecan), Microlab[™] 600 (Hamilton)
- Data Analysis Software: Analyst[®] (SCIEX), MultiQuant[™] (SCIEX), ChemStation[®] (Agilent), MassHunter[®] (Agilent), Empower 3[™] (Waters), MassLynx[™] (Waters), OMNIC[™] (ThermoFisher Scientific), TopSpin[®] (Bruker), Freedom EVOware[®] (Tecan), Magellan[™] (Tecan), NaviTrak 2.0[™] (Immunalysis)
- Laboratory Information Management Software: JusticeTrax LIMS-Plus, Core LIMS (ThermoFisher Scientific)

SCIENTIFIC PRESENTATIONS:

- Poster Presentation, Society of Forensic Toxicologists (SOFT) Annual Meeting, Nashville, TN, September 27 – October 1, 2021.
 - Phung, Erika; Rodgers, Corissa; Gooden, Andrea; Stout, Peter; Lee, Dayong. “Ethanol stability from five years of a blind quality control program in blood alcohol analysis”.
- Podium Presentation, American Academy of Forensic Sciences Annual Meeting, Anaheim, CA, February 17 – 22, 2020.



- Phung, Erika; Lee, Daniel; Swart, Cassandra; Moore-Bollinger, Katherine; Bynum, Nichole; Grabenauer, Megan; Botch-Jones, Sabra. "Evaluation of the Long-Term Stability of Select Phenylacetylindole, Cycloalkylindole, Quinoliny, and Carboxamide Synthetic Cannabinoids in Human Whole Blood Using LC-MS/MS".
- Poster Presentation, Society of Forensic Toxicologists (SOFT) Annual Meeting, San Antonio, TX, October 16 – 18, 2019.
 - Phung, Erika; Lee, Daniel; Swart, Cassandra; Moore-Bollinger, Katherine; Bynum, Nichole; Grabenauer, Megan; Botch-Jones, Sabra. "Evaluation of the Long-Term Stability of Select Phenylacetylindole, Cycloalkylindole, Quinoliny, and Carboxamide Synthetic Cannabinoids in Human Whole Blood Using LC-MS/MS".
- Podium Presentation, Midwest Association of Toxicology and Therapeutic Drug Monitoring (MATT) Annual Meeting, Cleveland, OH, April 4 – 5, 2019.
 - Phung, Erika; Lee, Daniel; Swart, Cassandra; Moore-Bollinger, Katherine; Botch-Jones, Sabra. "Evaluation of the Short-Term Stability of Select Naphthoylindole, Adamantoylindole, Quinoliny, and Carboxamide Synthetic Cannabinoids in Human Whole Blood Using LC-MS/MS".
- Podium Presentation, Northeastern Association of Forensic Scientists (NEAFS) Annual Meeting, Bolton's Landing, NY, October 23 – 27, 2018.
 - Phung, Erika; Bynum, Nichole; Grabenauer, Megan; Botch-Jones, Sabra; Moore, Katherine. "Validation of 15 Synthetic Cannabinoid Metabolites in Urine by LC-MS/MS."