

## —GLEN PAUL JACKSON, PHD, FAAFS, FRSC—

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**POSITIONS HELD**

- 2020 Founder of AuthentiCHEM, LLC; consulting in analytical and forensic chemistry.
- 2012–present** **Ming Hsieh Distinguished Professor of Forensic and Investigative Science.**  
West Virginia University, Morgantown, WV.
- 2012–present** **Joint Professor of Chemistry.**  
West Virginia University, Morgantown, WV.
- 2014–2019 Adjunct Professor of Biology.  
West Virginia University, Morgantown, WV.
- 2009–2012 Assistant (2004-2009) and Associate Professor (2009-2012) of Chemistry and Biochemistry & Director of the BS Forensic Chemistry Program (2009-2012).  
Ohio University, Athens, OH.
- 2000–2004 Doctoral Research Associate (Intern, 2000-2002) Postdoctoral Research Associate (2002-2004).  
Oak Ridge National Laboratory, Oak Ridge, TN.
- 1998–2000 Graduate Teaching Assistant.  
West Virginia University, Morgantown, WV.
- 1996–1997 Graduate Teaching Assistant.  
Ohio University, Athens, OH.

**EDUCATION**

- 1998–2002 Ph.D. Analytical Chemistry.  
West Virginia University, Morgantown, WV.
- 1996–1998 M.S. Analytical Chemistry.  
Ohio University, Athens, OH (coursework completed during year abroad in 1996–1997, degree conferred in 1998).
- 1994–1998 B.S. (2:1 with Honors) Chemical and Analytical Science (year abroad in 1996–1997).  
University of Wales Swansea, UK.

**AWARDS AND RECOGNITION**

- 2021 FACSS Innovation Award winner.
- 2013 FACSS Innovation Award finalist.
- 2011 Transformative Faculty Award for teaching (Ohio University).
- 2008 Distinguished Public Speaker in STEM, Southeast Ohio Center for Excellence in Mathematics and Science (SEOCEMS).
- 2008–13 NSF CAREER Award “Mass Spectrometry for the Masses.”
- 2001 ASMS Travel Award, East Tennessee Mass Spectrometry Discussion Group.

- 2000 Forest Ferrell Award, Department of Chemistry, West Virginia University.
- 1999–2000 HERF Fellowship Award, West Virginia University.
- 1999 Outstanding Teaching Assistant of the Year Award, Department of Chemistry, West Virginia University.
- 1998–99 HERF Fellowship Award, West Virginia University.

## PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

- 2022– Affiliate Member, The Chartered Society of Forensic Sciences.
- 2016–present Founding Co-Editor-in-Chief (with Prof. José Almirall), *Forensic Chemistry* published by Elsevier, Amsterdam, Netherlands.
- 2017–present Member, Society for Applied Spectroscopy.
- 2014–present Member, Forensic Isotope Ratio Mass Spectrometry (FIRMS) Network.
- 2010–2012 Member, Forensic Science Institute of Ohio (FSIO).
- 2010–present Fellow (since 2018), American Academy of Forensic Sciences (AAFS), Criminalistics.
- 2002–2004 Member & Secretary, East Tennessee Mass Spectrometry Discussion Group.
- 2001–Present Member, American Society for Mass Spectrometry (ASMS).
- 2000–Present Member, American Chemical Society (ACS), Analytical Division.
- 1997–present Fellow (since 2017), Royal Society of Chemistry (RSC).

## FUNDING RECEIVED

Total weighted (by % effort) external funding for grants awarded as PI or Co-PI (2004–present): >\$2.7M.

### *Federal/State*

- 2022–24 “Expert Algorithm for Substance Identification (EASI),” Department of Justice, National Institute of Justice, **\$327,405**. Function: PI. 15PNIJ-21-GG-04179-COAP
- 2018–21 “Investigating the Kinetic and Thermodynamic Approaches to Predict Evaporation of Gasoline at Elevated Temperatures for Fire Debris Applications,” Department of Justice, National Institute of Justice, **\$466,769**. Function: Co-PI, ~35% effort (PI, Ruth Smith, MSU). 2018-DU-BX-0225
- 2018–21 “Structural Characterization of Emerging Synthetic Drugs,” Department of Justice, National Institute of Justice, **\$368,415**. Function: PI (w/ Co-PI, Randall Clark, Auburn U). 2018-75-CX-0033
- 2017–20 “Development of Charge Transfer Dissociation Mass Spectrometry (CTD-MS) of Oligosaccharides,” National Science Foundation, **\$450,000**. Function: PI. CHE-1710376
- 2015–20 “Developing IMS-SID/MAD-MS Instrumentation for Characterizing Intrinsically Disordered Protein Structure,” NIH/NIGMS, **\$1,376,751**. Function: Co-PI, 37.5% effort (PI, Stephen Valentine, WVU). R01GM114494
- 2014–16 “Biometrics from the Isotopic Analysis of Amino Acids in Human Hair,” Department of Justice, National Institute of Justice, **\$283,484**. Function: PI. 2013-DN-BX-K007

- 2011–13 “Expedited Field Survey & Sampling Techniques for Polychlorinated Biphenyl (PCB) Congeners and Dioxins,” Department of Energy, **\$284,345**. Function: Co-PI, 40% effort (PI, Mark Weinberg).
- 2010 “The Science Behind Forensic Science: An Exhibit at the US Science and Engineering Expo,” Supplement for CAREER: Mass Spectrometry for the Masses, National Science Foundation, Chemistry Division, **\$2,500**. Function: PI.
- 2008–14 “CAREER: Mass Spectrometry for the Masses,” National Science Foundation, Chemistry Division, (0745590), **\$562,000**. Function: PI. CHE-0745590
- 2008–12 “Exfiltration Trench for Post Construction Storm Water Management for Linear Transportation Projects,” Ohio Department of Transportation, Office of Research and Development, **\$533,033**. Function: Co-PI, 10% effort (PI, Gayle Mitchell).
- 2007–11 “Vegetated Biofilters for Post Construction Storm Water Management for Linear Transportation Projects,” Ohio Department of Transportation, Office of Research and Development, **\$432,922**. Function: Co-PI, 20% effort (PI, Gayle Mitchell).
- 2007–10 “Development of an Advanced Quadrupole Ion Trap for Proteomics,” National Science Foundation, Division of Biological Infrastructure, Instrumentation Development for Biological Research (0649757), **\$228,160**. Function: PI. DBI-0649757
- 2006 “Purchase of an Inductively-Coupled Plasma Optical Emission Spectrophotometer,” State of Ohio House Bill 18, **\$55,000**. Function: Co-PI, 50% effort (PI, Peter B Harrington).

#### **Private/Industry/Other**

- 2013–14 “Modulated DART Ion Source,” IonSense, Inc., **\$5,000**. Function: PI.

#### **Internal (WVU and Ohio University)**

- 2017 “Cheat Lake Science Fair,” Eberly College of Arts and Sciences Community Engagement Grant, **\$750**. Function: PI.
- 2010 “Acquisition of a Micro-FTIR system,” College of Arts and Sciences Technology Fund, **\$45,283**. Function: PI.
- 2009 “Metastable Atom-Activated Dissociation Mass Spectrometry,” Ohio University Research Priorities Fund, BMIT Graduate Research Associate, **\$10,000**. Function: PI.
- 2009 “Acquisition of an Inductively Coupled Plasma Mass Spectrometer (ICP-MS),” CAS and VP Research. **\$25,000**. Function: Co-PI, 30% effort (PI, Peter B. Harrington).
- 2007 “Master’s Degree Program in Forensic Chemistry,” Future Growth Fund. **\$147,358**. Function: Co-PI, 30% effort (PI, Peter B. Harrington).
- 2007–9 “Development of a Portable Mass Spectrometer Operating at High Pressures,” Ohio University Research Priorities Fund, BMIT Graduate Research Associate, **\$14,625**. Function: PI.
- 2006 “Acquisition of GC-Combustion Isotope Ratio Mass Spectrometer,” Ohio University Matching Funds, **\$35,000** (VP Research 43%, College of Arts and Sciences 15%, Center for Intelligent Chemical Instrumentation 15%). Function: PI.
- 2006 “Acquisition of a Polarized Light Microscope and Digital Imaging System,” College of Arts and Sciences Technology Fund, **\$8,645**. Function: PI.
- 2005 “Acquisition of a UV/VIS and Raman Instrument for Undergraduate Teaching Labs,” College of Arts and Sciences Technology Fund, **\$16,743**. Function: Co PI (PI Peter de B Harrington).

- 2005 “Acquisition of Equipment for Metastable Atom-Activated Dissociation of Biological ions,” NanoBiotechnology Institute, Ohio University Research Priorities Fund, **\$35,000**. Function: Co Investigator (PI Steve Bergmeier).

## INTELLECTUAL PROPERTY

- 3) “Method and Device for Mass Spectrometric Analysis of Biomolecules using Charge Transfer Dissociation (CTD),” US Patent Number 9,997,342. Issued June 12, **2018**. Role: PI.
- 2) “Method for Sequencing Peptides and Proteins Using Metastable Atom-Activated Dissociation Mass Spectrometry,” US Patent Number 8,389,931. Issued March 05, **2013**. Role: PI.
- 1) “Portable Loeb-Eiber Mass Spectrometer,” US patent number US 7,772,546, issued Aug 10, **2010**. Role: PI.

## PUBLICATIONS

\*Denotes invited publication.

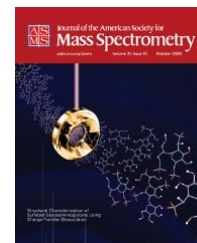
#Article featured on front cover of journal.

### West Virginia University

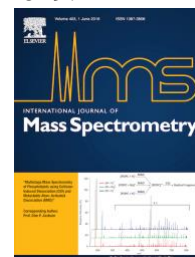
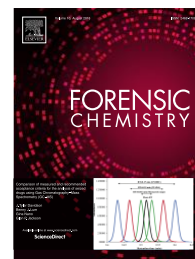
- 89) P. M. Mendis, G. P. Jackson, “Structural Characterization of Acidic and Neutral Human Milk Oligosaccharides (HMOs) using Ultra-High Performance Liquid Chromatography-Charge Transfer Dissociation Mass Spectrometry (UHPLC-CTD-MS)” *Glycobiology*, **2022**, cwac010.
- 88) #H. M. Edwards, Z. J. Sasiene, P. M. Mendis, G. P. Jackson, “Structural Characterization of Natural and Synthetic Macrocycles using Charge Transfer Dissociation Mass Spectrometry,” *J. Am. Soc. Mass Spectrom.*, **2022**, 33, 4, 671–680.
- 87) H. M. Edwards, H-T. Wu, R. R. Julian, G. P. Jackson, “Differentiating Aspartic Acid Isomers and Epimers in Peptides using Charge Transfer Dissociation Mass Spectrometry (CTD-MS),” *Analyst*, **2022**, 147(6), 1159-1168.
- 86) H. M. Edwards, H-T. Wu, R. R. Julian, G. P. Jackson, “Differentiation of Leucine and Isoleucine Residues in Peptides using Charge Transfer Dissociation Mass Spectrometry (CTD-MS),” *Rapid Commun. Mass Spectrom.*, **2022**, 36, e9246.
- 85) \*P. M. Mendis, Z. J. Sasiene, D. Ropartz, H. Rogniaux, G. P. Jackson, “Ultra-High Performance Liquid Chromatography Charge Transfer Dissociation Mass Spectrometry (UHPLC-CTD-MS) as a Tool for Analyzing the Structural Heterogeneity in Carrageenan Oligosaccharides,” *Anal. Bioanal. Chem. (Article in Forefront; 20th Anniversary Edition)*, **2022**, 414, 303-318.
- 84) M. P. V. Matos, M. E. Engel, J. B. Mangrum, G. P. Jackson, “Origin Determination of the Eastern Oyster (*Crassostrea virginica*) using a Combination of Whole-Body Compound-Specific Isotope Analysis and Heavy Metal Analysis,” *Anal. Methods*, **2021**, 13, 3493–3503.
- 83) Z. J. Sasiene, D. Ropartz, H. Rogniaux, G. P. Jackson, “Charge Transfer Dissociation of a Branched Glycan with Alkali- and Alkaline Earth Metal Adducts,” *J. Mass Spectrom.*, **2021**, 56, e4774.
- 82) Z. J. Sasiene, P. M. Mendis, D. Ropartz, H. Rogniaux, G. P. Jackson, “The Influence of Na/H Exchange on the Charge Transfer Dissociation (CTD) Spectra of Mannuronic Acid Oligomers,” *Int. J. Mass Spectrom.*, **2021**, 468, 116634.



- 81) Z. J. Sasiene, P. M. Mendis, G. P. Jackson, "Quantitative Assessment of Six Different Reagent Gases for Charge Transfer Dissociation (CTD) of Biological Ions," *Int. J. Mass Spectrom.*, **2021**, 462, 116532.
- 80) P. M. Mendis, Z. J. Sasiene, D. Ropartz, H. Rogniaux, G. P. Jackson, "Structural Characterization of Isomeric Oligogalacturonan Mixtures using Ultra-High-Performance Liquid Chromatography-Charge Transfer Dissociation Mass Spectrometry (UHPLC-CTD-MS)," *Anal. Chem.*, **2021**, 93(5), 2838-2847.
- 79) J. T. Davidson, Z. J. Sasiene, G. P. Jackson, "Comparison of In-Source Collision-Induced Dissociation and Beam-Type Collision-Induced Dissociation of Synthetic Cathinones and Fentanyl Analogs using a High-Resolution Quadrupole Time-of-Flight (Q-TOF) Mass Spectrometer," *J. Mass Spectrom.*, **2021**, e4679.
- 78) #L. E. Pepi, Z. J. Sasiene, P. M. Mendis G. P. Jackson, I. J. Amster, "Structural Characterization of Sulfated Glycosaminoglycans using Charge Transfer Dissociation," *J. Am. Soc. Mass Spectrom.*, **2020**, 31(10), 2143-2153.
- 77) J. T. Davidson, Z. J. Sasiene, G. P. Jackson, "Fragmentation Pathways of Odd- and Even-Electron *N*-Alkylated Synthetic Cathinones," *Int. J. Mass Spectrom.*, **2020**, 453, 116354.
- 76) H. Buck-Wiese, M. Fanuel, M. Liebeke, K. Le Mai Hoang, A. Pardo-Vagas, P. H. Seeberger, J-H Hehemann, H. Rogniaux, G. P. Jackson, D. Ropartz, "Discrimination of  $\beta$ -1,4 and  $\beta$ -1,3 Linkages in Native Oligosaccharides via Charge Transfer Dissociation Mass Spectrometry" *J. Am. Soc. Mass Spectrom.*, **2020**, 31(6), 1249-1259.
- 75) J. T. Davidson, Z. J. Sasiene, Y. Abiedalla, J DeRuiter, C. R. Clark, G. P. Jackson, "Fragmentation Pathways of  $\alpha$ -Pyrrolidinophenone Synthetic Cathinones and their Application to the Identification of Emerging Synthetic Cathinone Derivatives," *Int. J. Mass Spectrom.*, **2020**, 453, 116343.
- 74) J. T. Davidson, E. L. Piacentino, Z. J. Sasiene, Y. Abiedalla, J DeRuiter, C. R. Clark, G. Berden, J. Oomens, V. Ryzhov, G. P. Jackson, "Identification of Novel Fragmentation Pathways and Fragment Ion Structures in the Tandem Mass Spectra of Protonated Synthetic Cathinones," *Forens. Chem.*, **2020**, 19, 100245.
- 73) J. T. Davidson, Z. J. Sasiene, G. P. Jackson, "The Influence of Chemical Modifications on the Fragmentation Behavior of Fentanyl and Fentanyl-Related Compounds in Electrospray Ionization Tandem Mass Spectrometry," *Drug Test. Anal.*, **2020**, 12(7), 957-967.
- 72) M. P. V. Matos, G. P. Jackson, "Compound-Specific Isotope Analysis of Human Hair: Predicting Behaviors and Biometrics Beyond Dietary Factors," *Anal. Chem.*, **2020**, 92, 4, 3014-3022.
- 71) I. C. Willis, Z. Fan, J. T. Davidson, G. P. Jackson, "Weathering of Ignitable Liquids at Elevated Temperatures: A Thermodynamic Model, Based on Laws of Ideal Solutions, to Predict Weathering in Structure Fires," *Forens. Chem.*, **2020**, 100215.
- 70) J. T. Davidson, Z. J. Sasiene, G. P. Jackson, "The Characterization of Isobaric Product Ions of Fentanyl using Multi-Stage Mass Spectrometry, High-Resolution Mass Spectrometry and Isotopic Labeling," *Drug Test. Anal.*, **2020**, 12(4), 496-503.
- 69) M. K. Santos, G. B. Walber, L. J. Danielli, T. Kreutz, K. C. Mariotti, M. Ritter, L. E. Arroyo, G. P. Jackson, R. P. Limberger, "Evaluation of the Presence of 1,3-Dimethylamylamine in Pelargonium Leaves and Essential Oils by Mass Spectrometric and Chromatographic Methods," *Chromatographia*, **2019**, 82(5), 875-883.



- 68) J. T. Davidson, G. P. Jackson, “The Differentiation of 2,5-dimethoxy-N-(N-methoxy-benzyl)phenethylamine (NBOMe) Isomers using GC Retention Indices and Multivariate Analysis of Ion Abundances in Electron Ionization Mass Spectra,” *Forens. Chem.*, **2019**, 14, 100160.
- 67) M. P. V. Matos, G. P. Jackson, “Isotope Ratio Mass Spectrometry in Forensic Science Applications,” *Forens. Chem.*, **2019**, 13, 100154.
- 66) M. P. V. Matos, K. I. Konstantynova, R. M. Mohr, G. P. Jackson, “Analysis of the  $^{13}\text{C}$  Isotope Ratios of Amino Acids in the Larvae, Pupae, and Adult Stages of *Calliphora vicina* Blow Flies and their Carrion Food Sources,” *Anal. Bioanal. Chem.*, **2018**, 410(30), 7943-7954.
- 65) #J. T. Davidson, B. J. Lum, G. Nano, G. P. Jackson, “Comparison of Measured and Recommended Acceptance Criteria for the Analysis of Seized Drugs using Gas Chromatography-Mass Spectrometry (GC-MS),” *Forens. Chem.*, **2018**, 10, 15-26.
- 64) M. K. Santos, E. Gleco, J. T. Davidson, D. B. J. Neves, G. P. Jackson, R. P. Limberger, L. E. Arroyo, “DART-MS/MS Screening for the Determination of 1,3-Dimethylamylamine (DMAA) and Undeclared Stimulants in Seized Dietary Supplements from Brazil,” *Forens. Chem.*, **2018**, 8, 134–145.
- 63) S. Khodjaniyazova, M. Nazari, M. P. V. Matos, G. P. Jackson, D. C. Muddiman, “Characterization of the Spectral Accuracy of an Orbitrap Mass Analyzer using Isotope Ratio Mass Spectrometry,” *Anal. Chem.*, **2018**, 90, 1897–1906.
- 62) \*P. Li, I. C. Kreft, G. P. Jackson, “Charge Transfer Dissociation (CTD) of Gas-Phase Insulin: Evidence of a One-Step, Two-Electron Oxidation Mechanism,” *J. Am. Soc. Mass Spectrom.*, **2018**, 29(2), 284–296.
- 61) D. Ropartz, P. Li, G. P. Jackson, H. Rogniaux, “Negative Polarity Helium Charge Transfer Dissociation Tandem Mass Spectrometry: Radical-Initiated Fragmentation of Complex Polysulfated Anions,” *Anal. Chem.*, **2017**, 89, 3824–3828.
- 60) H. L. Birks, A. R. Cochran, T. J. Williams, G. P. Jackson, “The Surprising Effect of Temperature on the Weathering of Gasoline,” *Forens. Chem.*, **2017**, 4, 32–40.
- 59) P. Li, G. P. Jackson, “Charge Transfer Dissociation (CTD) of Phosphocholines: Gas-Phase Ion/Ion Reactions between Helium Cations and Phospholipid Cations,” *J. Mass Spectrom.*, **2017**, 52, 271–282.
- 58) \*P. Li, G. P. Jackson, “Charge Transfer Dissociation (CTD) Mass Spectrometry of Peptide Cations: Study of Charge State Effects and Side-Chain Losses,” *J. Am. Soc. Mass Spectrom. (Special Focus: Bio-Ion Chemistry: Interactions of Biological Ions with Ions, Molecules, Surfaces, Electrons, and Light)*, **2017**, 28, 1271–1281.
- 57) G. P. Jackson, “Error Terror in Forensic Science: When Spectroscopy Meets the Courts,” *Spectroscopy*, **2016**, 31(11), 12–16. (Guest Editorial)
- 56) D. Ropartz, P. Li, M. Fanuel, A. Giuliani, H. Rogniaux, G. P. Jackson, “Charge Transfer Dissociation of Complex Oligosaccharides: Comparison with Collision-Induced Dissociation and Extreme Ultraviolet Dissociative Photoionization,” *J. Am. Soc. Mass Spectrom.*, **2016**, 27, 1614–1619.
- 55) #P. Li, W. D. Hoffmann and G. P. Jackson, “Multistage Mass Spectrometry of Phospholipids using Collision-Induced Dissociation (CID) and Metastable Atom-Activated Dissociation (MAD),” *Int. J. Mass Spectrom.*, **2016**, 403, 1–7.
- 54) M. Zhang, N. A. Kruse, J. R. Bowman, G. P. Jackson, “Field Analysis of Polychlorinated Biphenyls (PCBs) in Soil using a Portable Solid Phase



- Microextraction (SPME) and Gas Chromatograph/Mass Spectrometry System,” *Appl. Spectrosc. (Special Edition on Portable Spectroscopy)*, **2016**, 70(5), 785–793.
- 53) F. Hülsemann, C. Lehn, S. Schneiders, G. P. Jackson, S. Hill, A. Rossmann, N. Scheid, P. J. H. Dunn, U. Flenker, W. Schänzer, “Global Spatial Distributions of Nitrogen and Carbon Stable Isotope Ratios of Modern Human Hair,” *Rapid Commun. Mass Spectrom.*, **2015**, 29, 2111–2121.
- 52) \*R. E. Deimler, M. Sander, G. P. Jackson, “Radical-Induced Fragmentation of Phospholipid Cations using Metastable Atom-Activated Dissociation Mass Spectrometry (MAD-MS),” *Int. J. Mass Spectrom.*, (Special Edition on Biological Radicals) **2015**, 390, 178–186.
- 51) A. H. B. Rashaid, P. B. Harrington, G. P. Jackson, “Profiling Amino Acids of Jordanian Scalp Hair as a Tool for Diabetes Mellitus Diagnosis: A Pilot Study,” *Anal. Chem.*, **2015**, 87, 7078–7084.
- 50) \*W. D. Hoffmann and G. P. Jackson, “Forensic Mass Spectrometry,” *Ann. Rev. Anal. Chem.*, **2015**, 8, 419–440. free eprint: DOI: 10.1146/annurev-anchem-071114-040335.
- 49) \* J. R. Almirall, G. P. Jackson, “Review: 27th ASMS Sanibel Conference on Mass Spectrometry—Security and Forensic Applications,” *J. Am. Soc. Mass Spectrom.*, **2015**, 26, 695–698.
- 48) A. H. B. Rashaid, P. B. Harrington, G. P. Jackson, “Amino Acid Composition of Human Scalp Hair as a Biometric Classifier and Investigative Lead,” *Anal. Methods*, **2015**, 7, 1707–1718.
- 47) \*W. D. Hoffmann, F. Jin, G. P. Jackson, “Performance Evaluation of a Loeb-Eiber Mass Filter at 1 Torr,” *J. Am. Soc. Mass Spectrom. (Focus on Harsh Environment and Field-Portable Mass Spectrometry)*, **2015**, 26(2), 286–291.
- 46) \*G. P. Jackson, Y. An, K. I. Konstantynova, A. H. B. Rashaid, “Biometrics from the Carbon Isotope Ratio Analysis of Amino Acids in Human Hair,” *Sci. Justice (FIRMS 2013 Special Edition)*, **2015**, 55, 43–50.
- 45) W. D. Hoffmann and G. P. Jackson, “Charge Transfer Dissociation (CTD) Mass Spectrometry of Peptide Cations using Kiloelectronvolt Helium Cations,” *J. Am. Soc. Mass Spectrom.*, **2014**, 25, 1939–1943.
- 44) M. M. Houck, K. Williams, G. P. Jackson, D. Gialamas, J. Salyards, T. McAdam, M. Sigman, S. Ballou, G. Herrin, J. Henry, V. Desiderio, “American Forensic Roundtable: Progress, Status, and the Future,” *Forens. Sci. Policy Manage.*, **2014**, 5(3–4), 1–19.
- 43) A. H. B. Rashaid, G. P. Jackson, Peter B. Harrington, “Quantitation of Amino Acids in Human Hair by Trimethylsilyl Derivatization Gas Chromatography/Mass Spectrometry,” *Enliven: Bio Anal. Techniques*, **2014**, 1(1), 1–12.
- 42) M. Zhang, G. P. Jackson, N. A. Kruse, J. Bowman, P. B. Harrington, “Determination of Aroclor 1260 in Soil Samples by GC/MS with Solid Phase Microextraction,” *J. Sep. Sci.*, **2014**, 37(19), 2751–2756.
- 41) R. E. Deimler, T. T. Razunguzwa, B. R. Reschke, C. M. Walsh, M. J. Powell, and G. P. Jackson, “Direct Analysis of Drugs in Forensic Applications using Laser Ablation Electrospray Ionization-Tandem Mass Spectrometry (LAESI-MS/MS),” *Anal. Methods*, **2014**, 6(13), 4810–4817.
- 40) D. Harris, S. Hokanson, V. Miller, and G. P. Jackson, “Fragmentation Differences in the EI Spectra of Three Synthetic Cannabinoid Positional Isomers: JWH-250, JWH-302, and JWH-201,” *Int. J. Mass Spectrom.*, **2014**, 368, 23–29.
- 39) N. A. Kruse, J. Bowman, D. Lopez, E. Migliore, G. P. Jackson, “Characterization of Polychlorinated Biphenyls, Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans in Soils and Sediments at the Portsmouth Gaseous Diffusion Plant, Ohio,” *Chemosphere*, **2014**, 114, 93–100.



- 38) Z. Schwartz, Y. An, K. I. Konstantynova, G. P. Jackson, "Analysis of Household Ignitable Liquids and their Post-Combustion Weathered Residues using Compound-Specific Gas Chromatography-Combustion-Isotope Ratio Mass Spectrometry," *Forens. Sci. Int.*, **2013**, 233 (1–3), 365–373.
- 37) Y. An, Z. Schwartz, G. P. Jackson, " $\delta^{13}\text{C}$  Analysis of Amino Acids in Human Hair using Trimethylsilyl Derivatives and Gas Chromatography-Combustion-Isotope Ratio Mass Spectrometry," *Rapid Commun. Mass Spectrom.*, **2013**, 27(13), 1481–1489.

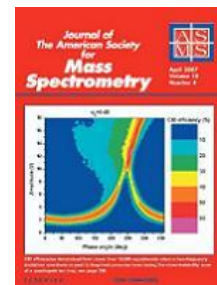
### Ohio University

- 36) S. L. Cook, C. M. Zimmermann, D. Singer, M. Fedorova, R. Hoffmann, G. P. Jackson, "Comparison of CID, ETD, and Metastable Atom-Activated Dissociation (MAD) of Doubly- and Triply-Charged Phosphorylated Tau Peptides," *J. Mass Spectrom.*, **2012**, 47(6), 786–794.
- 35) X. Sun, P. Chen, S. L. Cook, G. P. Jackson, J. M. Harnly, P. B. Harrington, "Classification of Cultivation Locations of *Panax quinquefolius* L Samples using High Performance Liquid Chromatography–Electrospray Ionization Mass Spectrometry and Chemometric Analysis," *Anal. Chem.*, **2012**, 84, 3628–3624.
- 34) Z. Muccio, C. Wöckel, Y. An, G. P. Jackson, "Comparison of Bulk and Compound Specific  $\delta^{13}\text{C}$  Isotope Ratio Analyses for the Discrimination Between Cannabis Samples," *J. Forens. Sci.*, **2012**, 57(3), 757–764.
- 33) S. L. Cook, G. P. Jackson, "Metastable Atom-Activation Dissociation Mass Spectrometry of Phosphorylated and Sulfonated Peptides in Negative Ion Mode," *J. Am. Soc. Mass Spectrom.*, **2011**, 22, 1088–1099.
- 32) S. L. Cook, G. P. Jackson, "Characterization of Tyrosine Nitration and Cysteine Nitrosylation Modifications by Metastable Atom-Activation Dissociation Mass Spectrometry," *J. Am. Soc. Mass Spectrom.*, **2011**, 22, 221–232.
- 31) Z. Muccio, G. P. Jackson, "Simultaneous Identification and  $\delta^{13}\text{C}$  Classification of Drugs Using GC with Concurrent Single Quadrupole and Isotope Ratio Mass Spectrometers," *J. Forens. Sci.*, **2011**, 56(S1), S203–S209.
- 30) X. Sun, C. M. Zimmermann, G. P. Jackson, C. E. Bunker, P. B. Harrington, "Classification of Jet Fuels by Fuzzy Rule-Building Expert Systems Applied to Two-Way Data by Fast Gas Chromatography–Fast Scanning Quadrupole Ion Trap Mass Spectrometry," *Talanta.*, **2011**, 83, 1260–1268.
- 29) R. Marin, Y. Ahuja, G. P. Jackson, U. Laskay, R. N. Bose, "Potentially Deadly Carcinogenic Chromium Redox Cycle Involving Peroxochromium(IV) and Glutathione," *J. Am. Chem. Soc.*, **2010**, 132, 10617–10619.
- 28) S. I. M. Paris, Ü. A. Laskay, Shengwen Liang, O. Pavlyuk, S. Tschirschwitz, P. Lönnecke, M. C. McMills, G. P. Jackson, J. L. Petersen, E. Hey-Hawkins, M. P. Jensen, "Manganese(II) Complexes of di-2-Pyridinylmethylene-1,2-diimine di-Schiff Base Ligands: Structures and Reactivity," *Inorg. Chim. Acta.*, **2010**, 363(13), 3390–3398.
- 27) C. M. Zimmermann, G. P. Jackson, "Gas Chromatography Tandem Mass Spectrometry for Biomarkers of Alcohol Abuse in Human Hair," *Ther. Drug Monit.*, **2010**, 32(2), 216–223.
- 26) #A. Baum, Y. Lu, Z. Muccio, G. P. Jackson, P. B. Harrington, "Differentiation between Origins of Extra Virgin Olive Oils by GC/C/IRMS using Principal





- Component Analysis, Linear Discriminant Analysis and Hierarchical Cluster Analysis,” *Spectroscopy*, **2010**, 25(2), 40–47.
- 25) S. L. Cook, O. L. Collin, G. P. Jackson, “Metastable Atom-Activated Dissociation Mass Spectrometry: Leucine/Isoleucine Differentiation and Ring Cleavage of Proline Residues,” *J. Mass Spectrom.*, **2009**, 44, 1211–1223.
- 24) \*G. P. Jackson, “The Status of Forensic Science Degree Programs in the US,” *Forens. Sci. Pol. Manage.*, **2009**, 1, 2–9.
- 23) O. L. Collin, C. M. Zimmermann, G. P. Jackson, “Fast Gas Chromatography Negative Chemical Ionization Mass Spectrometry of Explosive Compounds,” *Int. J. Mass Spectrom.*, **2009**, 279, 93–99.
- 22) \*Z. Muccio, G. P. Jackson, “Isotope Ratio Mass Spectrometry,” (MiniReview) *Analyst*, **2009**, 134, 213–222.
- 21) C. A. Zimmermann, Ü. A. Laskay, G. P. Jackson, “Analysis of Suspected Trace Human Remains from an Indoor Concrete Surface,” *J. Forens. Sci.*, **2008**, 53(6), 1437–1442.
- 20) Ü. A. Laskay, G. P. Jackson, “Resonance Excitation and Dynamic Collision Induced Dissociation in Quadrupole Ion Traps Using Higher-Order Excitation Frequencies,” *Rapid Commun. Mass Spectrom.*, **2008**, 22(15), 2342–2348.
- 19) Ü. A. Laskay, O. L. Collin, J. J. Hyland, Brad. Nichol, S. P. Pasilis, D. C. Duckworth, G. P. Jackson, “Dynamic Collision-Induced Dissociation (DCID) a Quadrupole Ion Trap Using a Two-Frequency Excitation Waveform: II. Effects of Excitation Frequency and Scan Rate,” *J. Am. Soc. Mass Spectrom.*, **2007**, 18, 2017–2025.
- 18) O. L. Collin, M. Beier, G. P. Jackson, “Dynamic Collision-Induced Dissociation (DCID) of Peptide Ions in a Quadrupole Ion Trap Mass Spectrometer,” *Anal. Chem.*, **2007**, 79, 5468–5473.
- 17) #Ü. A. Laskay, J. J. Hyland, G. P. Jackson, “Dynamic Collision-Induced Dissociation (DCID) a Quadrupole Ion Trap Using a Two-Frequency Excitation Waveform: I. Effects of Excitation Amplitude and Phase Angle,” *J. Am. Soc. Mass Spectrom.*, **2007**, 18, 749–761.
- 16) O. L. Collin, C. Niegel, K. E. DeRhodes, B. R. McCord, G. P. Jackson, “Fast-GC of Explosive Compounds Using a Pulsed Discharge Electron Capture Detector,” *J. Forensic Sci.*, **2006**, 51(4), 815–818.
- 15) G. P. Jackson, J. J. Hyland, Ü. A. Laskay, “Energetics and Efficiencies of Collision-Induced Dissociation Achieved During Mass Acquisition in a Quadrupole Ion Trap Mass Spectrometer,” *Rapid Commun. Mass Spectrom.*, **2005**, 19, 3555–3563.
- Oak Ridge National Laboratory (Graduate Intern and Postdoctoral Associate)**
- 14) G. P. Jackson, F. L. King, D. E. Goeringer, D. C. Duckworth, “Erratum: Gas-Phase Reactions of  $U^+$  and  $U^{2+}$  with  $O_2$  and  $H_2O$  in a Quadrupole Ion Trap,” *J. Phys. Chem. A*, **2004**, 108(11), 2138–2139.
- 13) G. P. Jackson, D. C. Duckworth, “Electrospray Mass Spectrometry of Undiluted Ionic Liquids,” *Chem Comm.*, **2004**, 5, 522–523.
- 12) G. P. Jackson, J. K. Gibson, D. C. Duckworth, “Gas-Phase Reactions of Bare and Ligated Uranium Ions with Sulfur Hexafluoride,” *J. Phys. Chem. A.*, **2004**, 108(6), 1042–1051.
- 11) \*G. P. Jackson, F. L. King, D. C. Duckworth, “Efficient Polyatomic Interference Reduction in Plasma-Source Mass Spectrometry Via Collision Induced Dissociation,” *J. Anal. Atom. Spectrom.*, **2003**, 18(9), 1026–1032.



- 10) \*G. P. Jackson, R. G. Haire, D. C. Duckworth, "A New Glow Discharge Source with Enhanced Ion Extraction for Small Non-Conductive Samples and Atmospheric Sampling," *J. Anal. Atom. Spectrom.*, **2003**, 18(6), 665–669.
- 9) \*A. Bogaerts, R. Gijbels, G.P. Jackson, "Modelling of a Millisecond Pulsed Glow Discharge: Investigation of the Afterpeak," *J. Anal. Atom. Spectrom.*, **2003**, 18(6), 533–548.
- 8) G. P. Jackson, J. K. Gibson, D. C. Duckworth, "Gas-Phase Reactions of Bare and Oxo-Ligated Actinide and Lanthanide Cations with Pentamethylcyclopentadiene in a Quadrupole Ion Trap Mass Spectrometer," *Int. J. Mass Spectrom.*, **2002**, 220, 419–441.
- 7) G. P. Jackson, F. L. King, D. E. Goeringer, D. C. Duckworth, "Gas-Phase Reactions of U<sup>+</sup> and U<sup>2+</sup> with O<sub>2</sub> and H<sub>2</sub>O in a Quadrupole Ion Trap," *J. Phys. Chem. A.*, **2002**, 106, 7788–7794.
- 6) G. P. Jackson, F. L. King, D. E. Goeringer, D. C. Duckworth, "Collision-Induced Dissociation of Lanthanide Oxide Ions in Quadrupole Ion Traps: Effects of Bond Strength and Mass," *Int. J. Mass Spectrom.*, **2002**, 216, 85–93.

#### **West Virginia University (Ph.D. Research)**

- 5) G. P. Jackson, F. L. King, "Bulk Plasma Properties in the Pulsed Glow Discharge," *Spectrochimica Acta, Part B.*, **2003**, 58(8), 1417–1433.

\*Short-listed for Elsevier/Spectrochimica Acta Atomic Spectroscopy Award for the most significant article(s) published in a volume (see editorial: *Spectrochim. Acta, Part B.*, **2005**, 60, 421–422).

- 4) G. P. Jackson, F. L. King, "Probing Excitation/Ionization Processes in Millisecond-Pulsed Glow Discharges in Argon Through the Addition of Nitrogen," *Spectrochim. Acta, Part B.*, **2003**, 58(2), 185–209.

\*Short-listed for Elsevier/Spectrochimica Acta Atomic Spectroscopy Award for the most significant article(s) published in a volume (see editorial: *Spectrochim. Acta, Part B.*, 2005, 60, 421–422).

- 3) G. P. Jackson, C. Lewis, S. K. Doorn, V. Majidi, F. L. King, "Spectral, Spatial and Temporal Diagnostics of a Millisecond Pulsed Glow Discharge: Argon Atom Metastables," *Spectrochim. Acta, Part B*, **2001**, 56(12), 2449–2464.
- 2) C. Lewis, G. P. Jackson, S. K. Doorn, D. Wayne, V. Majidi, F. L. King, "Spectral, Spatial and Temporal Diagnostics of a Millisecond Pulsed Glow Discharge: Copper Atom and Ion Signals," *Spectrochim. Acta, Part B*, **2001**, 56(5), 487–501.

#### **Ohio University (M.S. Research)**

- 1) G. P. Jackson, A. R. J. Andrews, "New Fast Screening Method for Organochlorine Pesticides in Water by Using Solid-Phase Microextraction with Fast Gas Chromatography and a Pulsed-Discharge Electron Capture Detector," *Analyst*, **1998**, 123(5), 1085–1090.

### **REPORTS, BOOKS AND BOOK CHAPTERS**

- 1) G. P. Jackson and Mark A. Barkett, "History of Forensic Mass Spectrometry" in *The Encyclopedia of Mass Spectrometry*, Vol 9, *Historical Perspectives Part A: The Development of Mass Spectrometry*, Ed. K. A. Neir, A. L. Yergy & P. J. Gale, Elsevier, Oxford, UK, **2015**. ISBN: 9780080438481.
- 2) Co-author of "Education and Standardization in Forensic Sciences" in *Science on Location: Forensic Science on the Move*, a report on an NSF-sponsored workshop titled "Strengthening Forensic Science through Connections with the Analytical Sciences" held in Arlington, VA, December 3 and 4, 2012

(PI: R. G. Cooks). The report, with recommendations, can be found here:  
<http://www.chem.purdue.edu/docs/ForensicWorkshopFinalReport.pdf>.

## CONSULTING

- 2022 Consultant for Pedro Law, LLP, Medina, OH.
- 2022 Consultant for Indiana State Police Laboratory, Fort Wayne, IN. (pro bono)
- 2022 Consultant for Palm Beach Sheriff's Office, Palm Beach, FL.
- 2022 Consultant for Virginia Department of Forensic Science. (pro bono)
- 2022 Consultant for 3M & Goldman Ismail Tomaselli Brennan & Baum, LLP, Chicago, IL.
- 2021 Consultant for The Linton Law Firm, Co, LPA. Cleveland, OH.
- 2021 Consultant for Gober-Keller LLC, Waynesboro, VA.
- 2020-22 Consultant for McCabe Law & Colorado State Alternative Defense Council, Boulder, CO.
- 2020-22 Consultant for Wolf Popper, LLP (on behalf of 3M), New York, NY.
- 2019 Consultant for the New York State Police Forensic Investigation Center. (pro bono).
- 2018-20 Consultant for the WV Innocence Project, Baker Botts, LLP & WV State Assistant Attorney General, Charleston, WV. My reports helped overturn the conviction of Jason Lively, who had served more than 14 years in prison. This case was featured in the 2021 season of Forensic Files II by CNN and a 2022 documentary for the Sundance Channel. (pro bono).
- 2018 Consultant for "Facing Evil," a video production by TCF productions Inc., Burbank, CA. I provided video microscope footage and high-resolution photomicrographs of drugs, bullets and cartridge casings. (pro bono).
- 2018 Consultant for New Jersey Institute of Technology, Newark, NJ. I served as an external evaluator for a proposed BS in Forensic Science.
- 2018 Consultant for DEA Special Testing, Dulles, VA. (pro bono).
- 2018 Consultant for Westchester County Forensic Laboratory, Valhalla, NY. (pro bono).
- 2016 Consultant (quoted) in *ASBMB Today*, a magazine published by the American Society for Biochemistry and Molecular Biology for the PNAS article, "Lifestyle chemistries from phones for individual profiling": <http://wildtypes.asbmb.org/2016/11/22/lifestyle-chemistries-of-phones/>. (pro bono).
- 2016 Consultant (quoted) in *Chemistry World*, the news magazine of the Royal Society of Chemistry for the *Analytical Chemistry* article, "Mass Spectrometry-Based Visualization of Molecules Associated with Human Habitats": <https://www.chemistryworld.com/news/chemisphere-maps-reveal-everyday-molecules-we-leave-behind/1017626.article>. (pro bono).
- 2016 Consultant for the New York State Police Forensic Investigation Center. (pro bono).
- 2016 Consultant for the Office of the Ohio Public Defender, Columbus, OH.
- 2016 Consultant for Northeastern Illinois Regional Crime Laboratory, Vernon Hills, IL. (pro bono).
- 2016 Consultant for ProPublica Inc., New York, NY. (pro bono).
- 2015 Consultant for Richard J. Hura, Attorney at Law, LLC, Canfield, OH.

- 2015 Consultant (voice talent) for FBI Law Enforcement Enterprise Portal (LEEP) marketing video, Clarksburg, WV. (pro bono).
- 2013 Consultant for IonSense Inc. Saugus, MA.
- 2012-21 Consultant for Vorys, Sater, Seymour and Pease LLP, Columbus, OH.
- 2011 Consultant for Nancy Grace Live, CNN/HLN. (pro bono).
- 2011 Consultant for Hartford, Dickey & King Co., LPA, East Palestine, OH.
- 2011 Consultant for ZIN Technologies, Inc., Middleburg Heights, OH.
- 2007-17 Science Advisory Board Member for Protea Biosciences, Inc., Morgantown, WV.
- 2010 Consultant for Hartford, Dickey & King Co., LPA, East Palestine, OH.
- 2009 Consultant for U. Michigan Law School, Ann Arbor, MI. (pro bono).
- 2009 Consultant for Law Offices of Steven P. McCollum, PC, Waukegan, IL.
- 2008 Consultant for “House of the Unknown” for The History Channel. *Role:* Consultant for Evolution Film and Tape, Burbank, CA. Responsibilities included forensic investigation, lab analyses, and on-camera interpretation of a ‘stain’ suspected as being the decay products of a former patient at the former Athens Mental Health Center.
- 2006 Consultant for the Office of the Ohio Public Defender, Athens Branch, Athens, OH.
- 2006 Consultant for Mollica, Gall, Sloan & Sillery Co., LPA, Athens, OH.
- 2005 Consultant for Byron L Potts & Co., LPA, Columbus, OH.
- 2005 Horizons Companies, Columbus, OH. *Role:* Coordinated video shooting on the Athens campus and performed demonstrations for a series of educational videos on Forensic Chemistry that accompanied McGraw-Hill textbooks to high schools throughout North America. (pro bono).

#### **SESSIONS/WORKSHOPS CHAIRED/ORGANIZED AT CONFERENCES**

- 2021 “Uncertainty in Forensic Chemical Measurements” at Pacificchem 2021, Honolulu, HI (virtual due to Covid).
- 2019 “Forensic Applications of Mass Spectrometry” at SciX Conference, Palm Springs, CA.
- 2019 “Drug Chemistry II” at the 71st Annual Meeting of the American Academy of Forensic Sciences, Baltimore, MD.
- 2018 “Illicit Drugs and Clandestine Laboratories” at the Australia-New Zealand Forensic Science Society (ANZFSS) 24<sup>th</sup> International Symposium, Perth, Western Australia.
- 2018 “Ion Traps: What Do They Hold for the Future?” at the Ion Trap Workshop of the 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Diego, CA.
- 2018 “Mass Spectrometry” at Spring SciX, Glasgow, Scotland.
- 2017 “Recent Advances in Oligosaccharide Analysis by Mass Spectrometry” at SciX 2017, Reno, NV.
- 2017 “Fundamentals of Ion Activation and Dissociation” at the 65<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN.
- 2016 “Interpretation Challenges in the Non-Biological Criminalistics Disciplines: Assessing the Path” at the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences, Las Vegas, NV.

- 2015 “Analysis of Counterfeit Drugs and New Psychoactive Substances” at SciX Conference, Providence, RI.
- 2015 “A Trans-Spectral Celebration of the International Year of Light: From X-Rays to THz Spectroscopy” at SciX 2015, Providence, RI.
- 2015 “Mass Spectrometry Instrumentation at the Forefront of Technology as Miscible Tools for Forensic and Security Evidence” at the 63<sup>rd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, St. Louis, MO.
- 2015 “Criminalistics II: Drug Chemistry” at the 67<sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences, Orlando, FL.
- 2015 “Controlled Substances and Explosives” at the ASMS Sanibel Conference on Security and Forensic Applications of Mass Spectrometry, Clearwater Beach, FL.
- 2014 “Roundtable Discussion on Research Challenges in Forensics and Homeland Security” at the 62<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Baltimore, MD.
- 2013 “Ion Structures, Energetics, and Ion Molecule Reaction Kinetics, in honor of Peter B. Armentrout’s 60<sup>th</sup> Birthday” at Fundamentals Interest Group Workshop at the 61<sup>st</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Minneapolis, MN.
- 2012 “Ion Manipulation, Analysis and Detection: New Developments” at the 60<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN.
- 2009 “Mass Spectrometry: Instrumentation” at 37<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Louisville, KY.
- 2007 “Developments in Ion Trap Mass Spectrometry” at the 55<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN.

### **TRAINING COMPLETED**

- 2014 Completed 10-week FBI Citizens Academy, Clarksburg, WV.
- 2013 Completed 2-day forensic examination of pressure sensitive tape at the Forensic Science Initiative Continuing Education Program, Morgantown, WV (Instructor: Jennifer Smith).
- 2013 Completed 2-day forensic science accreditation course at the Forensic Science Initiative Continuing Education Program, Morgantown, WV (Instructor: Frank Fitzpatrick).
- 2009 Completed 1-day trace evidence: paint course at the Continuing Education for Forensic Professionals Program, Las Vegas, NV (Instructor: Scott Ryland).
- 2007 Completed 1-day expert witness testimony course at the Continuing Education for Forensic Professionals Program, Orlando, FL (Instructor: Max Houck).
- 2005 Completed 1-day forensic DNA workshop at the Mid-Atlantic Association of Forensic Sciences, Pittsburgh, PA.

### **INVITED PRESENTATIONS OUTSIDE TRADITIONAL CONFERENCE VENUES**

- 2022 Washington/Baltimore Mass Spectrometry Discussion Group, Columbia, MD  
 “What Remains” Podcast Interview for WRAL. Interview covered the ways in which isotope ratio mass spectrometry can provide investigative leads for unidentified deceased victims.
- 2021 Avans Hogeschool (University of Applied Sciences) (presented virtually due to COVID)  
 Virtual STEM Fair, Savvas Learning Company for National Chemistry Week (presented virtually due to Covid)

- Max Planck Institute for Marine Biology Bremen Seminar Series (presented virtually due to COVID).
- Molecular Dynamics in the Gas Phase (MD-GAS), Hosted by the European Cooperation in Science and Technology (COST) (presented virtually due to COVID).
- Tennessee Tech University, Cookeville, TN (presented virtually due to COVID).
- Alpha Lambda Delta Honorary Society, "Presentation on Presentations", Morgantown, WV (presented virtually due to COVID).
- 2020 Ohio Mass Spectrometry and Metabolomics Symposium, Columbus, OH (presented virtually due to COVID).
- 2019 Department of Chemistry, UC Riverside, Riverside, CA.
- Plenary Lecture, SMAP: Joint meeting of the French Proteomics Society and the French Mass Spectrometry Society, Strasbourg, France.
- Opening Plenary, Research Innovation to Implementation (RI2I) Workshop, NIST, Gaithersburg, MD.
- Department of Chemistry, Michigan State University, East Lansing, MI.
- Department of Chemistry, SUNY Albany, Albany, NY.
- 2018 Department of Chemistry and Chemical Biology, Indiana University Purdue University Indianapolis, Indianapolis, IN.
- Department of Chemistry, University of Georgia, Athens, GA.
- Department of Chemistry, University of Buffalo, Buffalo, NY.
- New Jersey Institute of Technology, Newark, NJ.
- 2016 Department of Chemistry, University of South Carolina, Columbia, SC.
- Department of Chemistry, North Carolina State University, Raleigh, NC.
- International Forensic Research Institute Symposium, Florida International University, Miami, FL.
- West Virginia Law Review Symposium, Morgantown, WV.
- 2015 Genetics and Developmental Biology Program, WVU, Morgantown, WV.
- Food and Drug Administration (FDA), Washington, DC.
- Roads Scholar Academy (WVU), Naples, FL.
- Duquesne University, Pittsburgh, PA.
- 2014 Georgetown University, Washington, DC.
- Society for Applied Spectroscopy (SAS) Speaker Tour, John Carroll University, Cleveland, OH.
- Department of Chemistry, Purdue University, West Lafayette, IN.
- Department of Chemistry, Indiana University, Bloomington, IN.
- 2013 Bennett Careers for Chemists Program, West Virginia University, Morgantown, WV.
- Department of Chemistry, Appalachia State University, Boone, NC.



- 2012 NSF Workshop on Strengthening Forensic Science Through Connections with Analytical Sciences, Arlington, VA.  
Department of Chemistry, Florida International University, Miami, FL.
- 2011 Alumni College, Ohio University, Athens, OH.  
Department of Chemistry, University of Cincinnati, Cincinnati, OH.  
Department of Chemistry, Otterbein University, Westerville, OH.
- 2010 Department of Chemistry and Biochemistry, Kent State University, Kent, OH.  
Department of Chemistry, University of Akron, Akron, OH.  
Pittsburgh Mass Spectrometry Discussion Group, Pittsburgh, PA.  
Pacific Northwest National Laboratory, Richmond, WA.
- 2009 FDA Forensic Chemistry Center, Cincinnati, OH.  
Department of Chemistry, Michigan State University, East Lansing, MI.
- 2008 Truman State University, Kirksville, MO.
- 2007 Department of Chemistry, University of North Texas, Denton, TX.
- 2006 Department of Chemistry, Penn State Erie, The Behrend College, Erie, PA.  
Department of Chemistry, West Virginia University, Morgantown, WV.

## TEACHING

### *Classes taught at West Virginia University*

- 2019-present FIS 451/452 *Arson and Explosives Analysis and Laboratory*. 10-44 undergraduates + 2-8 graduate students each offering
- 2019-present FIS 460/461 *Seized Drug Analysis and Laboratory*. 10-40 undergraduates + 2-8 graduate students each offering
- 2018-present *FIS 401 Forensic Professional Communication*. 6-20 undergraduates + 2-4 graduate students each offering.
- 2015–2019 *FIS 696/796 Graduate Seminar*. 20-40 MS students each offering.
- 2015 *FIS 592C Biological and Chemical Evidence*. 4 LLM students in fall 2015.
- 2015–2018 *FIS 593G Arson and Explosives Analysis*. 5-13 students each spring.
- 2012–2018 *FIS 660 (Lecture and Lab) Advanced Forensic Chemistry and Laboratory* 5-12 MS students each fall.

### *Classes taught at Ohio University*

Average professor rating for **Glen Jackson**, Fall 2004-2012 (17 courses): **4.3** (5 max).

Average professor rating for **all faculty** at the same level over the same period: **4.0** (5 max).

- 2010–2012 *CHEM 433 Spectrochemical Analysis*. ~20 Students in winter 2010, and winter 2011.
- 2010–2012 *CHEM 436 Spectrochemical Analysis Laboratory*. ~20 Students (in four lab sections) in winter quarter 2010 and 2011.

- 2010–2011 *CHEM 727 Advanced Spectrochemical Analysis*. 5–6 Students in fall quarter 2010 and 2011.
- 2008–2009 *CHEM 487B Forensic Chemistry Laboratory*. ~20 Students in spring quarters of 2008 & 2009. This laboratory accompanied CHEM 487A and is also a capstone course for forensic chemistry majors.
- 2006–2012 *CHEM 487A/587 Forensic Chemistry*. 9–17 Students in spring quarters 2006, 2007, 2010, 2011 & 2012. This class was the capstone course for forensic chemistry majors.
- 2006–2012 *CHEM 893 Analytical Division Seminar*. 12–18 Students in winter quarter each year.
- 2006–2011 *CHEM 728 Advanced Chemical Separations*. 3–6 Students in winter quarter 2006 and 2008, fall 2009, winter 2011.
- 2005–2011 *CHEM 730 Special Topics in Analytical Chemistry: Mass Spectrometry*. 4–8 Students in spring 2005, winter 2007, spring 2009, fall 2011.
- 2004–2009 *CHEM 241 Quantitative Analysis*. 60–100 Students each fall quarter. I incorporated a new textbook, an audience response system (ARS), peer instruction and on-line homework assignments through the Computer-Assisted Personalized Approach (CAPA).

#### ***External workshops taught***

- 2022 Virtual lightning talk on **Forensic Applications of Isotope Ratio Mass Spectrometry** for the Forensic Research Committee of the American Society of Crime Laboratory Directors (ASCLD)
- 2021 3<sup>rd</sup> School of Forensic Sciences of the Brazilian Federal Police, (Remote due to Covid Pandemic).  
***Structural Characterization of Emerging Synthetic Drugs using Mass Spectrometry Webinar***. Taught a 45-minute webinar with a live question and answer session to ~50 participants.
- 2021 RTI Forensic Technology Center of Excellence (FTCOE), Research Triangle Park, NC.  
***Structural Characterization of Emerging Synthetic Drugs using Mass Spectrometry Webinar***. Taught a one-hour webinar with a live question and answer session to ~150 participants.
- 2015 Forensic & Investigative Science Outreach, Morgantown, WV.  
***Forensic GC/MS Workshop with EI Spectral Interpretation***. Taught a three-day workshop to ~17 practicing forensic professionals.
- 2015 Las Vegas Metropolitan Crime Laboratory, Las Vegas, NV.  
***Forensic GC/MS course with EI Spectral Interpretation***. Taught a three-day workshop to ~17 practicing forensic professionals.
- 2014 Houston Forensic Science Center, Houston, TX.  
***Forensic Mass Spectrometry Workshop***. Taught a two-day workshop to 25 forensic professionals from the toxicology and controlled substances sections.
- 2014 Forensic & Investigative Science Outreach, Morgantown, WV.  
***Forensic GC-MS Workshop***. Taught a three-day workshop, including hands-on DART/MS demonstration and GC-MS demonstrations, to 18 participants.

- 2013 Forensic Science Initiative's webinar series on the applications of forensic science for the legal professional, Morgantown, WV.  
***The Use of Mass Spectrometry in Forensic Science.*** One-hour Webinar with live question and answer session to more than 50 participants.
- 2011 Continuing Education for Forensic Professionals Program, Jackson Hole, WY.  
***Mass Spectrometry Workshop: Drug and Trace.*** Taught a two-day workshop to 25 practicing forensic professionals. ***Uncertainty of Measurements Workshop.*** Taught two ½-day workshops to a total of ~30 practicing forensic professionals.
- 2011 Continuing Education for Forensic Professionals Program, Jackson Hole, WY.  
***Uncertainty of Measurements Workshop.*** Taught two ½-day workshops to a total of ~30 practicing forensic professionals.
- 2010 Continuing Education for Forensic Professionals Program, Boston, MA.  
***Mass Spectrometry Workshop 1: Drug and Trace.*** Taught a two-day workshop to 25 practicing forensic professionals. ***Mass Spectrometry Workshop 2: HPLC for Toxicology.*** Taught a one-day workshop to 25 practicing forensic professionals.
- 2009 Indiana State Police, Laboratory Division, Indianapolis, IN.  
***Mass Spectrometry Interpretation Workshop.*** Taught a three-day workshop to a total of 25 practicing forensic professionals in trace and drug units.
- 2009 Cedar Crest College Continuing Education Program, Allentown, PA.  
***Forensic Mass Spectrometry Workshop.*** (NIJ-funded). Taught a three-day workshop to 27 practicing forensic professionals.
- 2009 Continuing Education for Forensic Professionals Program, Las Vegas, NV.  
***Forensic Mass Spectrometry Workshop.*** (NIJ/FSI Funded). Taught a two-day workshop to 25 practicing forensic professionals.
- 2007 Continuing Education for Forensic Professionals Program, Orlando, FL.  
***Forensic Applications of Mass Spectrometry Workshop.*** (NIJ/FSI Funded). Taught two workshops to a total of 40 practicing forensic professionals.

## SERVICE AND POSITIONS OF RESPONSIBILITY

### *Professional*

- 2019 NIH Review Panel. ZDA1 GXM-A 20 R, Rapid assessment of drug abuse: smart city tools.
- 2018-19 Co-Chair, Ion trap interest group and workshop coordinator, ASMS Conference on Mass Spectrometry and Allied Topics (>100 attendees).
- 2018-22 Member (adjunct from 20-22) of the ASMS History Committee.
- 2018-present Holder, DEA license and state pharmacy license for forensic chemistry drug safe.
- 2018 Program Chair for Mass Spectrometry Section, Spring SciX, Glasgow, Scotland.
- 2017-19 Co-Chair, ASMS Ion trap interest group and workshop coordinator, ASMS Conference on Mass Spectrometry and Allied Topics.
- 2017-2022 Member of the abstract review committee and the Young Forensic Scientist Award Committee for the Criminalistics section of the American Academy of Forensic Sciences (AAFS)
- 2017-19 Member of the Governing Board of the Society for Applied Spectroscopy (SAS).
- 2017-20 Secretary and Executive Committee Member of the FACSS Governing Board.

- 2016-21 International Advisory Board member of *Analytical and Bioanalytical Chemistry*, Springer Publishers.
- 2015-19 Program Co-Chair, Mass Spectrometry Section, SciX Conference. Responsibility includes the organization of 4-8 oral sessions each year and the selection of poster abstracts.
- 2016-present Founding Co-Editor-in-Chief of *Forensic Chemistry*; a hybrid traditional/open access journal published by Elsevier (with Prof. José R. Almirall, FIU). 2020 CiteScore = 3.7.
- 2015 Chair, External Evaluation Committee, IUPUI Forensic Chemistry Program.
- 2015 Program Chair of SciX Conference (~1200 attendees [2<sup>nd</sup> highest attendance in 40 years], ~9 award sessions and plenary lectures, ~450 speakers, ~200 posters), Providence, RI.
- 2015 Co-organizer and Program Co-Chair (with José Almirall) ASMS Sanibel Conference on Forensic and Security Applications of Mass Spectrometry (150 attendees, ~25 speakers, ~50 posters) Clearwater Beach, FL.
- 2014-17 Member, inaugural NIST OSAC Subcommittee on Seized Drugs.
- 2014-19 Chair, Cheat Lake Elementary Science Fair Committee (~80 student posters each year). No admission costs to the students, and we award more than \$3K of prizes each year, in addition to six tuition waivers to weeklong STEM summer camps at WVU's Statler College of Engineering.
- 2014 Ad Hoc Reviewer for NIJ Graduate Fellowship Award.
- 2014 Awards Chair, SciX Conference. Responsible for organizing ~9 award sessions of 5 presentations each.
- 2014-15 Chair, Security and Forensics Interest Group and workshop coordinator, ASMS Conference on Mass Spectrometry and Allied Topics (>100 attendees).
- 2014 Review Panel, Planetary Instrument Concepts for the Advancement of Solar System Observations (PICASSO), NASA.
- 2013 Member FACSS Innovation Award Committee and FACSS Poster Award Committee for SciX Conference, 2013.
- 2013 Chair, ASMS Asilomar Conference Committee (Member 2012-2014).
- 2013 Chair, Fundamentals Interest Group, ASMS Conference on Mass Spectrometry and Allied Topics.
- 2012 Ad Hoc Reviewer, NIH.
- 2011 Ad Hoc Reviewer for NOW (Netherlands Organization of Scientific Research).
- 2011 Ad Hoc Reviewer for Israeli Science Foundation.
- 2010 NSF Exhibitor at the First USA Science and Engineering Festival in Washington, DC, Oct 23-24, 2010.
- 2009 Reviewer, *Forensic Chemistry* by Suzanne Bell, 1<sup>st</sup> Ed. Pearson Prentice Hall, Upper Saddle River, NY, 2006.
- 2009 & 12 Review Panel, NSF.
- 2007 Judge, State Science Fair, Columbus, OH.

2007-11 Reviewer, Strategic Environmental Research and Development Program (SERDP) funding agency.

2005-Present Ad Hoc Reviewer, NSF.

2002-Present Ad Hoc Reviewer for the following journals: Analytical Chemistry, Chem Phys Chem, Energy and Fuels, Food Control, Forensic Science International, Forensic Science Policy and Management, International Journal of Analytical Chemistry, International Journal of Mass Spectrometry, International Journal of Molecular Science, Journal of the American Society for Mass Spectrometry, Journal of Analytical Atomic Spectroscopy, Journal of Analytical and BioAnalytical Chemistry, Journal of Food and Nutritional Science, Journal of Proteome Research, New Journal of Chemistry, Rapid Communications in Mass Spectrometry, Science and Justice, PLOS One.

2006 Accuracy Reviewer, *Forensic Chemistry* by Suzanne Bell, 1<sup>st</sup> Ed. Pearson Prentice Hall, Upper Saddle River, NY, 2006.

2006 Reviewer, *Exploring Chemical Analysis* by Daniel C. Harris, 3<sup>rd</sup> Ed. W. H. Freeman, New York, NY, 2005.

External reviewer of internal grants, special hires and T&P dossiers for:

Illinois State University, Indiana University Purdue University Indianapolis, John D. and Catherine T. MacArthur Foundation, Louisiana State University, Ohio State University, University of California, San Diego, U. South Florida, State University of New York Albany, Vanderbilt University, Virginia Commonwealth University (x2), University of Central Florida (x2), Northern Illinois University, U. of Amsterdam, Illinois State U, University of New Haven, University of Tampa, Washington State University.

### ***West Virginia University***

2020-21 Provost's faculty rewards and recognition committee

2020-2021 Chair, forensic biology search committee.

2020 ECAS Outstanding researcher committee.

2020 ECAS Woodburn fellow committee.

2013-Present Chair, FIS faculty evaluation committee (Chair since 2014. Did not serve in 2015-16 due to conflict).

2016-17 FIS search committee (for department chair).

2016-17 ECAS graduate curriculum committee.

2015-19 Benedum distinguished scholar award selection committee.

2015-16 ECAS outstanding researcher and outreach committee.

2014 Review committee for the Eberly family professorship in physics and astronomy.

2014-Present FIS graduate committee.

2013-2016 Dean's advisory committee.

### ***Ohio University Departmental***

2009-2011	Departmental representative for quarters-to-semester (Q2S) transition. Responsible for completing conversion of the graduate-level curriculum using Ohio Curriculum Enhancement and Approval Network (OCEAN) user interface.
2009-2012	Director BS forensic chemistry program.
2009-2010	Center of excellence committee.
2009-2012	Student seminars.
2009-2012	Research committee.
2009-2012	Graduate committee.
2009-2012	Instrument committee (Chair).
2008-2012	Graduate recruitment committee, World Wide Web committee.
2004-2012	Holder, DEA license and state pharmacy license for forensic chemistry drug safe.
2004-2012	Curriculum committee, instrument committee.
2006-2008	World Wide Web committee.
2004-2007	Forensic chemistry faculty search committee, Forensic Science Education and Program Accreditation Commission (FEPAC) accreditation committee.
2004-2005	Graduate recruitment committee, space committee.

### ***Ohio University College/University***

2011-2012	University Council for Research, Scholarship, and Creative Activity.
2011-2012	Chair, Environmental Studies Advisory Board.
2010	Young Ohio Scholars: Co-organized DNA workshop for middle-school-aged visitors, Athens, OH (Organizers: Vijay Nadella, Genomics Facility and Sara Wyatt, Dept. Plant Biology).
2010-2012	College P&T Committee.
2009	Mock Interviewer for Fulbright Applicant.
2009-2010	Member and CAS representative on Space Management Advisory Committee (SMAC).
2007-2008	Member, Learning Community on the Audience Response System (ARS). Also participated in the production of education videos for the ARS.
2005-2008	Ad Hoc Chair, University Judiciary Hearings.
2007	Member, Committee for Omnibus Publication for Resources at OHIO, Coalition for Enhancing Undergraduate Success (CEUGS).
2004-Present	Member, Advisory Board for Master of Science in Environmental Studies (MSES) Program.

### **RESEARCHERS SUPERVISED**

*Thesis/Dissertation Committees Chaired (DNG means did not graduate)*



2021-present Emily Ruiz (WVU, Ph.D. Chemistry)  
 2021-present Madeline Schuch (WVU, Ph.D. Chemistry)  
 2021-present Christopher Poulos (WVU, M.S. Forensic & Investigative Science)  
 2021-present Max Denn (WVU, M.S. Forensic & Investigative Science)  
 2021-present Isabel Galvez Valencia (WVU, M.S. Forensic & Investigative Science)  
 2020-present Erica Maney (WVU, Ph.D. Forensic Science)  
 2019-present Alexandra (Oyedoyin) Adeoye (WVU. M.S. Forensic & Investigative Science)  
 2019-present Alia Hacker (WVU. M.S. Forensic & Investigative Science)  
 2016-2021 Mario Balapuwaduge Praneeth Mendis (WVU, Ph.D. Chemistry). Now works at Viatrix, Morgantown, WV.  
 2016-2021 Halle M. Edwards (WVU, Ph.D. Chemistry). Now works at Viatrix, Morgantown, WV.  
 2016-2021 Zachary J. Sasiene (WVU, Ph.D. Chemistry). Postdoc at LANL.  
 2018-2020 Caitlyn Wensel (WVU. M.S. Forensic & Investigative Science)  
 2017-2020 J. Tyler Davidson (WVU, Ph.D. Forensic Science). Assist. Prof. at SHSU.  
 2018-2019 Thomas Hakey (WVU. Ph.D. Chemistry, DNG)  
 2015-2017 Korina Menking-Hoggatt (WVU, M.S. Forensic & Investigative Science). PhD with at WVU with Prof. Trejos before postdoc at NIST.  
 2015-2017 Ashley R. Cochran (WVU, M.S. Forensic & Investigative Science)  
 2015-2017 J. Tyler Davidson (WVU, M.S. Forensic & Investigative Science)  
 2014-2018 Taylor Krivenki (WVU, MS Chemistry, DNG).  
 2013-2019 Mayara P. V. de Matos (WVU, Ph.D. Biology) Postdoc at FDA  
 2013-2016 Bohui Lv (WVU, Chemistry, DNG)  
 2012-2017 Pengfei Li (WVU, Ph.D. Chemistry)  
 2009-2014 Feng Jin (WVU, Ph.D. Chemistry). Metabolomics center at Baylor College of Medicine.  
 2012-2014 Kateryna I. Konstantynova (WVU, Chemistry, DNG)  
 2010-2012 Ayat H. Bani-Rashaid (Ohio U, Ph.D. Chemistry and Biochemistry). Student transferred to Prof. Harrington in July 2012  
 2010-2012 Mengliang Zhang (Ohio U, Ph.D. Chemistry and Biochemistry) Student transferred to Prof. Harrington in July 2012  
 2009-2014 Robert E. Deimler (WVU, Ph.D. Chemistry)  
 2008-2013 Yan An (Ohio U, Ph.D. Chemistry and Biochemistry)  
 2007-2010 Zeland Schwartz (nee Muccio) (Ohio U, Ph.D. Chemistry and Biochemistry)  
 2007-2009 Derrell L. Hood (Ohio U, M.S. Chemistry and Biochemistry)  
 2006-2012 Shannon L. Cook (Ohio U, Ph.D. Chemistry and Biochemistry)  
 2005-2010 Carolyn M. Zimmermann (Ohio U, Ph.D. Chemistry and Biochemistry)  
 2004-2008 Ünige A. Laskay (Ohio U, Ph.D. Chemistry and Biochemistry)  
 2004-2007 Olivier L. Collin (Ohio U, Ph.D. Chemistry and Biochemistry). Oliver transferred to my group after his first two years of study

### ***Thesis/Dissertation Committees Served***

#### *Duquesne University (as External Committee Member)*

2016-18 Michelle Peters (MS Forensic Science)

#### *West Virginia University, Current*

Olanrewaju Awoyemi (Ph.D. Chemistry)  
 Swathi Murali (Ph.D. Forensic and Investigative Science)  
 Amanda DeVor (Ph.D. Chemistry)  
 Brandi Binkley (Ph.D. Chemistry)

Oriana Ovide (MS Forensic and Investigative Science)  
Alyssa Smale (Ph.D. Forensic Science)  
Jing Wang (Ph.D. Chemistry)  
Md Daud Sharif (Ph.D. Chemistry)  
Anthony DeBastiani (Ph.D. Chemistry)  
Chong Li (Ph.D. Chemistry)  
Yan Pan (Ph.D. Chemistry)  
Xiaqing Xu (Ph.D. Chemistry)

*Completed*

2021 Sandra Majuta (Ph.D. Chemistry)  
2021 Nandhini Ranganathan (Ph.D. Chemistry)  
2020 Nicole Richetelli (Ph.D. Forensic Science)  
2020 Maryssa Beasley (Ph.D. Chemistry)  
2018 Kristin Kelly (Ph.D. Chemistry)  
2017 Mahdiar Khakinejad (Ph.D. Chemistry)  
2017 Megan Maurer (Ph.D. Chemistry)  
2017 Brittany Yeager (Ph.D. Chemistry)  
2016 Yilin Zhang (Ph.D. Chemistry)  
2015 Lee Greenawald (Ph.D. Chemistry)  
2013 Ronald Balaba (Ph.D. Chemistry)  
2013 Stephanie Martindale (Ph.D. Chemistry)  
2013 Megan R. DeJesus (Ph.D. Chemistry)  
2013 Holly A. McCall (Ph.D. Chemistry)  
2013 Amanda Cadau (MS Forensic & Investigative Science)

*Ohio University*

*Completed*

2014 Ayat Bani-Rashaid (Ph.D. Chemistry and Biochemistry)  
2014 Mengliang Zhang (Ph.D. Chemistry and Biochemistry)  
2013 Ying Zhong (Ph.D. Electrical Engineering and Computer Science)  
2012 Zhixin Miao (Ph.D. Chemistry and Biochemistry)  
2012 Yun Zhang (Ph.D. Chemistry and Biochemistry)  
2012 Zhanfeng Xu (Ph.D. Chemistry and Biochemistry)  
2012 Thanuja Malikarachchi (MS Civil Engineering)  
2012 Xiaobo Sun (Ph.D. Chemistry and Biochemistry)  
2011 K. Suzanne George (Ph.D. Chemistry and Biochemistry)  
2011 Weiyang Lu (Ph.D. Chemistry and Biochemistry)  
2011 Oksana Pavlyuk (Ph.D. Chemistry and Biochemistry)  
2011 Jourdan Seimer (MS Environmental Studies)  
2010 Adam Jacoby (Ph.D. Chemistry and Biochemistry)  
2010 Elroy Fernandes (Ph.D. Chemistry and Biochemistry)  
2010 Lauren Armeni (MS Environmental Studies)  
2010 George Harrison (Ph.D. Chemistry and Biochemistry)  
2010 Lei Wang (Ph.D. Chemistry and Biochemistry)  
2010 Nicholas Smeenk (M.S. Environmental Studies)  
2010 Zack Lustgarten (M.S. Environmental Studies)

2009 Gheorge Bota (Ph.D. Chemical Engineering)  
 2009 Yeliz Celik (Ph.D. Physics and Astronomy)  
 2009 Krystian Jasinski (Ph.D. Chemistry and Biochemistry)  
 2009 Yao Lu (Ph.D. Chemistry and Biochemistry)  
 2008 Ping Chen (Ph.D. Chemistry and Biochemistry)  
 2008 Mahmoud Emera (Ph.D. Chemistry and Biochemistry)  
 2008 Xiaoyan Huang (Ph.D. Chemistry and Biochemistry)  
 2008 Csaba Laszlo (Ph.D. Chemistry and Biochemistry)  
 2007 Burzin Khajotia (M.S. Chemical Engineering)  
 2006 Qingzhou Cui (Ph.D. Chemistry and Biochemistry)  
 2004 Gheorge M. Bota (M.S. Chemistry and Biochemistry)  
 2004 Sandra Bishop (Ph.D. Chemistry and Biochemistry)  
 2004 Libo Cao (Ph.D. Chemistry and Biochemistry)

### ***Undergraduate Researchers Directed***

2022 Jessica Orris  
 2020-2021 Jared George  
 2020-2022 Hannah McMillen  
 2019-2022 Ahna Kotula  
 2019-2021 Evan Ferweda  
 2018-2020 Samantha Mehnert. Currently pursuing a PhD in Chemistry at Purdue.  
 2018 Emily Ruiz (currently pursuing a PhD in chemistry at WVU)  
 2018 Brandon Lowe.  
 2017-2019 Sarah Chaffman  
 2017-2019 Isaac Willis (currently pursuing a Ph.D. in Chemistry at Michigan State U.)  
 2017 Emily Gleco  
 2017 Sierra Stinson  
 2016-2017 Gabriel Walkup (Research Technician at Evonic)  
 2015-2016 Olivia Dodd  
 2015-2016 Tyler Williams. Received a Ph.D. in Chemistry at Clemson U.  
 2014-2015 Ashley Cochran (currently at RTI, also obtained an M.S. in FIS with me at WVU)  
 2014-2015 Heather Birks (obtained M.S. at VCU)  
 2014-2014 Clayton Johnson  
 2011-2012 Rosemary Kanters  
 2010-2012 Ashley March  
 2009-2011 Daniel Cobau (Earned D.O. at Ohio University College of Osteopathic Medicine)  
 2008-2010 Mark Barkett (was at Dover Chemical, Ohio)  
 2008-2010 Samantha Blake (completed M.S. at North Carolina State U.)  
 2008-2010 Christine Fisher (currently a postdoctoral researcher at the FDA in Washington, DC.)  
 2007-2009 Megan Wenning, (SEA, PURF 2007, joint with Lojek, currently a DNA analyst at BCII-London, OH)  
 2007-2009 Lisa Lojek, (PURF 2007, joint with Wenning)  
 2006-2008 Chris Kanalas, (PURF 2006)  
 2006-2006 Bradley Nichol  
 2006-2006 Aaron Jarrel (currently working for Metler Toledo in Germany)  
 2005-2006 Jen Hyland, (1<sup>st</sup> Place Student Research and Creative Activity Fair 2006)

2004-2006 Kate DeRhodes, (PURF 2004, 1<sup>st</sup> Place Student Research and Creative Activity Fair 2005)

***Visiting Scholars Directed and Collaborators Supervised in the Laboratory***

2020 Kiersten Drake (visiting MS student from U. Strathclyde, Scotland, UK)  
2019 Yifan Huang and Wenjing Peng (from Professor Yehia Mechref's group), Texas Tech University, Lubbock, TX  
2018 Lauren Pepi (Graduate student) and Dr. Jonathan Amster (Professor), University of Georgia, Athens, GA  
2018 Dr. David Ropartz, INRA, France  
2018 Dr. Helene Rogniaux, INRA, France  
2018 Zilin Fan, Visiting Scholar, Tianjin Fire Research Institute of MPS, China  
2016 Dr. David Ropartz, Visiting Scholar, INRA, France  
2015 Iris Kreft, Student Intern, Avans University, Netherlands  
2013-2015 William D. Hoffmann (Postdoctoral Scholar)  
2012 Madlen Sander, Visiting Scholar, U. Leipzig  
2009 Claudia Wöckel, Visiting Scholar, U. Leipzig  
2006 Matthias Beier, Visiting Scholar, U. Leipzig  
2005 Claudia Niegel, Visiting Scholar, U. Leipzig

**CONFERENCE PRESENTATIONS (PRESENTER LISTED FIRST)**

*\*Denotes Invited Lecture*

***Work conducted at West Virginia University***

- 191) \*G. P. Jackson, S. Mehnert, J. T. Davidson, "New Algorithm for Mass Spectral Identifications," at Pacifichem, Honolulu, HI, (Virtual due to COVID), Dec 2021. (Oral)
- 190) P. M. Mendis, G. P. Jackson, "Differentiation of Structural- and Linkage Isomers of Human Milk Oligosaccharides using UHPLC with Charge Transfer Dissociation Mass Spectrometry (CTD-MS)" at the 69<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Philadelphia, PA, Oct 2021. (Poster)
- 189) Z. J. Sasiene, P. M. Mendis, D. Ropartz, H. Rogniaux, G. P. Jackson, "Influence of Metal Adduction on the Structural Characterization of Oligosaccharides using Charge Transfer Dissociation (CTD) Mass Spectrometry" at the 69<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Philadelphia, PA, Oct 2021. (Poster)
- 188) \*G. P. Jackson, S. Mehnert, J. T. Davidson, "Expert Algorithm for Substance Identification (EASI): A New Paradigm for Mass Spectral Identifications," presented in the Innovation Award Session at SciX Conference, Providence, RI, Sept 2021. (Oral)
- 187) \*G. P. Jackson, A. Adeoye, J. T. Davidson, E. Ruiz, B. Lowe, "A New Mass Spectral Identification Algorithm to Discriminate Between Structurally Similar Fentanyl Analogs," at SciX Conference, Providence, RI, Sept 2021. (Oral)
- 186) \*G. P. Jackson, Z. J. Sasiene, P. M. Mendis, D. Ropartz, H. Rogniaux, G. P. Jackson, "keV Ion Activation in Mass Spectrometry," at the European COST Action Molecular Dynamics in the Gas Phase (MD-GAS) meeting, (virtual due to COVID), Mar 2021. (Oral)
- 185) G. P. Jackson, J. T. Davidson, Z. J. Sasiene, B. Lowe, Y. Abiedalla, C. R. Clark, E. L. Piacentino, V. Ryzhov, "Mass Spectrometric Characterization of Emerging Synthetic Drugs and an Algorithm for

- Confident Identifications,” at the 72<sup>nd</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, (virtual due to COVID), Mar 2021. (Oral)
- 184) \*J. T. Davidson, Z. J. Sasiene, G. P. Jackson, “Comparison of In-Source Collision-Induced Dissociation and Beam-Type Collision-Induced Dissociation for Emerging Synthetic Drugs,” at the 73<sup>rd</sup> Meeting of the American Academy of Forensic Sciences (virtual due to COVID), Feb 2021. (Oral)
- 183) \*G. P. Jackson, “Hair Reveals What People Conceal: Biometric Traits from the Chemical Analysis of Human Hair,” at the Ohio Mass Spectrometry and Metabolomics Meeting (virtual due to COVID), Oct 2020 (Oral).
- 182) J. T. Davidson, Z. J. Sasiene, Y. F. Abiedalla, C. R. Clark, G. P. Jackson, “Fragmentation Pathways of  $\alpha$ -pyrrolidinophenone Derivative Synthetic Cathinones,” at the 68<sup>th</sup> ASMS “Reboot” Conference on Mass Spectrometry and Allied Topics (virtual due to COVID), June 2020. (Poster)
- 181) H. M. Edwards, Z. J. Sasiene, P. M. Mendis, H-T Wu, R. R. Julian, G. P. Jackson, “Differentiating Isomeric Amino Acid Residues in Peptides with Charge Transfer Dissociation Mass Spectrometry (CTD-MS),” at the 68<sup>th</sup> ASMS “Reboot” Conference on Mass Spectrometry and Allied Topics (virtual due to COVID), June 2020. (Poster)
- 180) P. M. Mendis, Z. J. Sasiene, D. Ropartz, H. Rogniaux, G. P. Jackson, “Structural Characterization of a Mixture of Complex Sulfated Oligosaccharides Using Ultra-High Performance Liquid Chromatography with Charge Transfer Dissociation Mass Spectrometry” at the 68<sup>th</sup> ASMS “Reboot” Conference on Mass Spectrometry and Allied Topics (virtual due to COVID), June 2020. (Poster)
- 179) H. G. Buck-Wiese, M. Fanuel, M. Liebeke, J-H. Hehemann, D. Ropartz, H. Rogniaux, G. P. Jackson, “Glycosidic Bond Position of Linear Oligosaccharides using the Cross-Ring Fragments Produced by Helium-Charge Transfer Dissociation Mass Spectrometry,” at the 68<sup>th</sup> ASMS “Reboot” Conference on Mass Spectrometry and Allied Topics (virtual due to COVID), June 2020. (Poster)
- 178) L. E. Pepi, Z. J. Sasiene, F. E. Leach III, P. M. Mendis, D. R. Klein, P. Chopra, F. Zhang, R. J. Linhardt, G-J Boons, J. S. Brodbelt, G. P. Jackson, I. J. Amster “Advances in Tandem Mass Spectrometry Approaches for the Structural Characterization of Sulfated Glycosaminoglycans,” at the 68<sup>th</sup> ASMS “Reboot” Conference on Mass Spectrometry and Allied Topics (virtual due to COVID), June 2020. (Oral)
- 177) G. P. Jackson, J. T. Davidson, Z. J. Sasiene, B. Lowe, Y. Abiedalla, C. R. Clark, E. L. Piacentino, V. Ryzhov, “Towards an Improved Understanding of the Mass Spectrometric Identification of Cathinones and Fentalogs,” at the 71<sup>st</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Chicago, IL, Mar 2020. (Oral)
- 176) C. Wensel, I. C. Willis, Z. Fan, J. T. Davidson, G. P. Jackson, “Thermodynamic and Kinetic Predictions of the Evaporation Patterns of Ignitable Liquids at Elevated Temperatures,” at 71<sup>st</sup> the Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Chicago, IL, Mar 2020. (Oral)
- 175) S. A. Mehnert, B. D. Lowe, E. Ruiz, J. T. Davidson, G. P. Jackson, “A Regression-Based Algorithm to Maximize the Confidence in Mass Spectral Identifications,” at the 72<sup>nd</sup> Meeting of the American Academy of Forensic Sciences, Anaheim, CA, Feb 2020. (Oral)
- 174) C. Wensel, I. C. Willis, Z. Fan, J. T. Davidson, G. P. Jackson, “The Effects of Elevated Temperatures and Substrates on the Weathering of Ignitable Liquids” at the 72<sup>nd</sup> Meeting of the American Academy of Forensic Sciences, Anaheim, CA, Feb 2020. (Oral)

- 173) \*R. W. Smith, G. P. Jackson, "Are Forensic Science Programs Meeting the Current and Future Needs of Prospective Employers?" at the 72<sup>nd</sup> Meeting of the American Academy of Forensic Sciences, Anaheim, CA, Feb 2020. (Oral)
- 172) J. T. Davidson, Z. J. Sasiene, Y. F. Abiedalla, C. R. Clark, G. P. Jackson, "On the Fragmentation Behavior of Fentanyl and Its Analogs in Electrospray Ionization-Tandem Mass Spectrometry (ESI-MS/MS)," at the 72<sup>nd</sup> Meeting of the American Academy of Forensic Sciences, Anaheim, CA, Feb 2020. (Oral)
- 171) \*S. A. Mehnert, B. D. Lowe, E. Ruiz, J. T. Davidson, G. P. Jackson, "Development of a Flexible Algorithm for Substance Identification Using Mass Spectrometry," at Eastern Analytical Symposium, Plainsboro NJ, Nov 2019. (Poster)
- 170) \*G. P. Jackson, S. A. Mehnert, B. D. Lowe, E. Ruiz, J. T. Davidson, "A Regression-Based Algorithm to Maximize the Confidence in Mass Spectral Identifications," at Eastern Analytical Symposium, Plainsboro NJ, Nov 2019. (Oral)
- 169) \*G. P. Jackson, S. A. Mehnert, J. T. Davidson, B. D. Lowe, "A Regression-Based Algorithm to Maximize the Confidence in Mass Spectral Identifications," at SciX Conference, Palm Springs, CA, Oct 2019. (Oral)
- 168) \*G. P. Jackson, J. T. Davidson, Z. J. Sasiene, Y. Abiedalla, C. R. Clark, "On the Mass Spectral Interpretation of Cathinones and Fentanyl Analogs," at SciX Conference, Palm Springs, CA, Oct 2019. (Oral)
- 167) \*D. Ropartz, M. Fanuel, G. P. Jackson, H. Rogniaux "The potential of charge transfer dissociation in structural biochemistry," at SMAP Congress, Strasbourg, France, Sept 2019. (Poster)
- 166) \*G. P. Jackson, M. P. V. Matos "Hair Reveals What People Conceal: Biometric Traits from the Chemical Analysis of Human Hair," at SMAP Congress, Strasbourg, France, Sept 2019. (Oral)
- 165) Z. J. Sasiene, P. M. Mendis, G. P. Jackson, "Comparison of Reagent Gases for Charge Transfer Dissociation (CTD) Mass Spectrometry of Peptides and Oligosaccharides," at the 67<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Atlanta, GA, June 2019. (Oral)
- 164) L. Pepi, Z. J. Sasiene, P. M. Mendis, G. P. Jackson, I. J. Amster "Comparison of Charge Transfer Dissociation (CTD) and Electron Detachment Dissociation (EDD) for the Structural Analysis of Glycosaminoglycans," at the 67<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Atlanta, GA, June 2019. (Oral)
- 163) H. M. Edwards, Z. J. Sasiene, P. M. Mendis, G. P. Jackson, "Charge Transfer Dissociation of Vitamin B<sub>12</sub>," at the 67<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Atlanta, GA, June 2019. (Poster)
- 162) P. M. Mendis, Z. J. Sasiene, D. Ropartz, H. Rogniaux, G. P. Jackson, "Structural Characterization of Oligosaccharide Mixtures Using Ultra-High Performance Liquid Chromatography (UHPLC) with Charge Transfer Dissociation Mass Spectrometry (CTD-MS)," at the 67<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Atlanta, GA, June 2019. (Poster)
- 161) J. T. Davidson, Z. J. Sasiene, Y. Abiedalla, C. R. Clark, G. P. Jackson, "Fragmentation Pathways of  $\alpha$ -pyrrolidinophenone Derivative Synthetic Cathinones," at the 67<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Atlanta, GA, June 2019. (Poster)
- 160) \*G. P. Jackson, J. T. Davidson, Z. J. Sasiene, Y. Abiedalla, C. R. Clark "On the Tandem Mass Spectrometry of Cathinones and Mass Spectrometric Identification of Drugs" at the Spring National Meeting of the American Chemical Society, Orlando, FL, Apr 2019. (Oral)



- 159) \*G. P. Jackson, S. A. Mehnert, B. D. Lowe, J. T. Davidson, "The Development of a Flexible Algorithm for Substance Identification Using Mass Spectrometry," at the 70<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Philadelphia, PA, Mar 2019. (NIJ Poster session).
- 158) I. C. Willis, Z. Fan, J. T. Davidson, G. P. Jackson, "The Influence of Elevated Temperatures on the Weathering of Ignitable Liquids" at the 70<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Philadelphia, PA, Mar 2019. (NIJ Poster session)
- 157) \*G. P. Jackson, M. P. V. Matos, R. M. Mohr, "Stable Isotopes to Determine Class Characteristics of Human Hair Donors and the Carrion Source of Blow Flies" at the 70<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Philadelphia, PA, Mar 2019. (Oral)
- 156) S. A. Mehnert, B. D. Lowe, J. T. Davidson, G. P. Jackson, "The Development of a Flexible Algorithm for Substance Identification Using Mass Spectrometry," at the 71<sup>st</sup> Meeting of the American Academy of Forensic Sciences, Baltimore, MD, Feb 2019. (Oral)
- 155) J. T. Davidson, Z. J. Sasiene, Y. F. Abiedalla, R. Clark, G. P. Jackson, "The Identification of a Novel Fragmentation Pathway of Synthetic Cathinones," at the 71<sup>st</sup> Meeting of the American Academy of Forensic Sciences, Baltimore, MD, Feb 2019. (Oral)
- 154) S. E. Chaffman, T. Williams; J. T. Miller, J. T. Davidson, G. P. Jackson, "Identification of an Ultraviolet (UV) -Induced Promethazine Dimer," at the 71<sup>st</sup> Meeting of the American Academy of Forensic Sciences, Baltimore, MD, Feb 2019. (Poster)
- 153) \*G. P. Jackson, Z. J. Sasiene, P. M. Mendis, D. Ropartz, P. Li, H. Rogniaux, "Charge Transfer Dissociation Mass Spectrometry (CTD-MS) of Glycans," at the 31<sup>st</sup> Lake Louise Tandem Mass Spectrometry Workshop, Lake Louise, Canada, Nov 2018. (Oral)
- 152) G. P. Jackson, J. T. Davidson, Z. J. Sasiene, Y. Abiedalla, C. R. Clark, "On the Mass Spectrometric Identification of Cathinones," at the Australia New Zealand Forensic Science Society's (ANZFSS's) 24th International Symposium on the Forensic Sciences, Perth, Australia, Sept 2018. (Oral)
- 151) G. P. Jackson, M. P. V. Matos, R. M. Mohr, "Application of CSIA to Source Attribution of Human Hair and Blow Flies," at the Australia New Zealand Forensic Science Society's (ANZFSS's) 24th International Symposium on the Forensic Sciences, Perth, Australia, Sept 2018. (Oral)
- 151) \*G. P. Jackson, J. T. Davidson, "MS Comparator: Ultra-Precise Spectral Comparisons," at the Forensic and Homeland Security Workshop of the 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Diego, CA, June 2018. (Oral)
- 150) M. P. V. Matos, R. M. Mohr, G. P. Jackson, "Identification of Carrion Sources from the Stable Isotope Analysis of Larvae, Pupae, and Adult Calliphora Vicina Blow Flies," at the 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Diego, CA, June 2018. (Oral)
- 149) P. M. Mendis, Z. J. Sasiene, D. Ropartz, H. Rogniaux, G. P. Jackson, "Fundamentals of Charge Transfer Dissociation (CTD) of Oligosaccharides," at the 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Diego, CA, June 2018. (Poster)
- 148) D. Ropartz, P. Li, G. P. Jackson, H. Rogniaux, "Radical-Initiated Fragmentation of Complex Polysulfated Anions by Negative Polarity Helium Charge Transfer Dissociation Tandem MS," at the 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Diego, CA, June 2018. (Poster)
- 147) H. M. Edwards, M. P. V. Matos, G. P. Jackson, "Biometrics from Isotope Ratio Analysis of Human Fingernails," at the 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Diego, CA, June 2018. (Poster)

- 146) J. T. Davidson, Z. J. Sasiene, Y. Abiedalla, C. R. Clark, G. P. Jackson, "Identification of a Novel Fragmentation Pathway of Synthetic Cathinones," at the 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Diego, CA, June 2018. (Poster)
- 145) H. Santos, T. J. Davidson, J. Cox, G. P. Jackson, W. Romao, L. E. Arroyo, "Potential Applications to New Psychoactive Substances Identification in Oral Fluid and Damiana leaf (*Turnera diffusa*) by DART-MS/MS and LC-MS/MS," at the 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Diego, CA, June 2018. (Poster)
- 144) Z. J. Sasiene, P. M. Mendis, G. P. Jackson, "Structural Characterization of Sulfated Oligosaccharides by Charge Transfer Dissociation (CTD) Mass Spectrometry," at the 66<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Diego, CA, June 2018. (Poster)
- 143) \*G. P. Jackson, Z. J. Sasiene, P. M. Mendis, D. Ropartz, P. Li, H. Rogniaux, "Comprehensive Characterization of Glycans, Peptides and Lipids using a New Approach to Tandem Mass Spectrometry" at the Spring SciX Meeting, Glasgow, Scotland, April 2018. (Oral)
- 142) G. P. Jackson, M. P. V. Matos, R. M. Mohr, "Using Stable Isotopes to Determine Class Characteristics of Human Hair Donors and the Carrion Source of Blow Flies," at the 69<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Orlando, FL, March 2018. (Poster)
- 141) J. T. Davidson, G. P. Jackson, "Quantifying the Uncertainty of Measurement for Gas Chromatography/Mass Spectrometry (GC/MS) Acceptance Criteria," at the 70<sup>th</sup> Meeting of the American Academy of Forensic Sciences Seattle, WA, Feb 2018. (Poster)
- 140) \*G. P. Jackson, K. Menking-Hoggatt, T. Krivenki, "On-Site GC/MS Analysis of Drugs: Reasoning, Reliability and Return on Investment," at SciX Conference, Reno, NV, Oct 2017. (Oral)
- 139) Z. J. Sasiene, P. M. Mendis, G. P. Jackson, "Charge Transfer Dissociation (CTD) Mass Spectrometry of Sulfated Oligosaccharides," at SciX Conference, Reno, NV, Oct 2017. (Poster)
- 138) M. K. dos Santos, E. Gleco, G. P. Jackson, R. P. Limberger, J. Cox, L. E. Arroyo, "Screening and Confirmation of Stimulants Drugs in Seized Dietary Supplements by DART-MS and Liquid Chromatography Triple Quadrupole Mass Spectrometry (LC-QQQ-MS)," at the Midwestern Association of Forensic Sciences Meeting, Cincinnati, OH, Sept 2017. (Poster)
- 137) S. Khodjanizyazova, M. Nazari, M. P. V. Matos, G. P. Jackson, D. C. Muddiman "Quantifying Spectral Accuracy of the Orbitrap Mass Analyzer by Comparison with the Isotope Ratio Mass Spectrometry," at the 65<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN June 2017. (Poster)
- 136) G. P. Jackson, P. Li, D. Ropartz, H. Rogniaux "Charge Transfer Dissociation (CTD): High Energy Radical Fragmentation of Glycans, Proteins and Peptides," at the 65<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN June 2017. (Oral)
- 135) \*G. P. Jackson, K. Menking-Hoggatt, T. Krivenki "Portable Forensic Mass Spectrometry," at the 68<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Chicago, IL, Apr 2017. (Oral)
- 134) \*G. P. Jackson, R. Mohr, M. P. V. Matos, M. E. Engel "Forensic Attribution using Stable Isotopes: Hairs to Humans and Insects to Carrion," at the 253rd American Chemical Society National Meeting, San Francisco, CA, Mar 2017. (Oral)
- 133) A. Cochran, G. P. Jackson, "The Analysis of the Fatty Acid Content of Fingerprint Residues Using Gas Chromatography/Mass Spectrometry (GC/MS)," at the 69<sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences, New Orleans, LA, Feb 2017. (Poster)

- 132) S.M. Stinson, G. M. Walkup, G. P. Jackson, “Do Hygiene Products Cause False Positives in Arson Investigations?” at the 69<sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences, New Orleans, LA, Feb 2017. (Poster)
- 131) J. T. Davidson, G. P. Jackson, “The Analysis of 2,5-Dimethoxy-N-(N-methoxybenzyl) phenethylamine (NBOMe) Isomers using Traditional and Fast Gas Chromatography/Mass Spectrometry (GC/MS),” at the 69<sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences, New Orleans, LA, Feb 2017. (Poster)
- 130) M. P. V. Matos, M. Engel, G. P. Jackson, “Compound-Specific Isotope Analyses of Hair Samples: Discrimination that goes Beyond Dietary Factors,” at the joint meeting of the Australia New Zealand Forensic Science Symposium (ANZFSS) and the Forensic Isotope Ratio Mass Spectrometry Network (FIRMS), Auckland, NZ, Oct 2016. (Poster)
- 129) G. P. Jackson, M. P. V. Matos, R. Mohr “Identification of Carrion from Blowflies,” at the joint meeting of the Australia New Zealand Forensic Science Symposium (ANZFSS) and the Forensic Isotope Ratio Mass Spectrometry Network (FIRMS), Auckland, NZ, Oct 2016. (Oral)
- 128) P. Li, G. P. Jackson, “Charge Transfer Dissociation (CTD) of Phospholipids: Influence of Head Group and Adducting Ions on Fragmentation,” at the ASMS Asilomar Conference on Mass Spectrometry and Ion Mobility, Asilomar, CA, Oct 2016. (Poster)
- 127) \*G. P. Jackson, I. Kreft, P. Li, D. Ropartz, H. Rogniaux “Development of Charge Transfer Dissociation (CTD) for Biological Ions,” at the ASMS Asilomar Conference on Mass Spectrometry and Ion Mobility, CA, Oct 2016. (Oral)
- 126) M. P. V. Matos, M. E. Engel, G. P. Jackson, “Origin Determination of Eastern Oyster (*Crassostrea virginica*) by Combination of Heavy Metal Concentrations, Whole-Body Bulk and Compound Specific Isotope Analyses,” 64<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Antonio, TX, June 2016. (Poster)
- 125) G. C. Donohoe, P. Li, G. P. Jackson, S. J. Valentine, “Exploring the Combination of Helium Charge Transfer Dissociation (He-CTD) and Hydrogen Deuterium Exchange Tandem Mass Spectrometry (HDX-MS/MS<sup>n</sup>),” 64<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Antonio, TX, June 2016. (Poster)
- 124) P. Li, G. P. Jackson, “Charge Transfer Dissociation (CTD) of Phosphocholines: Gas-Phase Ion/Ion Reactions between Helium Cations and Phospholipid Cations,” 64<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Antonio, TX, June 2016. (Poster)
- 123) B. Lv, W. D. Hoffmann, G. P. Jackson, “CBD/THC Quantitative Analysis with Direct Analysis in Real Time-Mass Spectrometry (DART-MS),” 64<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Antonio, TX, June, 2016. (Poster)
- 122) \*G. P. Jackson and F. M. Fernandez, “Plenary Workshop: Forensic Mass Spectrometry,” at the 64<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Antonio, TX, June, 2016. (Oral)
- 121) G. P. Jackson, I. Kreft, P. Li, D. Ropartz, H. Rogniaux “Charge Transfer Dissociation (CTD): High Energy Radical Fragmentation of Glycans, Peptides and Lipids,” at the 64<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Antonio, TX, June, 2016. (Oral)
- 120) G. P. Jackson, “The Future of Forensic Instrumental Methods of Analysis,” at the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences, Las Vegas, NV, Feb, 2016. (Oral)

- 119) A. Cochran, H. Birks, T. Williams, G. P. Jackson, "The Surprising Effect of Temperature on the Weathering of Gasoline," at the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences, Las Vegas, NV, Feb, 2016. (Oral)
- 118) T. Williams, J. T. Miller, G. P. Jackson, "The Prevalence of Promethazine Dimerization in Forensic Samples of Purple Drank," at the 68<sup>th</sup> Annual Meeting of the American Academy of Forensic Sciences, Las Vegas, NV, Feb, 2016. (Oral)
- 117) A. Cochran, H. Birks, T. Williams, G. P. Jackson, "The Surprising Effect of Temperature on the Weathering of Gasoline," SciX Conference, Providence, RI, Oct, 2015. (Poster)
- 116) P. Li, W. D. Hoffmann, G. P. Jackson, "Multistage Mass Spectrometry of Phospholipids Using Collision-Induced Dissociation (CID) and Metastable Atom-Activated Dissociation (MAD)," SciX Conference, Providence, RI, Oct, 2015. (Poster)
- 115) \*W. D. Hoffmann, G. P. Jackson, "Distinguishing Isobaric Drugs using Online Derivatization and Direct Analysis in Real Time (DART)," SciX Conference, Providence, RI, Oct, 2015. (Oral)
- 114) \*W. D. Hoffmann, G. P. Jackson, "Isobaric Drug Analysis using Direct Analysis in Real Time (DART) and Hydrogen/Deuterium Exchange," ACS National Meeting, Boston, MA, Aug, 2015. (Oral)
- 113) W. D. Hoffmann, G. P. Jackson, "Isobaric Drug Analyses using Hydrogen/Deuterium Exchange and CID," 63<sup>rd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, St. Louis, MO, June, 2015. (Oral)
- 112) G. P. Jackson, W. D. Hoffmann "Charge Transfer Dissociation (CTD) Mass Spectrometry," 63<sup>rd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, St. Louis, MO, June, 2015. (Oral)
- 111) P. Li, W. D. Hoffmann, G. P. Jackson "Gas-Phase Fragmentation Mechanisms of Phosphocholines using Metastable Atom-Activated Dissociation (MAD) with Selected Ion Ejection," 63<sup>rd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, St. Louis, MO, June, 2015. (Poster)
- 110) \*G. P. Jackson, K. I. Konstantynova, M. P. V. de Matos, R. Mohr "Forensic Source Attribution using Stable Isotopes: Hairs to Humans and Insects to Carrion," 66<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, New Orleans, LA, Mar, 2015. (Oral)
- 109) G. P. Jackson, K. I. Konstantynova, M. P. V. de Matos, R. Mohr "Forensic Source Attribution using Stable Isotopes: Hairs to Humans and Insects to Carrion," 67<sup>th</sup> Meeting of the American Academy of Forensic Sciences, Orlando, FL, Feb, 2015. (Oral)
- 108) \*G. P. Jackson "Linking Insects to Humans and Hair to Human Phenotypes using Stable Isotopes," ASMS Sanibel Conference on Security and Forensic Applications of Mass Spectrometry, Clearwater Beach, FL, Jan, 2015. (Oral)
- 107) \*G. P. Jackson, R. Mohr, K. I. Konstantynova "Forensic attribution using stable isotopes: hairs to humans and insects to carrion," SciX Conference, Reno, NV, Oct, 2014. (Oral)
- 106) W. D. Hoffmann, F. Jin, G. P. Jackson, "A Loeb-Eiber Mass Filter for Miniature Mass Spectrometry," 62<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Baltimore. MD, Jun, 2014. (Oral)
- 105) K.I. Konstantynova, R. Mohr, G. P. Jackson, "Identification of flesh (carrion) source from the stable isotope analysis of blow fly larvae, pupae and adult flies," 66<sup>th</sup> Meeting of the American Academy of Forensic Sciences, Seattle, WA, Feb, 2014. (Poster)

- 104) \*G. P. Jackson, "Metastable Atom-Activated Dissociation: Status and Outlook," ASMS Sanibel Conference on Ion Activation: Fundamentals, Applications and New Frontiers, Clearwater Beach, FL, Jan, 2014. (Oral)
- 103) G. P. Jackson, Y. An, K. Konstantynova "Biometrics from the Stable Isotope Analysis of Amino Acids in Human Hair," FACSS Innovation Award Session, SciX Conference, Milwaukee, WI, Oct, 2013. (Oral)
- 102) \*G. P. Jackson, F. Jin, W. D. Hoffman, G. F. Verbeck "Development of a Loeb-Eiber Mass Filter for Portable Mass Spectrometry," 9th Harsh Environment Mass Spectrometry Workshop (HEMS), St. Pete Beach, FL, Sept, 2013. (Oral)
- 101) G. P. Jackson, Y. An, K. Konstantynova, "Biometrics from the  $\delta^{13}\text{C}$  Values of Amino Acids in Human Hair," 5<sup>th</sup> Forensic Isotope Ratio Mass Spectrometry (FIRMS) Network Conference, Montréal, Canada, Sept, 2013. (Oral)
- 100) M. Zhang, P. B. Harrington, N. Kruse, J. Bowman, S. Lammert, E. Lee, G. P. Jackson, "Development of an Expedited Field Method for PCBs in Sediments and Soils using Portable GC/MS," 61<sup>st</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Minneapolis, MN, June, 2013. (Poster)
- 99) W. D. Hoffmann, R. E. Deimler, M. Sander, G P. Jackson, "Metastable Atom-Activated Dissociation of Phosphocoline Lipids in Protonated, Sodiated, and Potassiated Forms," 61<sup>st</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Minneapolis, MN, June, 2013. (Poster)
- 98) F. Jin, W. D. Hoffmann, G. F. Verbeck, G. P. Jackson, "Development of a Portable Mass Spectrometer for Operation at 1 Torr ," 61<sup>st</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Minneapolis, MN, June 2013. (Poster)
- 97) B. Deimler, M. Sander, W. D. Hoffmann, G. P. Jackson, "Analysis of Phosphocholines using Metastable Atom Activated Dissociation Mass Spectrometry (MAD-MS) and Collision Induced Dissociation (CID)," 61<sup>st</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Minneapolis, MN, June, 2013. (Poster)
- 96) Y. An, Ayat Bani Rashaid, G. P. Jackson, "Bulk Versus LC-IRMS Amino-Acid-Specific Isotopic Analysis of Human Hair, " 61<sup>st</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Minneapolis, MN, June, 2013. (Poster)
- 95) \*G. P. Jackson, R. E. Deimler, T. Razunguzwa, B. Reschke and M. Powell "Direct Analysis of Forensic Samples by Laser Ablation Electrospray Tandem Mass Spectrometry (LAESI<sup>TM</sup>-MS/MS)," SciX 2012, 39<sup>th</sup> FACSS Conference, Kansas City, MO, Oct, 2012. (Oral)

***Work conducted at Ohio University***

- 94) Y. An, G. P. Jackson, "A Bulk versus Amino-acid-specific isotopic analysis of Human Hair" 60<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Vancouver, BC, June 2012. (Poster)
- 93) G. P. Jackson, R. E. Deimler, T. Razunguzwa, B. Reschke and M. Powell "Direct Analysis of Forensic Samples by Laser Ablation Electrospray Tandem Mass Spectrometry (LAESI-MS/MS)" 60<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Vancouver, BC, June 2012. (Poster)
- 92) \*G. P. Jackson "Development of a Portable Loeb-Eiber Mass Spectrometer" 38<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Reno, NV, Oct 2011. (Oral)
- 91) \*G. P. Jackson, B. Deimler, S. L. Cook, C. M. Zimmermann, R. Hoffman "Comparison of CID, ETD, and Metastable Atom-Activated Dissociation (MAD) of Phosphorylated Tau Peptides" Central Regional Meeting of the American Chemical Society (ACS), Indianapolis, IN, June 2011. (Oral)

- 90) F. Jin, G. F. Verbeck, G. P. Jackson "Development of a Portable Mass Spectrometer for Operation at 1 Torr" 59<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June 2011. (Poster)
- 89) Y. An, G. P. Jackson "Forensic Isotope Ratio Analysis of Human Hair" 59<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June 2011. (Poster)
- 88) B. Deimler, S. L. Cook, G. P. Jackson, "Metastable Atom-Activated Dissociation Mass Spectrometry (MAD-MS) of Phosphopeptide and Sulfopeptide Anions" 59<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June 2011. (Poster)
- 87) G. P. Jackson, S. L. Cook, C. M. Zimmermann, R. Hoffman "Comparison of CID, ETD, and Metastable Atom-Activated Dissociation (MAD) of Phosphorylated Tau Peptides" 59<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June 2011. (Poster)
- 86) F. Jin, G. P. Jackson, "Development of a Portable Mass Spectrometer for Operation at 1 Torr" 8<sup>th</sup> Annual Ohio Mass Spectrometry Symposium, Columbus, OH, April 2011. (Oral)
- 85) Y. An, G. P. Jackson, "Towards an Isotopic Ratio Analysis of Human Hair" 8<sup>th</sup> Annual Ohio Mass Spectrometry Symposium, Columbus, OH, April 2011. (Oral)
- 84) \*G. P. Jackson "Metastable Atom-Activated Dissociation of Glycopeptides, Nitrosylated Peptides and Non-Peptidic Analytes" 38<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Raleigh, NC, Oct 2010. (Oral)
- 83) \*G. P. Jackson "Developing Synergism between Universities and Crime Laboratories" MFRC Forensic Education Forum, Indianapolis, IN, Jun 2010. (Oral)
- 82) G. P. Jackson "Development of a Portable Mass Spectrometer for Operation at 1 Torr" 58<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Salt Lake City, UT, May 2010. (Oral)
- 81) S. L. Cook, G. P. Jackson "Metastable Atom-Activated Dissociation Mass Spectrometry (MAD-MS) of Peptidic and Non-Peptidic Species" 58<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Salt Lake City, UT, May 2010. (Poster)
- 80) S. L. Cook, G. P. Jackson "Characterization of Post-Translationally-modified Peptides using Metastable Atom-Activated Dissociation Mass Spectrometry (MAD-MS)" Seventh Ohio Valley Mass Spectrometry Symposium, Apr 2010. (Poster)
- 79) \*S. L. Cook, G. P. Jackson "Metastable-Atom Activated Dissociation (MAD) within a Quadrupole Ion Trap Mass Spectrometer (QIT-MS)" 7<sup>th</sup> Uppsala Conference on Electron Capture and Transfer Dissociation, Nara, Japan, Dec 2009. (Oral)
- 78) C. M. Zimmermann, S. L. Cook, R. Hoffmann, G. P. Jackson "Comparison of Metastable Atom-Activation Dissociation (MAD), ETD and CID of Peptides and Modified Peptides" Midwestern Universities Analytical Chemistry Conference, East Lansing, MI, Dec 2009. (Poster)
- 77) Z. Muccio, C. Wöckel, G. P. Jackson "Simultaneous Identification and  $\delta^{13}\text{C}$  Classification of Cannabinol in Unknown Marijuana Samples using GC with Concurrent Single Quadrupole and Isotope Ratio Mass Spectrometers" Midwestern Universities Analytical Chemistry Conference, East Lansing, MI, Dec 2009. (Poster)
- 76) S. L. Cook, C. M. Zimmermann, G. P. Jackson "Metastable Atom-Activated Dissociation Mass Spectrometry (MAD-MS) of Peptide Ions in a Quadrupole Ion Trap" 37<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Louisville, KY, Oct 2009. (Oral)

- 75) C. M. Zimmermann, S. L. Cook, R. Hoffmann, G. P. Jackson "Comparison of Metastable Atom-Activation Dissociation (MAD), ETD and CID of Peptides and Modified Peptides" 57th ASMS Conference on Mass Spectrometry and Allied Topics, Philadelphia, PA, June 2009. (Poster)
- 74) S. L. Cook, G. P. Jackson "Metastable-Atom Activated Dissociation (MAD) within a Quadrupole Ion Trap Mass Spectrometry (QIT-MS)" 57th ASMS Conference on Mass Spectrometry and Allied Topics, Philadelphia, PA, June 2009. (Poster)
- 73) M. Wenning, L. Lojek, V. Nadella, G. P. Jackson "Determining Forensic Viability of DNA from Chewing Gum Samples" Mid-Atlantic Association of Forensic Scientists, Baltimore, MD, May 2009. (Oral)
- 72) S. L. Cook, Ü. A. Laskay, G. P. Jackson "Quantitative Analysis of Biomolecules in the Quadrupole Ion Trap via Pulsed Q DCID." 6th Uppsala Conference on Electron Capture and Transfer Dissociation, Madison, WI, Dec 2008. (Poster)
- 71) Ü. A. Laskay, S. L. Cook, G. P. Jackson "Quantitative Analysis of Biomolecules in the Quadrupole Ion Trap via Pulsed Q DCID." Asilomar Conference on Mass Spectrometry, Asilomar, CA, Oct 2008. (Poster)
- 70) \*G. P. Jackson "Quantitative Assessment of the Growth in Forensic Science Degree Programs in the US" 18<sup>th</sup> Triennial Meeting of the International Association of Forensic Sciences, New Orleans, LA, July 2008. (Oral)
- 69) Ü. A. Laskay, S. L. Cook, G. P. Jackson "Quantitative Analysis of Biomolecules in the Quadrupole Ion Trap via Pulsed Q DCID." 56th ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June 2008. (Poster)
- 68) S. L. Cook, Ü. A. Laskay, G. P. Jackson "Pulsed Q DCID: A Faster, More Energetic Fragmentation Method for the Analysis of Peptide Mixtures." 56th ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June 2008. (Poster)
- 67) C. M. Zimmermann, Ü. A. Laskay, G. P. Jackson "Gas Chromatography Tandem Mass Spectrometry for Biomarkers of Alcohol Abuse in Human Hair" 56th ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, June 2008. (Poster)
- 66) Ü. A. Laskay, S. L. Cook, G. P. Jackson "Quantitative Analysis of Biomolecules in the Quadrupole Ion Trap via Pulsed Q DCID." Ohio University Research and Creative Activity Fair, May 2008. (Poster)
- 65) L. L. Lojek, M. Wenning, G. P. Jackson "Determining the Forensic Viability of DNA from Chewing Gum Samples." Ohio University Research and Creative Activity Fair, May 2008. (Poster)
- 64) C. M. Zimmermann, Ü. A. Laskay, G. P. Jackson "Analysis of Suspected Trace Human Remains from an Indoor concrete Surface." Ohio University Research and Creative Activity Fair, May 2008. (Poster)
- 63) \*G. P. Jackson "Case Report: Forensic Investigation of 'the Mystery Stain' at the old Athens Asylum" The Faculty Commons & Alden Library Lunch Bag Series Exploring the Research Process, Athens, OH, May 2008. (Oral)
- 62) S. L. Cook, Ü. A. Laskay, G. P. Jackson "Pulsed Q DCID: A Faster, More Energetic Fragmentation Method for the Analysis of Peptide Mixtures." 5th Annual Ohio Mass Spectrometry Symposium, Columbus, OH, Mar 2008. (Oral)
- 61) Ü. A. Laskay, S. L. Cook, G. P. Jackson, "Quantitative Analysis of Biomolecules in the Quadrupole Ion Trap via Pulsed Q DCID." 5th Annual Ohio Mass Spectrometry Symposium, Columbus, OH, Mar 2008. (Oral)

- 60) C. M. Zimmermann, G. P. Jackson, "Gas Chromatography Tandem Mass Spectrometry for Biomarkers of Alcohol Abuse in Human Hair." 5th Annual Ohio Mass Spectrometry Symposium, Columbus, OH, Mar 2008. (Oral)
- 59) X. Sun, P. de B. Harrington, C. M. Zimmermann, G. P. Jackson, C. E. Bunker " Classification of Jet Fuel Physical Properties by Fuzzy Rule-Building Expert Systems Applied to Two-Way Fast GC–Fast MS Data Objects." 59<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, New Orleans, LA, Mar 2008. (Oral)
- 58) \*G. P. Jackson "A Faster Method of Tandem Mass Spectrometry for Fast or Complex GC and LC Separations." 34th Federation of Analytical Chemistry and Spectroscopy Societies Conference, Memphis, TN, Oct 2007. (Oral)
- 57) G. P. Jackson, C. M. Zimmermann, O. L. Collin "A Faster Method of Tandem Mass Spectrometry for Forensic, Clinical and Biological Applications" 55th ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 2007. (Poster)
- 56) Ü. A. Laskay, O. L. Collin, G. P. Jackson "Dynamic CID-A Novel Method to Achieve Fast Fragmentation of Biomolecules in a QIT" 55th ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 2007. (Oral)
- 55) C. Kanalas, O. L. Collin, G. P. Jackson "Study of Pulsed Dynamic Collision-Induced Dissociation of Leucine Enkephalin" Ohio University Research and Creativity Fair, Athens, OH, May 2007. (Poster)
- 54) Ü. A. Laskay, O. L. Collin, G. P. Jackson "Improving the Fragmentation of Biomolecules in a Quadrupole Ion Trap" Ohio University Research and Creativity Fair, Athens, OH, May 2007. (Poster)
- 53) \*G. P. Jackson "CSI Effect on Forensic Science Degree Programs in the US" Oxford Roundtable on Criminal Law and Justice, Oxford University, Oxford, England, Apr 2007. (Oral)
- 52) C. M. Zimmermann, O. L. Collin, G. P. Jackson, "Fast Gas Chromatography Tandem Mass Spectrometry for the Detection of Biomarkers for Alcohol Abuse in Human Hair" 4th Annual Ohio Mass Spectrometry Symposium, Columbus, OH, Mar 2007. (Oral)
- 51) Ü. A. Laskay, O. L. Collin, G. P. Jackson, "Implementation of Dynamic Collision Induced Dissociation to the Fragmentation of Biomolecules" 4th Annual Ohio Mass Spectrometry Symposium, Columbus, OH, Mar 2007. (Oral)
- 50) C. M. Zimmermann, O. L. Collin, G. P. Jackson, "Analysis of Fatty Acid Ethyl Esters in Human Hair by Fast Gas Chromatography Tandem Mass Spectrometry" Pittsburg Conference, Chicago, IL, Feb 2007. (Poster)
- 49) O. L. Collin, G. P. Jackson, "Dynamic Collision-Induced Dissociation: A Faster Approach for Tandem Mass Spectrometry of Peptides" Pittsburg Conference, Chicago, IL, Feb 2007. (Poster)
- 48) O. L. Collin, M. Beier, C. M. Zimmermann, Ü. A. Laskay, G. P. Jackson, "Fast Gas Chromatography with Tandem Quadrupole Ion Trap Mass Spectrometry Applied to the Detection of Explosives" 232nd American Chemical Society Meeting, San Francisco, CA, Sept 2006. (Poster)
- 47) \*G. P. Jackson, O. L. Collin, C. Zimmermann, Ü. A. Laskay, M. Beier, "Fast Gas Chromatography With Quadrupole Ion Trap Tandem Mass Spectrometry Applied to the Detection of Explosives" 33rd Federation of Analytical Chemistry and Spectroscopy Societies Conference, Orlando, FL, Oct 2006. (Oral)



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- 45) Ü. A. Laskay, J. J. Hyland, M. Beier, O. L. Collin, G. P. Jackson, "CID Achieved During Mass Acquisition in a QIT-MS Using a Two-Frequency Excitation Waveform" 17th International Mass Spectrometry Conference, Prague, Czech Republic, Aug 2006. (Poster)
- 44) O. L. Collin, Matthias Beier, G. P. Jackson, "Detection of Explosives by Fast GC-Fast MS Using an Ion Trap" Technical Support Working Group Explosives Detection Conference, Miami, FL, June 2006. (Poster)
- 43) Ü. A. Laskay, J. J. Hyland, G. P. Jackson, "CID Achieved During Mass Acquisition in a QIT-MS Using a Two-Frequency Excitation Waveform" 54th ASMS Conference on Mass Spectrometry and Allied Topics, Seattle, WA, May 2006. (Poster)
- 42) S. P. Pasilis, L. Li, G. P. Jackson, D. C. Duckworth, D. E. Goeringer, "Dynamic Collision Induced Dissociation of Metal Oxide ions and Peptide Ions in a Quadrupole Ion Trap" 54th ASMS Conference on Mass Spectrometry and Allied Topics, Seattle, WA, May 2006. (Poster)
- 41) G. P. Jackson, Ü. A. Laskay, B. J. Nichol, J. J. Hyland, "CID in Quadrupole Ion Traps Using Resonance Excitation of Higher-Order Secular Frequencies" 54th ASMS Conference on Mass Spectrometry and Allied Topics, Seattle, WA, May 2006. (Poster)
- 40) \*G. P. Jackson, "A New, Fast-GC Method for the Analysis of High-Explosives" 115<sup>th</sup> Annual Meeting of The Ohio Academy of Science, Dayton, OH, April 2006. (Oral)
- 39) J. J. Hyland, B. J. Nichol, Ü. A. Laskay, G. P. Jackson, "Simulations of a Novel Method of Molecular Fragmentation in an Ion Trap" Ohio University Research and Creativity Fair, Athens, OH, May 2006. (Poster)
- 38) K. DeRhodes, G. P. Jackson, "Optimization of PDECD for Fast-GC of High-Explosives" Ohio University Research and Creativity Fair, Athens, OH, May 2006. (Poster)
- 37) O. L. Collin, C. Zimmermann, M. Beier, G. P. Jackson, "Fast, Confirmatory Analysis of High Explosives Using Fast-GC Quadrupole Ion Trap Mass Spectrometry" Ohio University Research and Creativity Fair, Athens, OH, May 2006. (Poster)
- 36) \*G. P. Jackson, "A New, Fast-GC Method for the Analysis of High-Explosives" 115<sup>th</sup> Annual Meeting of The Ohio Academy of Science, Dayton, OH, Apr 2006. (Oral)
- 35) Ü. A. Laskay, J.J. Hyland, G. P. Jackson, "CID Achieved During Mass Acquisition Using a Two-Frequency Excitation Waveform" 3<sup>rd</sup> Annual Ohio Mass Spectrometry Symposium, Columbus, OH, Mar 2006. (Oral)
- 34) \*Glen P. Jackson "New Approach for Tandem Mass Spectrometry in Quadrupole Ion Traps" West Virginia University, Morgantown, WV, Oct 2005. (Oral)
- 33) \*Glen P. Jackson "New approach for tandem mass spectrometry in quadrupole ion traps" NIH, Bethesda, MD, Aug 2005. (Oral)
- 32) O. Collin, G. P. Jackson, "Metastable-Activated Dissociation Mass Spectrometry: A New Paradigm for Mass Spectrometry" 53<sup>rd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Antonio, TX, June 2005. (Poster)

- 31) O. Collin, G. P. Jackson, "A Novel Protein Sequencing Technique" Ohio University Research and Creativity Fair, Athens, OH, May 2005. (Poster)
- 30) K. DeRhodes, C. Neigel, G. P. Jackson, "New Method for the Simultaneous Detection of Low- and High-Explosives" Ohio University Research and Creativity Fair, Athens, OH, May 2005. (Poster)
- 29) \*G. P. Jackson, "Metastable-Activated Dissociation Mass Spectrometry for the Structural Determination of Proteins" University of Leipzig, Leipzig, Germany, Mar 2005. (Oral)
- 28) \*G. P. Jackson, "Recent Developments in Mass Spectrometry: Instrumentation and Applications" Upper Ohio Valley Section of the American Chemical Society, Marietta College, Marietta, OH, Feb 2005. (Oral)
- 27) \*G. P. Jackson, "Personal Response System in Undergraduate Chemical Education" Departmental Seminar/Workshop, Ohio University, Athens, OH, Oct 2004. (Oral)

***Work conducted at Oak Ridge National Laboratory (Graduate Intern and Postdoctoral Associate)***

- 26) D. C. Duckworth, L. Li, G. P. Jackson, B. C. Knipple, D. E. Goeringer "Dynamic Collision Induced Dissociation in Quadrupole Ion Trap Mass Spectrometry" 53<sup>rd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, San Antonio, TX, June 2005. (Poster)
- 25) Y. Lu, D. C. Duckworth, G. P. Jackson, F. L. King "Electrospray Mass Spectrometry of Room Temperature Ionic Liquids" Pittsburg Conference, Orlando, FL, Feb 2005. (Poster)
- 24) L. Li, D. C. Duckworth, D. E. Goeringer, G. P. Jackson, "Collision-Induced Dissociation Methods for Reducing Polyatomic Interferences Elemental Analysis via Ion Trap Mass Spectrometry" Pittsburg Conference, Orlando, FL, Feb 2005. (Poster)
- 23) G. P. Jackson, S. Dai, D. C. Duckworth, "Mass Spectrometry of Room Temperature Ionic Liquids" 52<sup>nd</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Nashville, TN, May 2004. (Poster)
- 22) G. P. Jackson, S. Dai, D. C. Duckworth, "Mass Spectrometry of Room Temperature Ionic Liquids" 30<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Fort Lauderdale, FL, Oct 2003. (Poster)
- 21) G. P. Jackson, D. E. Goeringer, D. C. Duckworth, "Fundamental Studies Involving Collision-Induced Dissociation of Strongly Bound Metal Oxide Ions in Quadrupole Ion Traps," 15<sup>th</sup> Sanibel Conference on Mass Spectrometry, Sanibel, FL, Jan 2003. (Poster)
- 20) \*D. C. Duckworth, G. P. Jackson, D. E. Goeringer, "Collision-Induced Dissociation Reactions of Glow-Discharge-Generated Polyatomic Ions in Quadrupole Ion Trap Mass Spectrometry," European Winter Conference on Plasma Spectrochemistry, Garmisch-Partenkirchen, Germany, Jan 2003. (Oral)
- 19) \*G. P. Jackson, F. L. King, D. C. Duckworth, "Selective Attenuation of Isobaric Interferences in Quadrupole Ion Trap Mass Spectrometry" 29<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Providence, RI, Oct 2002. (Oral)
- 18) G. P. Jackson, F. L. King, "Post-Pulse Ion Generation in a Millisecond Pulsed Glow Discharge," 2002 Winter Conference on Plasma Spectrochemistry, Scottsdale, AZ, Jan 2002. (Oral)
- 17) \*D. C. Duckworth, D. E. Goeringer, G. P. Jackson, F. L. King, "Breaking Up and Making Up: Gas-Phase Heavy Metal Ion Chemistry In Quadrupole Ion Traps," 28<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Detroit, MI, Oct 2001. (Oral)
- 16) L. L. Gdovka, G. P. Jackson, "Beckett's *Fin de Partie* and Einstein's Theory of Relativity," 26<sup>th</sup> Colloquium on Literature and Film, West Virginia University, Morgantown, WV, Sept 2001. (Oral)

- 15) \*Douglas C. Duckworth, G. P. Jackson, Fred L. King, "Glow Discharge Quadrupole Ion Trap Mass Spectrometry: Analytical Tool, Chemical Probe, Or Mere Curiosity?" 53rd Annual Meeting of the Southeastern Region of the American Chemical Society, Savannah, GA, Sept. 2001. (Oral)
- 14) G. P. Jackson, F. L. King, D. E. Goeringer, D. C. Duckworth, "Determination of Mass Effects on the Dissociation of Diatomic Ions in a Quadrupole Ion Trap," 49<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Chicago, IL, May 2001. (Poster)
- 13) D. C. Duckworth, G. P. Jackson, F. L. King, "Mechanistic and Kinetic Investigation of the Oxidation of Uranium Ions in a Quadrupole Ion Trap," 49<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Chicago, IL, May 2001. (Oral)
- 12) \*G. P. Jackson, F. L. King, D. E. Goeringer, D. C. Duckworth, "Investigation of the Collision Induced Dissociation of Diatomic Molecules in Quadrupole Ion Traps," East Tennessee Mass Spectrometry Discussion Group, Knoxville, TN, May 2001. (Oral)
- 11) G. P. Jackson, F. L. King, D. C. Duckworth, "Relative Dissociation Rate Measurements of Rare Earth Element Oxides in a Quadrupole Ion Trap Mass Spectrometer," 27<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Nashville, TN, Sept 2000. (Oral)
- 10) D. C. Duckworth, J. K. Gibson, G. P. Jackson, F. L. King, "Reactions of Gas-Phase Uranium with Pentamethylcyclopentadiene in a Quadrupole Ion Trap," 48<sup>th</sup> ASMS Conference on Mass Spectrometry and Allied Topics, Long Beach, CA, June 2000. (Poster)

***Work conducted at West Virginia University (Ph.D. Research)***

- 9) \*F. L. King, G. P. Jackson, L. Lei, C. Lewis, T. Millay, M. A. Moser, V. Majidi, "Excitation And Ionization In a MS Pulsed Glow Discharge Plasma: Implications For Atomic And Molecular Determinations," 28<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Detroit, MI, Oct 2001. (Oral)
- 8) \*F. L. King, C. Lewis, G. P. Jackson, "2-D Spatial and Temporal Mapping of MS-Pulsed DC and rf Glow Discharges," 27<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Nashville, TN, Sept 2000. (Oral)
- 7) G. P. Jackson, C. Lewis, F. L. King, "Two-Dimensional Optical Investigation of a Millisecond Pulsed Glow Discharge Source," 27<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Nashville, TN, Sept 2000. (Oral)
- 6) G. P. Jackson, C. Lewis, S. K. Doorn, V. Majidi, F. L. King, "Temporally and Spatially Resolved Diagnostics of a Pulsed Glow Discharge Source," 2000 Winter Conference on Plasma Spectrochemistry, Fort Lauderdale, FL, Jan 2000. (Oral)
- 5) G. P. Jackson, C. Lewis, S. Doorn, V. Majidi, F. L. King, "Temporally and Spatially Resolved Diagnostics of Pulsed Glow Discharge Sources," 52nd Southeast Regional American Chemical Society Meeting, Knoxville, TN, Oct 1999. (Oral)
- 4) S. K. Doorn, G. P. Jackson, C. Lewis, D. Wayne, V. Majidi, F. L. King, "Diagnostics of a Pulsed Glow Discharge Source," Poster presented at 26<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Vancouver, Canada, Oct 1999. (Oral)

***Work conducted at Ohio University (M.S. Research)***

- 3) A. R. J. Andrews, L. de Jager, H. Zhang, G. P. Jackson, "Fast Extraction of Chlorinated Pesticides from Water Samples," 25<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Austin, TX, Oct 1998. (Oral)

- 2) A. R. J. Andrews, G. P. Jackson, "Fast Screening of Water Samples for Chlorinated Pesticides," 24<sup>th</sup> Federation of Analytical Chemistry and Spectroscopy Societies Conference, Providence, RI, Oct 1997. (Oral)
- 1) G. P. Jackson, A. R. J. Andrews, "Chlorinated Pesticide Determination by Solid-Phase Microextraction and Fast Gas Chromatography," Pittsburgh Conference, Atlanta, Georgia, Mar 1997. (Oral)